



AFRICAN YOUTH INNOVATION IN THE COVID-19 ECONOMY

A research and publication project by the African Centre for the Study of the US for the
Youth Bridge Trust

22 June 2020

AUTHOR PROFILES

RESEARCH TEAM

John King'athia Karuitha

Karuitha is a PhD candidate at the Wits Business School, University of the Witwatersrand, Johannesburg. He has over a decade and a half experience in teaching and conducting research in financial economics. Besides, he is a student of data analytics and R-programming and a Certified Information Systems Auditor. His research interests are on the nexus between digitization (more so, Fintech) on the one hand, and financial intermediation, financial inclusion and microfinance, rural and agribusiness finance on the other. Beyond academia, he has served in finance and project management roles in Kenya. Also, he is a regular contributor to the Business Daily; a newspaper ran by the Nation Media Group, which is the most extensive media house in Kenya.

Thobekile Luanda Mpungose

Luanda Mpungose is a Programme Officer for the African Governance and Diplomacy Programme at the South African Institute of International Affairs (SAIIA). Her research interests include youth development and broader policy participation, BRICS cooperation and South Africa's foreign policy. Luanda recently co-authored the UNICEF Guide for Youth Participation which was co-created with Africa's youth.

Gilbert M. Khadiagala

Gilbert M. Khadiagala is the Jan Smuts Professor of International Relations and Director of the Centre for the Study of the United States (ACSUS) at the University of Witwatersrand, Johannesburg, South Africa. He has previously taught comparative politics, African politics, and international relations in Kenya, Canada, and the United States. Prof. Khadiagala holds a doctorate in international studies from the Paul H. Nitze School of Advanced International Studies (SAIS), the Johns Hopkins University, Washington, D.C. He is the recent editor of *War and Peace in Africa's Great Lakes Region* (New York: Palgrave-MacMillan, 2017) and author of *Regional Cooperation on Democratization and Conflict Management in Africa* (Washington DC: Carnegie Endowment for International Peace, 2018)

Lennon Monyae

Lennon Monyae is an International Relations (MA) graduate from the University of Witwatersrand, South Africa. He currently works for the African Peer Review Mechanism (APRM), a mutually agreed instrument voluntarily acceded to by the Member States of the African Union as a governance self-monitoring mechanism. Lennon's work at the APRM is focused on mobilising youth engagement and promoting AU shared values. A key highlight in Mr Monyae's APRM work experience is leading the team that organised APRM 1st International Youth Summit in Ndjamena, Chad in July 2019.

Noxolo Ntaka

Noxolo holds two Masters Degrees in African and Political studies from the University of Oxford and Wits University, respectively. She also completed her undergraduate (BSoc.Sci) and honours degree at the University of Cape Town, in Economics and Political studies. Noxolo currently works as Project Manager at Democracy Works Foundation, leading the organisation's newest project: a civic education and dialogue programme aimed at up-skilling youth across South Africa annually. As a young scholar and professional, she has over three years of combined experience in research, program management, implementation, monitoring, and evaluation. Noxolo is passionate about creating sustainable impact and in 2019, she was recognised as part of the Mail & Guardian's top 200 most promising Young South Africans under 35.

Bob Wekesa

Wekesa is partnerships, research and communications coordinator at the African Centre for the Study of the United States based at the University of the Witwatersrand, South Africa. He holds a bachelor's degree from the University of Nairobi and masters and doctoral degrees from the Communication University of China, Beijing. His area of teaching, research and public engagement is the intersection of journalism, media and communications on the one hand and geopolitics, diplomacy and foreign policy on the other. He supervises post-graduate projects in these fields. His current research work includes: Africa-US public diplomacy (including diaspora relations); cities as actors in international relations; Africa-US digital

diplomacy and the representation of Africa in American media and America in African media. He is also working on the trilateral Africa-US-China engagements.

Table of Contents

INTRODUCTION AND BACKGROUND	7
CHAPTER 1	9
The Role of Youth in Governance and Leadership in a Post-COVID-19 World	9
Introduction	9
Youth and the COVID-19 Crisis	9
Youth Agency in Times of COVID-19	10
Leadership and Generational Change in the Post-COVID -19 World	12
Skills for Leadership and Governance	15
CHAPTER 2	18
Youth, COVID-19 and Development in Africa: Prospects and Challenges	18
Introduction and contextual background	18
African Youth and the Sustainable Development Goals	19
Agenda 2063 and the Flagship Projects	21
The African Continental Free Trade Agreement (AfCFTA) Flagship	25
Nexus between SDGs and Agenda 2063 and Leveraging the Youth	26
Conclusion	29
CHAPTER 3	30
Marginalization in a Time for COVID-19: Key Lessons and Opportunities	30
Introduction	30
A Closer Look at Challenges Affecting Marginalized Groups	33
Access to Education and the Digital Divide	33
Employment	37
Gender Based Violence and Femicide	38
Areas of Best Practice by Africa's Youth: Methods and Approaches.	39
Conclusion	41
CHAPTER 4	42
Youth and entrepreneurship: Untapped Opportunities and Supply Chains	42
Introduction	42
Youth Entrepreneurship	42
Communicating in African Languages	43
Information Overload and Ignorance	45
Screening and testing	47
Facilities, equipment and disinfectants	48
Supply Chains and Skills Mobility	49

Conclusion	53
CHAPTER 5	56
Funding, Partnerships and Networks	56
Introduction	56
Situation analysis	56
Recommendations on possible interventions: Exploring Funding, Partnerships and Networks for Youth	60
➤ Partnerships with youth-lead and orientated initiatives	60
➤ Integrated intervention: Education, Technology & health care:	62
➤ Entrepreneurship & Employment:	66
CHAPTER 6	68
Youth, Digital Economy, and the Future of Work in Africa	68
Summary	68
Background	68
The Prospects of Digital and Digitally Mediated Work in Africa	71
A Place for the Youth	73
The New Digital Divide	73
Soiling the Gadgets: Agriculture and the Digital Revolution	75
“Viral” Economy: COVID-19 and Digital Work	75
Roadblocks on the Path to the Digital Economy for the Youth	76
Ideal Youth: Essential Skills Set for the Digital Workplace	77
Soft Skills	77
Hard Skills	77
Business Skills	77
Domain Expertise	78
Computer Programming for Applications Development	78
Data Analytics	78
Information Security	79
Education and Mentorship Opportunities for Digital technology	79
Continuous Learning	80
The Role of the Government	80
Conclusion	81

INTRODUCTION AND BACKGROUND

As with other sectors of segments of society, African youth have not been spared from the devastating effects of COVID-19. Yet, the much talked about African youth bulge seen as a multifaceted means that African will likely face less deaths and perhaps weather the storm far better than other parts of the world. This is on the strength of professional medical sentiment to the effect that the youth are able to withstand certain aspects of the deadly viral respiratory disease. The optimism of African youth as a potential demographic savior for the continent has gained traction a factor of Africa's resilience. This optimism must however be tempered with caution not least because medical and scientific opinion remains a fluid work in progress in a manner to suggest the youth could still be affected. In fact, it has been pointed that the socioeconomic dimensions of the pandemic do not discriminate between ages. Moreover, it has already been pointed out that the economic pressures arising out of the pandemic are already causing youth poverty and could potentially accelerate the notion of African youth as a time bomb.

It is in view of these concerns that Youth Bridge Trust (YBT), a Johannesburg-based grant-making organization, approached the African Centre for the Study of the United States (ACSUS) based at the University of the Witwatersrand to put together a strategic research report that would inform relevant, timely and insightful interventions. It is an assignment that ACSUS welcomed in view of the fact that we were and continue to working on a similar knowledge production initiative on COVID-19 with the Africa Portal, a project of the Southern Africa Institute of International Affairs (SAIIA). Fortuitously, both YBT and ACSUS had already established a partnership on youth empowerment just before the arrival of the life-changing pandemic. Equally significant is that both YBT and ACSUS are supported by the Ford Foundation Southern Africa office thus sharing broad interests, and inclinations.

This report is therefore a product of deep immersion and quick-turnaround strategic research report on the innovative ways that youth organizations such as YBT can leverage to efficiently and effectively respond to COVID-19. Subsequent to this report, the authors will produce six thought leadership articles drawing on their chapters.

The strategic research report has been developed with the objective of providing implementable strategies and plans of actions to inform YBT's work with regards innovative means and ways of addressing youth related dimensions of the COVID-19 and post-COVID-19 economy. It highlights some of requisite skills that will be in demand during and in the post-COVID-19 economy. These are skills that can learnt quickly, can be used for work in different industries sectors and that are scalable.

CHAPTER 1

The Role of Youth in Governance and Leadership in a Post-COVID-19 World

Gilbert Khadiagala

Introduction

Crises of the magnitude of COVID-19 often deepen the existing societal cleavages, exacerbate the structures of privilege and inequities, and worsen the avenues for social and political mobility. The emergence of such large-scale upheavals disproportionately disadvantage youth who suffer the ravages of declining employment opportunities, social welfare, and other emergency measures adopted to address such crises. Moreover, as governments shift energies to deal with the plight of the most vulnerable members of society, they frequently neglect the multiple concerns of youth, preferring to wait for the “return to normalcy.” Ultimately, the youth face diminished societal visibility, dignity, and recognition. Similarly, however, the socioeconomic and political recovery initiatives from such crises present momentous vistas for youth participation in changing the prevailing attitudinal and institutional patterns and practices in directions that enhance their stakes in leadership and governance. Thus while pandemics have the potential to disempower youth in the short term, they could in the long term unleash vital stirrings that produce significant generational change. Nevertheless, youth contribution to such shifts hinges fundamentally on agency, creative leadership, organization, and willingness to seize opportunities.

Youth and the COVID-19 Crisis

COVID-19 has had a drastic impact on youth in South Africa and Africa as whole primarily because it has heightened the already prevalent social ills that face them. According to the most recent International Labour Organization (ILO) data, in 2019, the estimated youth unemployment rate in South Africa was at 53.18 percent.ⁱ For the rest of the continent, there are reports that almost 16 million young Africans, around 13.4 per cent of the total labour force of 15-24 year olds, are facing unemployment. The Africa Union (AU) recently estimated that due to the COVID-19 pandemic, “nearly 20 million jobs, both in the formal and informal sectors, are threatened with destruction.” The same report notes that in Africa, 85.8 per cent

of employment, and 95 per cent of youth employment, is informal.ⁱⁱ With most of the youth employed in the informal sector, the implications are that African youth are bearing the worst effects of socioeconomic marginalization, deterioration in livelihoods, and unprecedented poverty. This picture is compounded by the fact that for an estimated 12 million youth entering the work force in every year, African economies generate only 3 million formal jobs.
iii

Before the pandemic, youth unemployment largely contributed to the popular depictions of Africa's youth bulge as a time bomb waiting to happen. But most proponents of the youth bulge seek merely to dramatize an alleged youth crisis that stems, in fact, from the absence of credible social investment policies in health, education, skills, and employment for the majority of the youth.^{iv} Although most analysts have attributed the Arab Spring protests in 2011 to large youth unemployment, the protests were not the outcomes of the curse of youth bulge per se but rather youth grievances in combination with structural flaws in society. From this perspective, the youth bulge thus needs to be read accurately as an example of blaming the victim. As Kimari has accurately observed: "the 'youth bulge' is not a neutral demographic discourse. It has become a highly suspect way of thinking about young people, inflected by long-standing preoccupations with African birth-rates and a dystopia image of 'coming anarchy'."^v Africa's informal sectors that absorb the bulk of the unemployed and underemployed lack meaningful social safety nets, consigning youth to precarious livelihoods. The emergency lockdowns and regulations that have accompanied responses to COVID-19 have tremendously affected these sectors, forcing many young people to sink deeper into chronic poverty. ILO projected that in the first month of the COVID-19 crisis, the income of informal workers in Africa dropped by 81 per cent.^{vi}

Youth Agency in Times of COVID-19

For many years, as most African economies have consistently been unable to generate job opportunities to absorb the millions graduating from universities and other tertiary institutions, young people have innovated by appropriating new technologies to navigate the vagaries of modern life. Through social activism and entrepreneurship, they have projected Africa to the global technological map while also making visible differences in their countries and communities.^{vii} It is this ingenuity and social power that COVID-19 has not been able to extinguish. The youth in Africa have actively engaged in finding approaches to combat COVID-

19 and its consequences. Most studies have reported that African youth are leveraging and harnessing digital technologies in the fight against COVID-19, serving on the frontlines as health care workers, raising awareness about the pandemic and launching advocacy and sensitization campaigns in communities.^{viii} These efforts are bound to increase as the pandemic takes its toll in Africa. Although Africa's youth in peri-urban and rural areas have yet to feature prominently in these initiatives, it will be important for the more perceptive urban youth to mobilize their efforts. Pointing to these initiatives, Aya Chebbi, the AU Youth Envoy from Tunisia has noted:

Youth are central to fighting coronavirus. Young Africans should put their energy, dynamism, and innovation in the fight to end the pandemic and many are already doing so. We need more youth working on the frontline; some are producing hand sanitizers, distributing them door to door and raising awareness; others started crowd funding platforms, distributing food packages, masks, and other gear to the most vulnerable in their communities.^{ix}

Similarly, as Tariro Bure, youth coordinator at the Mandela Institute for Development Studies (MINDS) Africa has observed:

Young people have the agency to advocate, capacity to innovate, and room to learn. Social media has been effective in documenting efforts and building collective action around COVID-19. Our goal as movement is to build a unified voice that facilitates young people to co-create their vision post-COVID-19, and platforms such as WhatsApp, Facebook, and Twitter have been effective in diffusing barriers. African youth are stepping up to show that they are indeed consequential leaders.^x

More critical, in reflecting on the role of young people in mitigating the pandemic in rural Kenya, Neema and Dan Kaseje, researchers involved in the project have proposed that:

The current pandemic response in Africa should tap into youth who are full of innovative ideas that could disrupt traditional thinking and modes of addressing diseases. Young people should be given a platform to express themselves, to solve problems, and to help with implementation efforts. They should be included in dialogue with public health specialists and policy-makers and should be given the opportunity to contribute. Including young people will result in a more sustainable and long-term solution to the current and future pandemics. The

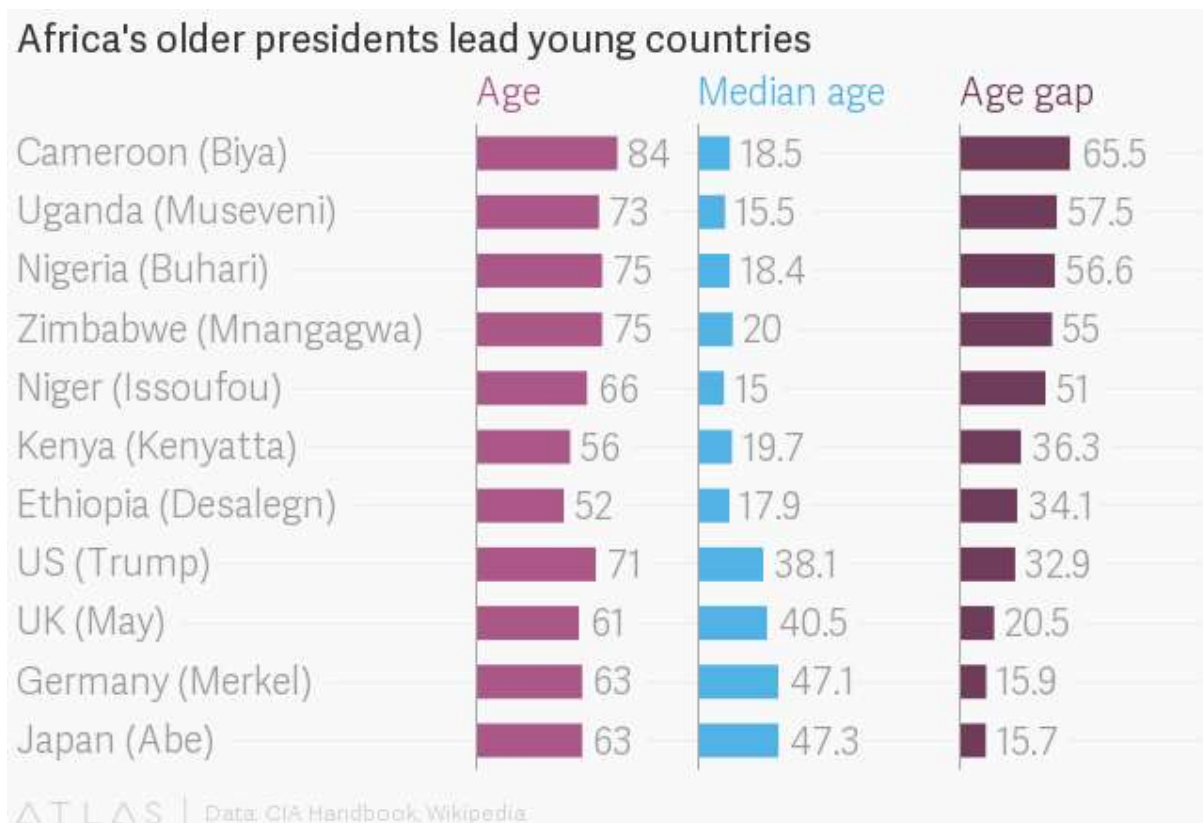
youth of today can act as custodians of the pandemic response in order to remind future generations of the lessons learnt, pitfalls, and the best way forward.^{xi}

Leadership and Generational Change in the Post-COVID -19 World

Most public health experts have described COVID-19 as a disease that primarily affects the elderly, providing Africa the opportunity to transform its youth bulge into a socioeconomic and political dividend. In the current context, most institutions are urging people over 60 years to stay at home, probably permanently if there is no vaccine in sight. With 60 per cent of Africa's population under the age of 25, African countries have a unique chance to elevate young people to prominent positions across society. Such moments of widespread challenges have historically produced radical and irreversible alterations in power dynamics that, over time, propel new leaders to the fore and invariably improve the governance of these societies. In Africa of the early 1960s, young leaders such as Julius Nyerere, Tom Mboya, Kenneth Kaunda, and Sekou Toure emerged to assume core leadership positions after the period of nationalist agitation.

However, like the typical revolutionary circumstances, such moments cannot be delivered on a silver platter; instead, they require organizational resolve, strategy, and determination. Youth have to demand these changes because those in power will simply not supply them. Young people in Africa are already leading in critical domains, but, for most of the times, they have shown reluctance to take politics seriously. A recent study of youth political participation in Botswana revealed that youth felt alienated from politics because of the debilitating role of money in politics, factionalism in political parties, and a host of cultural and attitudinal impediments.^{xii} In South Africa, youthful leaders in the opposition party, the Democratic Alliance (DA)—Lindiwe Mazibuko and Mmusi Maimane--quit because of being frustrated by the whites who dominate the party. Throughout Africa, youth have for a long time associated politics with negative images of repression, authoritarianism, and violence.^{xiii} Figure 1 shows clearly that Africa has the youngest population globally but with some of the world's oldest leaders.

Figure 1: Gaps between African Leaders and Population Profiles



In the ongoing democratic experimentations in Africa, youth started to take a more active role in politics. Young leaders such as Nelson Chamisa in Zimbabwe, Julius Malema in South Africa, and Bobi Wine in Uganda have risen to change the narrative about youth and leadership of political parties. Although most of these leaders still languish on the political periphery, the increasing clout of youth through digital activism is bound to alter the power equation as more youth getting elected to higher positions. Currently most African parliaments are attracting youthful parliamentarians, most of them professionals, but as figure 2 reveals, there are still enormous shortfalls in youth representation (BOB TO INSERT FIGURE 2). COVID-19 should thus prompt more youth involvement in leadership and governance. As the digital generation, African youth have within their scope the power to mobilize quickly and effectively for change across a wide array of domains. In his June 16th Youth Day speech, South Africa's President Cyril Ramamphosa made this appeal to the youth:

We are looking forward to innovation and creativity and new ideas from young people. We want young people who are going to speak out and step forward. Covid-19 is pregnant with opportunities. So, I am throwing a challenge to young people to begin to see post-Covid-19. We need to set up different ways of running our economy, the

ownership of the economy and managing our economy. I am throwing a challenge to young people: post-Covid-19 is a new platform. We need to set up different ways of running our economy, ownership and managing our economy and even the production of our economy.^{xiv}

In seizing the new opportunities for leadership in social transformation, Africa youth will need to recognize the significance of governance in the sound management of social and political affairs. To the youth, governance should be an everyday concern because it is at the heart of resource allocation and distribution with tremendous implications for social and political stability.^{xv} For instance, the proliferation of diseases such as Ebola and COVID-19 are inextricably tied to the broad governance problems that have long afflicted African societies.^{xvi} Like other public emergencies before, COVID-19 has occurred alongside decrepit and under-resourced public health systems, most of which collapsed owing to corruption and mismanagement of resources.^{xvii} Similarly, COVID-19 has spread rapidly in informal settlements and slum-dwelling communities because governments have abdicated basic responsibilities in the provision of housing, water, and sanitation to millions of their citizens. Youth are disproportionately represented in these informal settlements.^{xviii}

Equally, government appeals for donations from the rich to meet the growing needs of the poor and vulnerable communities in times of COVID-19 belie the lukewarm taxation policies that would routinely target the rich to fund social services. Elsewhere, progressive taxation policies have worked to reduce inequities and foster humane societies; in Africa, ruling elites conspire with the rich to deprive public institutions of sufficient tax revenues to build equitable and caring societies. The litany of governance failures in Africa are legion and present an embarrassment to the continent particularly since the early 1990s. Africa has experimented with many governance reforms that sought to create transparent, accountable, and responsive political systems. African youth need to be alert to some of these governance challenges in order to be ready to stand up to them and mobilize for new ways of doing things. As Thione Niangua young Senegalese activist has observed:

Youth in Africa are isolated and underrepresented in governance across the continent. This is often the case in most parts of the world, but the ratio of under-representation of youth in Africa is alarmingly high. They are left out from key decision-making processes. In many cases,

the younger generation is more knowledgeable, equipped, and prepared to address the fast moving issues of today than the establishment leadership.^{xix}

The challenges of governance in Africa stem, in large measure, from the profound chasms between the leaders and the citizens. Bridging these divides requires accountable and responsive governance and, more critical, a citizenry that is informed and prepared to push for good governance. Although the past democratization trends in Africa have started to improve governance, most African countries are still grappling with weak institutions that cannot deliver public services and guarantee that all citizens will be treated equally. This is where youth leadership matters. As Landry Signe, a young Cameroonian professional at the Brookings Institution in Washington DC suggests:

When young leaders reach positions of influence they should focus on building strong institutions for accountability and educate people about the importance of broad accountability for a successful continent. Countries with higher levels of accountability collectively outperform those with lower levels. Youth can advance civil society growth, poverty reduction, economic expansion, and innovation throughout the continent by strengthening the participation of women and youth, promoting human rights, facilitating access to justice, and ensuring inclusion of all communities.^{xx}

Skills for Leadership and Governance

COVID-19 has potentially projected African youth to strategic position that will make them leaders in championing rebuilding the socioeconomic and political fabrics in ways that reflect the ethos of hard work, entrepreneurship, common purpose, and collective problem-solving. For effective leadership and governance, the core skills that youth require are in mobilization and networking. Ultimately both skills require broad organizational structures at national, sub-regional, and continental levels. In the post-COVID-19 world, African youth leadership that galvanizes for transformative change will be significant. Youth leaders should demand that there should be no return to normalcy without their engagement. There are many leadership institutions in Africa that have played critical roles in training African youth for take up leadership positions in society. Institutions such as the Young African Leadership Initiative (YALI) have proliferated to deepen knowledge and expertise on youth leadership and organization. These institutions have been significant in the socialization of a new generation

of youth on how to mobilize around many concerns central to up-lifting the youth. Similarly, institutions such as the World Bank's Youth Transforming Africa initiative (YTA) and the Youth Alliance for Leadership and Development in Africa (YALDA) provide training in critical skills that have enabled the engagement of many youth on questions of empowerment. Leadership training also builds the awareness that allows youth to fully grasp the policies and programs articulated by governments and various agencies to meet their needs. As African governments move toward adopting post-COVID-19 recovery plans, youth leaders can mobilize their constituencies about making such programs more relevant and meaningful the majority of the youth.

Networking is linked to mobilization because it speaks to the ability of youth leaders and organization to build alliances across communal, national, continental and international levels. In Africa, the continent has adopted core platforms such as the Youth Charter and institutions such the African Youth Commission (AYC) and the Pan-African Youth Union (PYU) that have allowed youth to network and mobilize around at national, sub-regional, and continental levels.^{xxi} While it was difficult in previous years to organize sub-regionally and continentally, the new digital technologies have facilitated easier mobilization of youth across borders to share salient ideas and experiences.

Figure 2: Youth Networking and Leadership Development Organizations

1	Acumen East African Fellowship	16	African Development Bank Young Professionals Programme
2	Africa 2.0	17	African German Youth Initiative
3	Africa Business Fellowship	18	African Leadership and Reconciliation Ministries (ALARM)
4	Africa China Young Leaders Forum	19	African Leadership Institute (AFLI) Leadership for Change Programme
5	Africa Leadership Forum	20	African Leadership Institute (AFLI) Tutu Fellowship
6	Africa Leadership Initiative (ALI) Africa Impact Forum	21	African Leadership Network
7	Africa Leadership Initiative (ALI) East Africa	22	African Union Youth Volunteer Corps
8	Africa Leadership Initiative (ALI) Media	23	Afrika Youth Movement
9	Africa Leadership Initiative (ALI) South Africa	24	AKAD Education Group – Africa
10	Africa Leadership Initiative (ALI) West Africa	25	Amani Institute - Leadership & Management for Impact
11	Africa Leadership Initiative (ALI) Young Africa Leadership Initiative (YALI)	26	American Middle East Network for Dialogue at Stanford (AMENDS)
12	Africa Science Leadership Programme (ASLP)	27	Ashinaga Africa Initiative
13	Africa Youth Leadership Forum	28	Ashoka Changemaker
14	Africa Youth Panel		
15	African Biblical Leadership Initiative		

Generational change in leadership and governance is a steady learning process that always depends on the life-long accumulation of skills, resources, and capacities. However, fortuitous moments such as pandemics have the tendency to jumpstart these transitions, allowing the emergence of new leaders with the energy, drive, and conviction. COVID-19 has had myriad consequences on health, economic, social, and political systems across the globe. In Africa, the consequences are just beginning to filter into the wider societal fabrics. Nonetheless, if COVID-19 produces new leaders and ignites generational change in Africa, it will have contributed to novel approaches to managing social and political affairs.

CHAPTER 2

Youth, COVID-19 and Development in Africa: Prospects and Challenges

Lennon Monyae

Introduction and contextual background

Constituting the bulk of the global population, the global youth in general, and African youth to be precise, confront challenges of inequality, unemployment, and poverty. These challenges in Africa have been compounded by the outbreak of the COVID-19 pandemic. Globally, the pandemic is being primarily seen as a health issue. However, it extends beyond health in Africa as in the rest of the world.

The pandemic broke out at time when Africa was grappling with the challenges of implementing the African Union's (AU) Agenda 2063 and the United Nation's (UN) Agenda 2030 better known as the Sustainable Development Goals (SDGs). Some of the targets set out for achievement by the AU such as "Silencing the Guns by 2020" have been missed as are other targets related to the youth such as reducing the rate of unemployment. More broadly economic performance was a big concern on the continent even before the pandemic. Moreover Africa is still finding it's footing with the 4th Industrial Revolution, characterised by the "fusion of the digital, biological, and physical worlds, as well as the growing utilization of new technologies such as artificial intelligence, cloud computing, robotics, 3D printing, the Internet of Things, and advanced wireless technologies, among others"^{xxii}.

The Mo Ibrahim Foundation reports that by 2027, the working-age population (15-64) will constitute 57.7% of Africa's total population^{xxiii}. This is a significant number of a working population that presents an opportunity to positively drive development for African countries. Upon the expiry of the decade dedicated to the youth (2008- 2018) AU heads of state and government^{xxiv} recognised the need to further focus on issues affecting the youth. The dedication of year 2017 as the AU Year of Youth signalled the urgency of involving youth in Africa's development. In addition, a comprehensive document named *AU Roadmap on Harnessing the Demographic Dividend through Investments in the Youth*^{xxv} commissioned by AU member states was published in an effort to direct actions to be taken while investing in Africa's youthful population.

The question that arises is: when will Africa leverage the abundant youth resource to support the implementation of 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) and Agenda 2063: The Africa We Want? Importantly, can African governments, multilateral organisations, development partners, the private sector, Non-Governmental Organizations (NGOs) and other stakeholders including African youth seize the COVID-19 pandemic to rethink and reset continental development frameworks at national, sub-regional, continental and global levels? More importantly, are policymakers engaging African youth adequately and sensitising them on skills needed for the achievement of SDGs and Agenda 2063. These questions will be reflected on in this chapter with the aim of providing recommendations and solutions.

African countries, like all world regions responding to COVID-19 using the World Health Organisation's (WHO) measures to combat the pandemic, has been imposing stringent restrictions on movement of people and social distancing measures^{xxvi}. This has exacerbated challenges faced by young people. High unemployment and underemployment rates will be exacerbated due to businesses closing and retrenchments since trade has been restricted. Those youth who depended on social and physical presence in order to do business in the informal sector have been unable to earn an income. In South Africa for example, social security measures provided by governments are commendable. However, they are inadequate to cushion the impact of the pandemic.

To say the least, the 2020 outlook for most African youth is bleak. Nevertheless, the pandemic has presented an opportunity for all stakeholders in youth empowerment to revisit how African youth can leverage the SDGs and Agenda 2063. Young people in Africa should look to the recently launched African Continental Free Trade Area (CFTA), potentially the world's largest free trade area as a potential to scale up their micro, small and medium enterprises in the post-pandemic era.

African Youth and the Sustainable Development Goals

Vast bodies of research and literature on the transition from the Millennium Declaration and its Millennium Development Goals (MDGs) to the 2030 Agenda and its attendant SDGs shows that African countries struggled to achieve most of the set MDGs^{xxvii}. For example, goal 1 that aimed at eradicating extreme poverty and hunger was only achieved by Botswana and Equatorial Guinea^{xxviii}. Learning from the shortcomings of the SDGs, African leaders developed

the Common Africa Position on the Post-2015 Development Agenda in anticipation of the SDGs. The initiative showed that African governments were interested in embarking on more uniform approach that would be heavily influenced the SDGs.

SDGs were adopted by global leaders on 25 September 2015^{xxix}. The United Nations notes that the “2030 Agenda for Sustainable Development provides a global blueprint for dignity, peace, and prosperity for people and the planet, now and in the future”. This global agenda was framed with the guidance of “5Ps” – People, Prosperity, Planet, Peace and Partnership, and constitutes 17 Goals and 169 targets. The 2030 Agenda is further underpinned by five guiding imperatives: Leave no one behind, Put sustainable development at the core – integrate social, economic and environmental dimensions of sustainability in all programmes, Transform economies for jobs and inclusive growth, Build peace and effective, open and accountable institutions for all, and, Forge a new global partnership^{xxx}.

The UN has made it clear that young people are partners in the implementation of the SDGs. Information on UN websites shows that young people were actively involved in the development of SDGs and continue to be engaged in the frameworks and processes that support its implementation, follow-up and review. African youth however have largely been left behind as far as SDGs are concerned. Access to information is impossible for youth living in Africa where the cost of internet is high and where approximately 800 million people are not connected to the internet^{xxxi}.

Reporting on the SDGs on the African continent has been low. The African Peer Review Mechanism (APRM) upon receiving an expanded mandate to monitor of Agenda 2063 and SDGs has started assisting AU member states in developing their voluntary national reviews and presenting them to the High-Level Political Forum (HLPF) on Sustainable Development^{xxxii}. Unfortunately, the actions and progress of youth in contributing to SDGs are not given focus in most reports developed by multilateral organisations. There is a gap here that could be addressed by youth-led civil society organisations working on annual reports highlighting the actions and progress of youth and SDGs. The United Nations Economic and Social Council (ECOSOCC) is another platform that has over the past years given voice to non-state actors including youth activists to report on best practices in SDGs implementation. It is important to note that ECOSOCC, like many other multilateral organisations, is for the most part accessible to youth from well-off backgrounds. The fact youth from poor communities are

mostly left out from involvement in ECOSOCC should be seen as an advocacy and lobbying opportunity.

Ownership of the SDGs by African youth is one of the low hanging fruits that stakeholders can utilise in harnessing meaningful participation by young people. The UN, the AU and youth led NGOs could upscale, harmonise and rationalise their research on SDGs. Public awareness of the SDGs is quite limited. Knowledge on the SDGs is currently restricted to students of development, practitioners in the public service and politicians. To mitigate the gap of Africa's youth SDGs ownership, one recommendation is for an increase in partnership between UN agencies and youth-led NGOs and grassroots activists. African governments can play their role through budgeting and national sensitisation of the people. Importantly, as suggested by the African Peer Review Mechanism bi-annual Africa governance reports, governments can align national planning and budgeting with SDGs.

SDG 3 deals with health targets and is currently on the spotlight as the world responds to COVID-19. African countries are currently not meeting the Abuja Declaration where African leaders pledged to the utilization of 15% of annual budget to improve the health sector^{xxxiii}. Given the budgetary pressure on national governments, innovation in the 4th Industrial Revolution could be utilised. Ms. Sarah Hamouda the SDGs expert at the APRM Continental Secretariat explained that "In Chad, Morocco, Senegal, Kenya, Tanzania, and other countries, African youth are leading awareness campaigns and bringing home-grown innovative solutions burden"^{xxxiv}.

Agenda 2063 and the Flagship Projects

In Agenda 2063, African youth are featured in Aspiration 6 of the 7 broad aspirations^{xxxv}. Aspiration 6 reads: "An Africa whose development is people -driven, relying on the potential offered by its people, especially its woman and youth, and caring for children^{xxxvi}". The centrality of youth in Africa's development agendas reinforces the ideals enshrined in the African Youth Charter (AYC) that demands youth empowerment from African governments but equally requires youth to take responsibility for their own development^{xxxvii}.

Since the launch of Agenda 2063, Africa's young people have voiced their concerns regarding the lack of inclusion in decision-making platforms and lack of funding for their projects. Platforms such as YouthConnekt, African Governance Architecture Consolation Series and the

APRM Annual Youth Symposium have been useful in youth engagement and sharing of experiences, best practices and peer learning in advancing African development. At the AU level, the establishment of the Office of the Youth Envoy and the subsequent election of the first ever AU Youth Envoy, Aya Chebbi is a commendable achievement. The scaling up of youth mainstreaming in decision-making and implementation of development frameworks however still requires further upscaling.

During the AU Youth Consultation Series on COVID-19 by the AU Youth Envoy held on social media platforms, Chebbi urged youth to adapt to the changing realities. She further requested the 16 African countries to expedite the universal accession to the African Youth Charter (AYC)^{xxxviii}. The implementation of the AYC is the first practical step at the continental level that will lead to meaningful youth participation in Agenda 2063, SDGs and all the flag continental projects such as the ACFTA.

The Agenda 2063 continental flagship projects present an opportunity for African leaders to co-opt young people to play their role in Africa's development. While 'Agenda 2063' has become a buzz word and has received a warm reception amongst some of the education African youth, as things stand, there is lack of a coherent plan on how youth will contribute to specific initiatives. Youth organizations that step up to the plate and offer tangible, project-based strategies will be making a major contribution in these regards.

Figure 1: Below are some examples of Agenda 2063 flagship projects^{xxxix}

AU Flagship Plan	Status of implementation	Opportunity for African Youth
African Continental Free Trade (ACFTA) Aimed at accelerating growth of Intra-Africa trade and use trade in a more effective way to bring growth and sustainable development	✓ 54 of the 55 AU Member States have signed the CFTA (Eritrea is yet to sign) ✓ 30 AU Member States have ratified and deposited their instruments ✓ ACFTA Secretariat will be in Accra, Ghana	- Job creation - Access to markets for youth in macro, small and medium enterprises - Access finance, peer learning and

		sharing of best practices
Pan- African Virtual and E-University (PAVEU) The project is aimed providing quality higher and to tertiary education for African people	✓ PAVEU is currently hosted at the Pan African University Rectorate Headquarters in Yaoundé, Cameroon	- Access to Pan-African higher education - Skills development
African Passport and Free Movement of People Reforming of Africa's migration laws that have previously been restrictive in the movement of people.	✓ 32 AU Member States have signed the Protocol to the Treaty on the Establishment of the African Economic Community relating to Free Movement of Persons, Right of Residence and Right of Establishment ✓ Design, production and issuance of the African Passport now available	- Boost in the tourism sector where youth are employed and have created employment opportunities - Skills transfer, labour mobility and Pan-African knowledge exchange
Single African Air Transport Market Aimed at creating a single unified air transport market in Africa to open-up African air space for civic aviation	✓ 23 AU Member States have signed up to the Open Sky agreement	- Employment as new markets for airlines will be established - Opportunities for entrepreneurs in aviation
Implementation of the Grand Inga Dam Project	✓ South Africa and DRC have signed an MOU stipulating the project management.	- Access to affordable and reliable energy will boost micro,

The dam to be constructed in the Democratic Republic of Congo (DRC) is expected to produce 43,200 MW and subsidise regional power needs	The dam is expected to be operational post-2030	small and medium business largely run by youth
The Pan -African E-Network Aimed at implementing policies and strategies that lead to transformative e-applications and services in Africa such as broad band terrestrial infrastructure, cyber security and revolutionary bio and nanotechnology industries	✓ 47 African countries have joined the initiative and the government of India is supporting its implementation	- Approximately two thirds of Africa are not connected to the internet - Youth lead in ICT and online businesses
Silencing the Guns by 2020 The aim was to end all wars, civil conflicts, gender-based violence and violent conflicts and prevent genocide	✓ The African Standby Force was established in 2003 but is still yet to be deployed	- Development is only viable in conflict free communities
Africa Outer Space Strategy Aimed at strengthening Africa's use of outer space to bolster its development	✓ Statue leading to the establishment of the African Space Agency was adopted by AU Member States in 2018 ✓ Republic of Egypt hosting country of the hosting Agency	- New areas for African youth to explore such as disaster management, remote sensing, climate forecast, defense etc

The table above illustrates that young people have vested interests in the successful implementation of Agenda 2063 and its flagship projects. Importantly, the trade and economic prospects that emanate from Agenda 2063 flagship projects particularly for Africa's young people who are already suffering from a surge in unemployment cannot be overstated. The post- pandemic era is yet another opportunity for policy makers and stakeholders involved in implementing programmes aligned to Agenda 2063 to upscale their efforts and revise strategies of engaging the youth.

The African Continental Free Trade Agreement (AfCFTA) Flagship

The AfCFTA Agreement is but one of the flagship programmes of Agenda 2063 .It advocates for the free movement of goods and services, and by extension, the free movement of people through the implementation of another flagship project – the common African Passport – and therein lies the bottleneck. Not many African countries, especially those with high standards of living want Africans at their doorsteps on account of a common African passport.

Osten Chulu, an economist and expert on the monitoring and evaluation of Agenda 2063 noted the following:

“Intra-African trade will certainly be enhanced with the AfCFTA, but Africa has to also contend with a few considerations: (1) Reducing the cost of doing business and reducing transaction cost; (2) Improve trade infrastructure ; (3) Finding solutions to regional trading arrangements such as SACU, ECOWAS, SADC, COMESA, etc, and how do we manage multiple membership to the latter (4)”^{xl}.

The question that African decision makers should be preoccupied as far as the AfCFTA is concerned is the capacity of our countries to educate our border control officials and the Africa population across the continent. Information and communication campaigns could be led by youth, leveraging creative means in the arts and culture realm. Equally, there is currently no capacity at African borders to allow for a seamless and unhindered movement of goods, services and people. In the post-pandemic implementation of the AfCFTA, African youth could be utilized in assisting with technological tools such as machine learning, digitization and artificial intelligence to speed up the mobility of goods and services across the borders.

Nexus between SDGs and Agenda 2063 and Leveraging the Youth

While the SDGs and the Agenda 2063 have laid out the implementation programmes and initiatives, many are premised on central government leadership and control. The SDGs have been integrated in most development plans of governments across the continent, while the same is not entirely true for Agenda 2063, although at the continental level, there is the First Ten-Year Implementation Plan complete with flagship projects. The Africa Governance Report (AGR) indicates the congruence between the SDGs and the Agenda 2063 of almost 90%, meaning that implementing the SDGs is akin to implementing the Agenda 2063^{xli}. Nonetheless, the youth can be involved in tightening and enhancing the joint implementation of the SDGs and Agenda 2063. This is because the youth are critical thinkers – they approach problems and solutions differently from the normal approaches to development. Some of the ideas being pursued in Agenda 2063 and SDGs have been around for many years, periodically repackaged and renamed. Part of being youthful is about asking questions around you. Youth can identify and challenge entrenched norms and ideals that exclude them in economic endeavours as well as challenge existing power structures.

The youth can play a critical role in the mobilization of their peers to force certain courses of action. The #BlackLivesMatter Movement is driven and led by relatively young people using social media as a mobilisation platform. Youth activism has been found a new and fertile ground and is on the increase globally. We are witnessing unparalleled creativity and innovation online. If the internet accessibility and high cost of data challenge is resolved one can only imagine the improved contributions towards the aspirations of SDGs and Agenda 2063.

Figure 2: Below are some of the main gaps that exist in youth development oriented programmes



Weak implementation of youth-centric policies with translation of continental and global programmes and policies receiving inadequate implementation results at national level. The latter is worsened by lack of country and community ownership, weak engagement, poor expertise, insufficient resources;



Inadequate engagement by governments with young people. In sum, young Africans are not well informed about the policies and programmes they ought to drive;



Data availability and poor monitoring and evaluation of youth policies.



Coordination and mainstreaming of youth policies and plans remain a stumbling block. The lack of coordination has resulted in overlapping mandates, duplication of tasks, misalignment and lack of synergy and the absence of a united front. Mainstreaming of youth which entails working with youth partners in organizations in the spirit of efficacy, equity and empowerment is lacking.



Competing Partner agendas have resulted in overlapping and misaligned agendas

Figure 3: In order for some of the gaps above to be addressed, the following interventions are proposed

- ✓ Development of a common African youth position in African youth response to Agenda 2063, UNSDGs and all relevant developmental frameworks. This common African youth position should be a multi-stakeholder project and can be informed by the current African Plan of Action for Youth Empowerment;
- ✓ Coordination and the capacitating of institutional mechanisms to address the challenge of addressing the lack of reliable data. A lot of reports cite the inadequacy of data as a big hindrance in tracking progress. Institutions such as the African Peer Review Mechanism (APRM), Economic Commission for Africa (ECA), African Development Bank (AfDB) and Regional Economic Communities (RECs) can collaborate with non-governmental organisations such as the Mo Ibrahim Foundation and Africa Barometer in monitoring and evaluating the progress of Agenda 2063 and UNSDGs;
- ✓ A clear division of labour amongst the AU and its organs and Regional Economic Communities, developmental partners, private sector and non-governmental organisations to stop the already existing duplication of efforts for similar objectives;
- ✓ The African Union Youth Division with the support of the African Youth Envoy should consider reviewing the African Youth Charter and find implementable projects that can be implemented at national level;
- ✓ Localisation of global, continental, regional and national developmental agendas with youth co-leading the process of implementation. Funding and training of youth led organisations should be a priority;
- ✓ Promotion of signing, ratifying and domestication of relevant domestic standards codes relating to youth empowerment such as the African Youth Charter should be up scaled. Organisations in the African Governance Architecture such as the APRM should promote youth participation in government.
- ✓ Encourage youth to go digital, nurture entrepreneurship, industrialisation and link African youth to national, regional and global value chains while creating decent employment. The latter should be done with the understanding that most of the African youth are still not connected to the internet. The digital apartheid should be an area of focus for all stakeholders involved in youth development. Without access to the internet, African youth will be marginalised from Agenda 2063, SDGs and will certainly contribute poorly to the AfCFTA.

Conclusion

The 4th Industrial Revolution is a good opportunity for African countries to enhance their youth participation in the ongoing development blueprints. Access to affordable and reliable internet will be game changer in this regard. Stakeholders led by the AU and UN institutions could use the post pandemic era to upscale their work in promoting youth empowerment through enhancing youth's role in achieving the objectives of Agenda 2063 and SDGs.

In the COVID-19 global pandemic that is altering the economic and social landscapes of African countries, the youth can be reliable partners. Young people's role in the effective implementation of Agenda 2063 and SDGs needs attention more than ever. The pandemic has reminded us that activists on the ground, policy makers, the government, private sectors need to combine efforts and refrain from working in silos.

The political commitment from all actors regarding youth mainstreaming needs to be supported by funding and improved follow up actions and reporting. SDGs and Agenda 2063 present an opportunity during this COVID-19 crisis and beyond for all stakeholders to revisit their approaches in youth development. In that regard, the *African Youth Charter* should remain the compass directing actors looking work hand in hand with African youth.

CHAPTER 3

Marginalization in a Time for COVID-19: Key Lessons and Opportunities

Luanda Mpungose

Introduction

The Covid-19 pandemic has emboldened and renewed Africa's impetus for unity and coordination as the region simultaneously responds to the virus and safeguards its economies from looming downturns. This is evidenced by the creation of the Africa Medical Supplies Portal which creates a single marketplace in which African countries can access medical supplies from regional and global manufacturers and competitive prices.^{xlii} Furthermore, there has been a joint effort by African countries to strengthen the Africa Centre Disease Control and Prevention (CDC) and subsequent appointment of special envoys that will solicit funding for Africa's economy and lobby for debt relief. What this indicates is the ability for Africa to mobilise to respond to pertinent issues and the swift creation of response structures and mechanisms. Shouldn't the challenges affecting marginalized groups be approached in the same manner? What can marginalised groups and civil society learn from this in order to hold governments accountable in the post Covid-19 era?

This global pandemic has unveiled the crippling inequalities that exist in African societies, where marginalised groups such as women and youth bear the brunt of inequity and disparity. This is seen through the lack of access to resources, the digital divide, increased unemployment and gender-based violence. It can be assessed that these socio-economic issues are felt most by certain groups in society who have been marginalised. Marginalisation can be conceptualised as relating to social exclusion, arising from a lack of equal opportunities and barriers to learning and participation.^{xliii} Those who are marginalised range from women, youth, LGBTQI communities and people living with disabilities. This chapter will focus particularly on youth and young women.

The African Union (AU) has taken significant steps to create frameworks that empower previously disadvantaged and marginalised groups such as the 2005 Protocol to the African Charter on the Rights of Women in Africa and the 2006 African Youth Charter. This is further

accentuated in aspiration six of Africa's development blueprint – AU Agenda 2063 – The Africa we Want, which states thus:

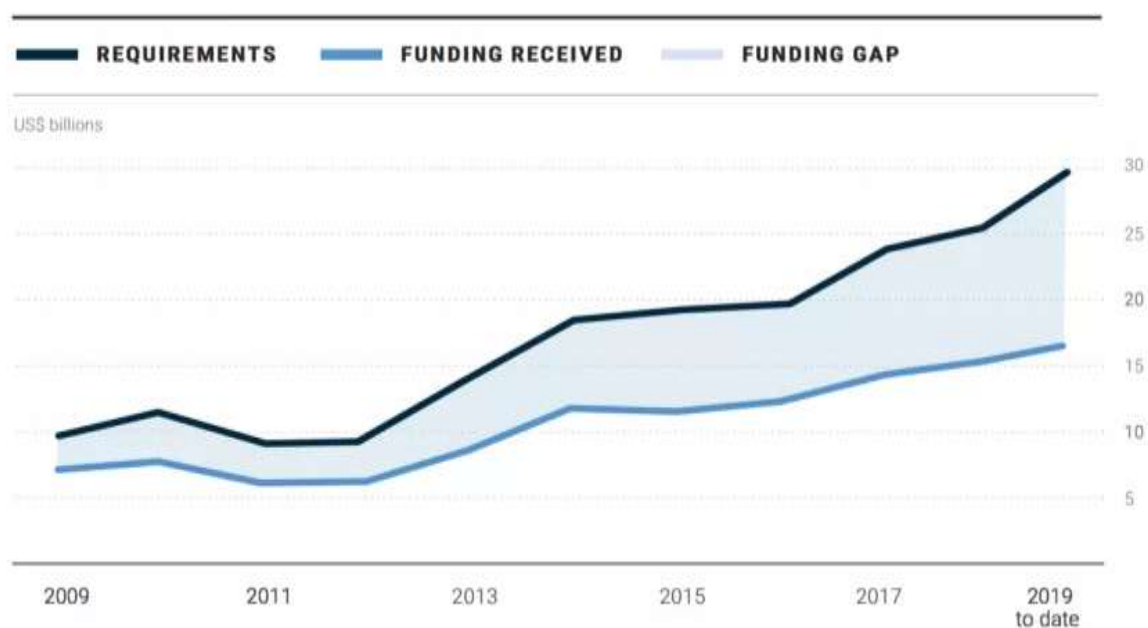
An Africa whose development is people-driven, relying on the potential of African people, especially its women and youth, and caring for children. Aspiring for Africa that is People-centred and caring; Puts children first; Has empowered women to play their rightful role in all spheres of life; has full gender equality in all spheres of life; and has engaged and empowered youth.^{xliv}

There is a confluence between these continental normative frameworks, national policies and the work of Civil Society Organisations (CSOs) and advocacy groups that operate at continental, national and grassroots levels on areas of socio-economic development. These organisations and groups have been directly affected by COVID-19 shutdowns, forcing them to modify their operations and approaches. They face a possible funding crisis as some development partners and donor countries may divert resources and budgets towards COVID-19 response and recovery. In South Africa, a number of Non-Governmental Organisations (NGOs) such as Breadline Africa, Cancer Association of Southern Africa (CANSAs), Nelson Mandela Foundation, SA Harvest and Shout SA have already re-strategized ways in which they can mobilise funds to centre their advocacy work and operations towards COVID-19 responses^{xlv}.

Further evidence of the shifting funding landscape abounds. According to a survey undertaken by On Think Tanks regarding funding during the Covid-19 pandemic, respondents representing donor organisations expressed that they are receiving pressure from their governments to redirect and align funding to Covid-19 interventions.^{xlvi} “Non-profit organisations and community-based organisations that are largely dependent on donor funding are having a really hard time and obviously having a significant reduction in contributions, which are of course hampering the vital services that they have to deliver, even more so than ever in the face of COVID-19”, says Gill Bates, CEO of Charities Aid Foundation Southern Africa.^{xlvii}

Figure 1: The funding gap for NGOs in the period of 2009-2019 following the Global Financial Crisis in 2007-2008^{xlviii}.

Funding Gap (2009–2019)



According to the World Economic Forum (WEF), this pandemic has set in motion a possible funding crisis for organisations as the economic downturn poses a threat to aid budgets and donations which are likely to decline as a result.^{xlix} What can be assessed in figure 1 is the economic effects of the financial crisis, seen through widening gap in required funding (30%) and funding received (16%) by NGOs. There is an estimated 14% discrepancy in the amount required by organisations and provided by donors.

Should similar trends take effect due to the COVID-19 pandemic, this will inevitably curtail the work of organisations led by marginalised groups and organisations that assist and advocate for women and youth. Thus, solutions need to be oriented towards providing resources and funding for NGOs and advocacy organisations.

United Nations Children’s Fund (UNICEF) accurately assess that women and girls are affected disproportionately by the COVID-19 pandemic given that women make up large parts of the health workforce; most primary caregivers to the ill are women; women and youth are more likely to be engaged in the informal sector which are the hardest hit economically by COVID-19; women experience increased risks of gender-based violence, including sexual exploitation; cultural factors may exclude women from decision-making spaces and restrict

their access to information on outbreaks and availability of services; young women might experience interrupted access to sexual and reproductive health services, including to family planning. Further to this, Africa grapples with the lack of access to jobs where data shows that one-third of Africa's is unemployed.ⁱ

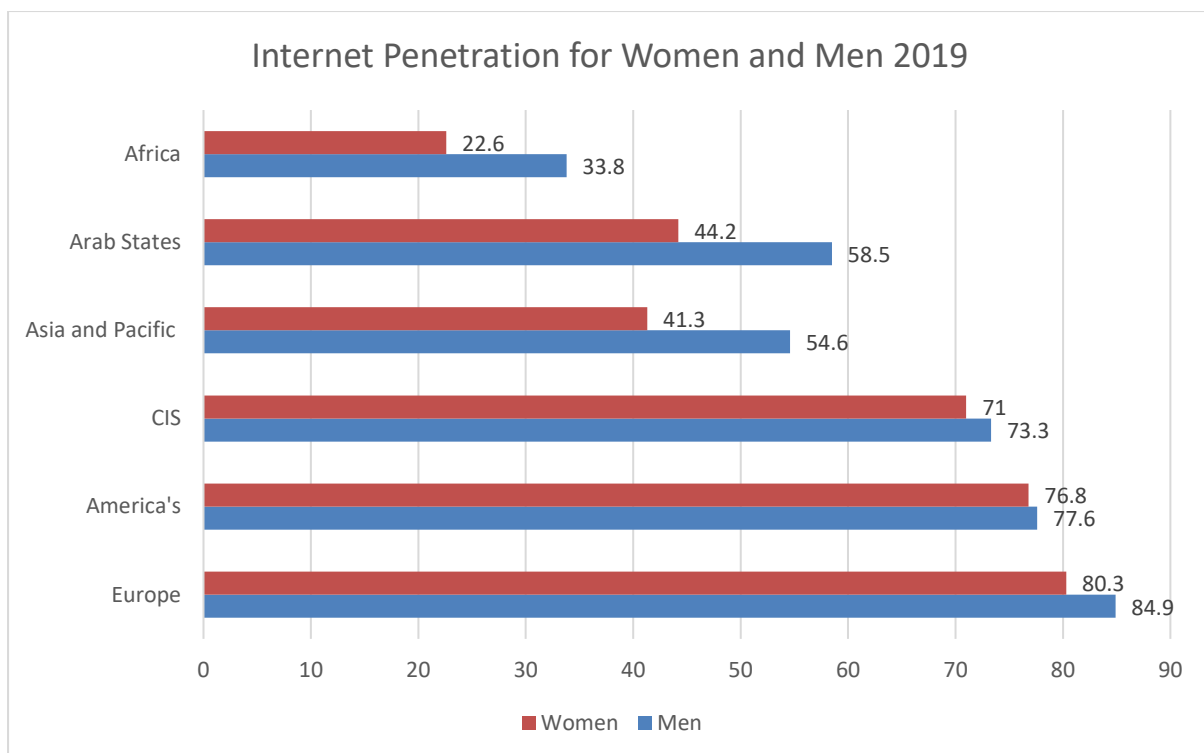
A Closer Look at Challenges Affecting Marginalized Groups

Access to Education and the Digital Divide

Generally women and girls bear the brunt of exclusion from education. A study recently undertaken by the United Nations Education, Scientific and Cultural Organization (UNESCO) found that 191 countries globally have implemented the closure of schools, resulting in over 91% of enrolled students or 1.5 billion people, not being able to go to school. These students have and continue to face disruptions to their education for an uncertain duration as most African nations have suspended physical learning indefinitely. Countries such as Cameroon and Tanzania have reopened schools while others such as South Africa resort to a combination of physical learning and digital learning platforms despite the many challenges pertaining to unequal access to the internet.ⁱⁱ

Most recent data shows that only 17.8% of Africans have internet access in their homes, while merely 10.7% have home-based computers.ⁱⁱⁱ Not only are African countries ill equipped with adequate ICT infrastructure to mitigate the disruptions caused by the pandemic, there is also the pertinent issue of unequal societies where young people, particularly young women, do not have the access to facilities and resources for online solutions. These are- access to computers, high- speed and stable internet and limited network coverage in remote/ rural areas.

Figure 2: Gendered Statistics on Internet Penetration^{liii}



Note: * ITU estimate. Penetration rates in this chart refer to the number of women/men that use the Internet, as a percentage of the respective total female/male population.

Figure two illustrates the gendered statistics to internet access across different regions of the globe. Africa lags behind significantly from the rest of the world and additionally, the digital divide across the gender dimension shows that there is an 11.2% gap between men and women regarding internet access. This enunciates the imperativeness of gendered interventions.

As governments in Africa grapple with measures to resume the academic year, the public-private sector partnership that has emerged in South Africa is notable and should be scaled up. This refers to the collaboration between government and major network providers such as MTN, Telkom and Vodacom to provide solutions to the inability of students to return to physical learning through the creation and scaling up of accessible digital platforms such as Student360 which houses academic materials for student free of charge. Furthermore, there have been laudable interventions from institutions of higher learning such as the University of Ghana and the University of the Witwatersrand to make provisions and avail resources (such as data and laptops) for students who might otherwise be excluded from online learning owing to the aforementioned issues of access.^{liv} This addresses the matter of access to some

degree. Notably, there is currently no evidence to suggest that this has resulted in higher participation by learners, particularly those from previously disadvantaged backgrounds. This remains to be seen in the next weeks and maybe months. A major opportunity herein is additional work to bolster the efforts of the aforementioned stakeholders through trainings and capacity building interventions that can build technological skills of the most marginalised youth particularly young women while advocating for quality broadband which will improve coverage in remote areas.

One of the biggest challenges facing youth organisations today is access to affordable data for their beneficiaries to participate effectively in online meetings and workshops. South Africa is reported to be among the countries highest data prices along with Zimbabwe, Namibia, Seychelles and Congo Brazzaville when compared to countries such as Nigeria, Tanzania, Rwanda and Egypt. Although the Competition Commission in South Africa ordered MTN and Vodacom to reduce their mobile data prices (resulting in a 33% reduction in data prices), the price of data remains expensive for the average person.^{lv}

Figure 3: Comparison of Data Prices in Africa^{lvi}

Country	1GB Data Bundle Price (USD)
Eswatini	21.39
Zimbabwe	20.00
Seychelles	17.87
Guinea Bissau	16.95
Chad	11.87
Libya	11.57
Namibia	10.89
Mauritania	9.78
Sao Tome and Principe	9.10
Botswana	8.87
Togo	8.48
Congo Brazzaville	8.14

Democratic Republic of Congo	8.00
Algeria	7.54
Madagascar	6.81
South Africa	6.78
Gabon	6.56
Angola	5.64
Cote D'Ivoire	4.24
Ethiopia	3.46
Senegal	3.39
Nigeria	2.78
Rwanda	2.20
Tanzania	2.18
Egypt	1.21

The data costs illustrated in figure 3 indicate the cost of data across the continent, led by Eswatini with the cost of 1 gigabyte of data averaging 21.34 USD and Egypt sitting at the lowest data cost- 1.21 USD for the same amount of data.

According to Itumeleng Mphure, Youth Programmes Officer with Youth@SAIIA, 90% of South African participants in their programmes require data provision as opposed to their counterparts in more developed countries in order to participate.^{lvii} In the medium to long-term, there needs to be sufficient support for organisations and campaigns that seek to bridge the digital divide, particularly in remote areas. These projects are scalable and can also create employment for youth. More financial support needs to be availed for advocacy geared towards further lowering of data prices, particularly as organisations increasingly rely on online alternatives.

The disruption or new normal equally compels organisations to reallocate some budget items to finance data for participants who may not have the resources but are an integral part of their programs.^{lviii} Furthermore, there are deeper social and environmental impediments that make it difficult for marginalised groups to participate fully and effectively in online

meetings and workshops. For example, there are young people whose involvement is impeded due to their homes being shared between a large numbers of family members making it difficult to attain conducive spaces to participate online. To throw an additional spanner in the works, the concept of social distancing is not feasible for some young people who may not have stable housing and therefore cannot safely engage in home-based social distancing. Therefore, while data and laptops are obvious solutions to some of these shortcomings, other pressing issues cannot be overlooked as they impact the inclusion of marginalised youths.

Employment

The African Development Bank (AfDB) finds that young women are more impacted by unemployment than young men. Furthermore, for most countries in sub-Saharan Africa and all of those in North Africa, it is easier for men to get jobs than it is for women, even if they have requisite skills and experience.^{lix} Furthermore, the International Labour Organisation has projected that an estimated 22 million jobs will be lost in Africa in the second quarter of 2020^{lx} and this is against the backdrop of a continent where youth (between the ages of 15-35) constitute 65% of the population and already battle with unemployment and underemployment. In North Africa, the youth unemployment rate is 25% but it is even greater in Botswana, the Republic of the Congo, Senegal, and South Africa, among others.^{lxi}

This will, in the short and long term constrain considerably Africa's gains in eliminating youth unemployment as espoused by Agenda 2063:

Youth unemployment will be eliminated, and Africa's youth guaranteed full access to education, training, skills and technology, health services, jobs and economic opportunities, recreational and cultural activities as well as financial means and all necessary resources to allow them to realize their full potential.^{lxii}

From an organisational point of view, there are obvious constraints in youth organisations' abilities to meet immediate deliverables with funders where contracts have been signed and/or the terms of reference have been agreed upon. Preliminary observations with interview subjects that work for organisations that are donor funded suggests that while some funders are receptive to altering agreed upon projects in lieu with covid-19 restrictions, health, and safety protocols, this is not the case with all funders. Consequently, not all funding

partners are flexible when it comes to changing their terms of reference.^{lxiii} This poses a threat that funding may be pulled affecting the financial sustainability of organisations and a threat to job security, respectively.

Gender Based Violence and Femicide

Current data shows that gender-based violence has increased substantially since the outbreak of the pandemic and with the subsequent lockdown protocols by individual countries.^{lxiv} During his briefing on 17 June 2020, President Cyril Ramaphosa of South Africa provided disturbing instances of gender-based violence and femicide in South Africa. “Over the past few weeks no fewer than 21 women and children have been murdered. Their killers thought they could silence them” said the president.^{lxv} Seven of the victims murdered are young women killed by men. Statistics show that there were approximately 5000 cases of gender-based violence reported between March and April 2020 during the highest and second highest restrictions level in the country (levels 5 and 4) in Gauteng alone. Further afield, reported cases in Nigeria similar to South Africa surged dramatically by 297% between March and April.^{lxvi} In Nigeria, the Mirabel Centre for Women has remained opened during the course of the lockdown which began in 30 March 2020. The Centre reports that it had received 15 sexual abuse cases within four days of the lockdown in Lagos.^{lxvii}

Against these grim statistics, do African countries have extensive legislation and policies to protect the victims of gender-based violence? Is there sufficient gender disaggregated data on gender-based violence? It can be argued that there are fundamental gaps in knowledge products in this regard. There is certainly a need for more evidence-based research on understanding this phenomenon from a legislative prism, the generation of literature and evidence-based research that extracts cases of best practice in order to bolster the work of advocacy groups.

There is an opportunity for scalable advocacy campaigns that both raise awareness and provide safe spaces for victims. In the short-medium term, solutions to these challenges need to be driven by innovation and inclusivity, ensuring that no one is left behind. Borrowing for the model used by network providers in response to inclusive online learning, similar approaches can be developed to ensure victims of gender-based violence can contact law enforcement agencies free of charge and ramping up the use of WhatsApp and other easily accessible platforms to disseminate information and statistics on this issue.

Areas of Best Practice by Africa's Youth: Methods and Approaches.

As once cautioned by Winston Churchill, former Prime Minister of the United Kingdom, “never let a good crisis go to waste.” There are numerous examples of youth-led organisations/initiatives that have seized the moment and stepped up to bring meaningful change in communities and countries. Youth interventions in the age of COVID-19 continue to dispel the perceptions that young people are just beneficiaries of government and leaders. The examples cited below demonstrates their agency and resourcefulness amid a global pandemic.

Sobel Aziz Ngom, Founder of Social Change Factory and Board Member of Generation Unlimited contends that the immediate areas of intervention from youth have been through mass distribution of personal protective equipment, assistance with food distribution in communities and information sharing. In Senegal, a Youth association has stepped up mass production of masks for the Senegal Health Ministry.^{lxviii} This demonstrates the agility and leadership of Senegalese youth entrepreneurs. Additionally, there is the promotion of a bottom-up approaches to communications on COVID-19 where this youth-led organisation has launched an information campaign to curb the spread of fake news and ensure communities are kept abreast on matters pertaining to changing regulations through daily updates in different local languages. These include the creation of videos with sign language to ensure inclusivity in the dissemination of information. The success of this project has been seen through the partnership between Social Change Factory and mass media in Senegal. The more young people are able to mobilise, network and sharpen their entrepreneurial skills, the more communities will benefit.

In Mali, Moussa Kondo, Country Director of Accountability Lab is running campaigns known as *Campagne Coronavirus CivActs*. The campaigns aim to track fake news and debunk myths on Covid-19 in all local languages and ensure transparency on the use of state resources by following donor funding and financial operations in covid-19 responses to ensure there is no irregular expenditure of funds that are meant to alleviate the effects on the pandemic in Mali.^{lxix} This campaign reinforces the importance of accountability and transparency. Boosted by the ability to understand state budgeting, access to open-budgeting platforms, advocating for open data in the event that information is not freely available. Additionally, advocacy skills and the use of social media to mobilise and share information. Given the technical nature of

some of the information, the ability to develop infographics and work with graphics is further emphasised.

“There are no pre-defined answers to covid-19, young people can rise up and escalate their views, shaping the narrative for a post covid-19 era particularly as there is currently an openness and appetite for innovation and digitisation.” Says Sobel Aziz Ngom.^{lxx}

Mphure argues that migrating to digital platforms does not only present challenges and obstacles. However, there are some positive gains that are notable in that online platforms allow for organisations to increase the reach as opposed to physical contact. Organisations need to reorient the way they do proposals to ensure innovation and online alternatives are built into their methodology. Development partners need to challenge organisations to rethink their work models and adopt approaches and methods that are relevant for this new reality- proposals need to demonstrate an increased use of online platforms and inclusivity.^{lxxi} Organisations need to consider capacity building programmes, now more than ever, that promote skills-based solutions. These are skills such as use of technology and online platforms, online meeting/workshop facilitation, coding, and software development.

There is an opportunity for young people to increase their voices and set the agenda for a post-covid-19 era. Young people need to clearly articulate their needs, what works for them and what does not work. Interventions in this regard may require strong platforms in which young people can engage and share ideas. Furthermore, there needs to be a critical examination of what policy participation looks like in the age of Covid-19 and subsequently in the post Covid-19 era. The kind of skills that will become crucial to ensure effective digital advocacy is policy engagement, research, ability to use social media to mobilise and garner support and the designing of infographics that are easily sharable.

An example of initiatives that can be emulated or leveraged within skills building is the UNICEF Advocacy Guide^{lxxii} which is a living document developed and co-created by Africa’s youth. This Guide sought to build the skills of youth in advocacy and policy participation by looking at key aspects of advocacy which are- research and fact finding, how to read and comment on a policy document, how to create a social media campaign, how to engage with stakeholders, monitoring and evaluation. These are the types of approaches that need to be

scaled up for marginalised groups who are looking for an entry point in issues that affect them.^{lxxiii}

Conclusion

This section assessed the concept of marginalisation in the age of Covid-19 with a particular focus on key challenges impacting groups such as youth and young women. It argued that these issues are not necessarily caused by this pandemic, but rather a legacy of deep-seated inequality which has become systematically entrenched in African countries. Furthermore, these issues are exacerbated by this pandemic. While rooting out deep socio-economic disparities may be a more longer-term endeavour requiring a multi-stakeholder approach, there are immediate low hanging fruits that can be leveraged by organisations and development partners.

The public-private partnerships and coordinated response by African countries in response challenged posed by this pandemic is presented as a benchmark for the types of modalities that should be emulated in response to socio-economic issues impacting marginalised groups. The overall successes and failures of these mechanisms and structures remain to be seen.

Proposed by this section are gendered and skills-based interventions that can ensure that organisations and their beneficiaries not only adapt to new methods, but to stay ahead of the curve. This pandemic threatens to reverse the developmental gains made by the continent and delay the attainment of the continents developmental aspirations as envisaged by Agenda 2063, it is for this reason that coordinated responses are critical.

CHAPTER 4

Youth and entrepreneurship: Untapped Opportunities and Supply Chains

Bob Wekesa

Introduction

COVID-19 is largely a problematic, challenging and perilous development. However, as this chapter argues, the pandemic's downsides, disadvantages and drawbacks ought to be seen as opportunities and windfalls. Rather than lament the challenges, it is more forward-looking to strategize on means and ways of mining them in responding to the immediate and future situations. Thus, the chapter seeks to offer some pathways towards implementable strategies and plans of actions that can be leveraged to harvest untapped potential. In so doing, the chapter is focused on some of the COVID-19 specific entrepreneurship possibilities that emanate from gaps, needs and disrupted supply chains. Closely following the challenges brought about by the pandemic, the chapter proposes some of the skills that the youth need in order to interpret a bad situation into an innovation and entrepreneurship treasure trove. In view of the fact that this is a current and evolving challenge, the chapter suggests low-hanging fruits that can be harvested quickly in what is emerging as a COVID-19 or pandemic economy^{lxxiv}.

Youth Entrepreneurship

The starting point is a reflection on youth entrepreneurship. There is little doubt that entrepreneurship is more amenable to youth than to older people. Behavioural and neuroscience studies have shown that younger people are more creative than their older counterparts because, among other factors, they are less inhibited by past experiences and less captive of established habits^{lxxv}. Entrepreneurship is "the process of doing something new and something different for the purpose of creating wealth for the individual and adding value to society"^{lxxvi}. A similar definition is that "entrepreneurship is the act of creating a business or businesses while building and scaling it to generate a profit"^{lxxvii}. The Cambridge Dictionary defines it as the "skill in starting new businesses, especially when this involves seeing new opportunities"^{lxxviii}. These and other definitions, take cognizance of newness, novelty and

creativity, or, more precisely, creation. These are the traits that come with youthfulness and COVID-19 provides a perfect opportunity for their expression, manifestation and application.

If we follow the logic of productive creativity, then African youth should be wealthy, considering that entrepreneurship is the form of creativity that leads to wealth or setting up profit-generating businesses. This is however not the case as we see in statistics on youth poverty and unemployment as captured by numerous studies such as the State of African Youth report in 2017^{lxxix}. Some of the factors that make youth entrepreneurship difficult can be understood when a definition by Business Dictionary is considered: “The capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit”^{lxxx}. This definition suggests that creativity, which includes an element of risk which in turn the youth have in plenty, must be developed (read consistency), organized (read predictable), and managed. This then calls for some level of skills, focus and a go-getter mind set if creativity is to be converted into wealth-creating productivity. However, even with skills, focus and the right attitude, factors militating against the harnessing of African youth creativity for wealth creation ranging from lack of capital to a poor policy environment have been well document^{lxxxi}.

Overall, youth keen on harvesting and harnessing the latent possibilities that COVID-19 portends can surf the internet using keywords such as “youth entrepreneurship and COVID-19” or “youth innovation and COVID-19” to access and consider the many emerging ideas and opportunities. A google search using these key phrases on 20 June returned 29.2 million items in less than a second. A youth organization such as Youth Bridge Trust can indeed commission youth to categorize this data into potential entrepreneurship sectors and publish this as a knowledge resource as part of its intervention. The rest of the chapter considers some of the ideas that do not require heavy financial investments, are easy to master and are scalable, meaning those that benefit communities and larger populations (as opposed to individualistic ones).

Communicating in African Languages

COVID-19 being a communicable disease necessitates information dissemination or public service information on a massive scale. Information is important in all phases; before people get infected in line with the adage that prevention is better than cure, and in the unfortunate

event of people being infected. Much of the information regarding COVID-19 has been developed by scientists using technical language. Such information includes protocols and guidelines on behaving in a manner that does not expose populations to the virus in high-risk settings such as health facilities, shopping areas, transport facilities, schools, homes, prisons, stadiums, transportation hubs, offices, and places of worship. This technical information needs to be broken down into language understandable and culturally appropriate to populaces in simple^{lxxxii} English, French or Portuguese. More importantly, translations into the over 2000 indigenous African languages not to mention sign language is a great gap waiting to be filled. Linguistic competences and specifically transcription and translation skills are therefore required in a big way. Already, a number of translation projects such as Translators Without Borders (TWB)^{lxxxiii} have sprung up around the world.

Many organizations playing a role in the information, communication and education dimensions of the pandemic may have budgets for which they would be willing to pay translation service providers. Donor organizations, governments and non-governmental that have turned to COVID-19 awareness creation and sensitization activities would potentially consider proposals that help them achieve their communication objectives such as presenting information visually and graphically so that it can be understood by community members. Others include media organizations such as radio and television stations looking for information relevant to the audiences and medical organizations seeking the translation of information packaged in foreign languages especially English into vernacular language.

Entrepreneurial youth can approach tech companies such as Google, Wikipedia, WebMD, Bing, Microsoft, Apple, Facebook and others with proposals for the translation English words and phrases related to the virus into African languages. Notably, these tech companies have initiated COVID-19 specific projects such as Apple and Google's joint contact tracing initiative^{lxxxiv} meaning that they would be interested in content generation projects. Some of the translations can be developed into videos and radio programs featuring local influencers. Such projects would also be of interest to mobile telecommunication companies given that their business models are depended on information and communication – a number of them are already heavily involved in COVID-19 projects. This innovative possibilities might involve the creation of completely new words in partnership with community leaders and language

departments in research organizations. There are a number of models from the Ebola crisis in West Africa in the past decade and messaging on HIV-Aids can be used^{lxxxv}.

Information Overload and Ignorance

A key challenge across the continent has been that some of the measures are hard to implement due to the levels of ignorance and illiteracy in some communities. In many communities, this arises out of ignorance and illiteracy. The fact that the youth are often more educated than pre-teen and older populations is a major asset for youth.

The vast amounts of information come with many challenges. Of particular concern is erroneous and even dangerous information such as conspiracy theories and the promotion of unproven medical treatments and therapies. Debunking and dispelling misinformation and disinformation is therefore an important antidote to what has become an information pandemic or in the words of the WHO, an infodemic. The youth who are able to verify the veracity of information and its relevance to populations will be playing a major educative role in helping the continent, regions, countries and communities to cope. In gathering and repurposing information on best practices with regards behaviour change, the youth ought not to start from scratch as organizations such as the World Health Organization (WHO), the African Centres for Disease Control (CDC), the national COVID-19 taskforces, universities and many other organizations are brimming with such materials.

It is notable that in many countries, governments, as of late May, started easing restrictions especially on the movement of people. Yet at the same time, the mass movement of people poses a great danger for increased infections^{lxxxvi}. This challenge can be converted into an opportunity by ingenious youth. There is and there will be a massive need for informational materials that are clear and comprehensible. Information in the form of printed posters and through mobile phone applications will be required as means of explaining practices that lessen the rate of infection particularly in crowded situations.

Youth organizations can convene training sessions on information gathering and dissemination either online or physical (while observing social-distancing) to help fill information gaps. Fortunately, the era of Information and Communication Technologies means that there is a lot of information on various aspects of the disease on the internet.

Skills in scanning traditional and social media and curating data and information from multiple sources and packaging for consumption are increasingly necessary. Mathematical and statistical skills combined with internet sleuthing competences are therefore required^{lxxxvii}.

Information curating and fact checking in partnership with fact-checking organizations such as Africa Check^{lxxxviii} provides avenues. The youth could undertake door to door awareness creation campaigns in a manner that would address the challenge of poor communication which has hampered interventions such as testing and diagnosis in several African countries. It has also been pointed out that lack social safety nets for vulnerable communities is leading to psychological issues. Youth with competences and skills in psychology, psychiatry and social work^{lxxxix} can serve as counsellors in communities thus gaining the experience that will prove helpful for their entry into job markets at a later stage.

Going through the massive information and data sets and making them relevant to communities would be a service that helps mitigate the ill-effects of the pandemic. Indeed, some of this information is being disseminated via webinars suggesting that the many organizations convening the webinars will need transcription services, essentially converting information from voice formats to readable formats such as Microsoft Word documents. At any rate, skills in convening online discussions, the use of chat bots and skills in online coding have become a major asset as people opt for online sources of information in the phase of stay and work at home advice. Guidelines for securing online jobs are now readily available on the internet as readable documents or as videos on YouTube and other platforms^{xc}.

Youth organizations can work with entities such as road transport companies, air travel authorities such as airline companies and airport agencies, and authorities responsible for water transport such as ports and ferry services to print and display information in public places. Graphic design skills are important in these respects. The youth with these skills can work with printing companies which may be currently either idle or operating at very low capacity as seen in the downturn in the newspaper industry^{xc1}. This way, the youth will be involved in the production of literature to sensitize and educate communities. Similarly, youth can work with mobile telephony companies to develop apps that can be downloaded by people who are forced to be on the move so that they heighten their levels of vigilance in situations of vulnerability.

Screening and testing

Data on the cases of those who are infected has become a major focus for governments. Without this knowledge, responses would potentially off the mark. This is why governments have been very keen to screen and test and announce the numbers of new infections, monitor mortalities and recoveries, identify the characteristics of the infection in various segments of the population and follow up outcomes with medical interventions^{xcii}. Countries have to ensure that screening and testing is of high quality to ensure that cases of infection are identified so that follow up action such as isolation, quarantine and medication are taken. Testing and screening also helps in terms of contact tracing which enables the identification of cases of infection thus stemming the possibility of escalation of infections in communities. Screening is particularly important at points of entry into countries and localities as in cases of movement of people from one province or district to another. However, most governments are stretched on all aspects of the surveillance that is required to generate this crucial data.

A number of innovative means in mitigating the effects of the pandemic in urban centres have been proposed^{xciii}. Working with local authorities such as municipalities, wards and neighbourhood organizations, the youth can help analyse the data in ways that are meaningful for immediate communities. Mapping and mathematical modelling as seen in the work being undertaken by the Gauteng City-Region Observatory, a research entity based at Wits University^{xciv}, can be helpful in drilling down to the meaning of data for specific locales. Skills in statistical and mathematical data analysis can be crucial in these respects. Youth from health and medical fields such as public health and, chemistry, biology and physics disciplines have a great opportunity in offering their services. Additionally, youth who are already trained as physicians and clinicians can undertake further training for their peers in the basics of areas such as management of severe respiratory infections and basic alleviation of early-stage-infections. These skills can prove quite helpful in focusing attention on places where intervention are required through communication approaches such as hotlines and minute-to-minute information dissemination at the community level. If there is a time when young scientists should volunteer as a means of gaining experience, it is now. The good news is that organizations such as UN Volunteers^{xcv} are providing the opportunity to serve.

Facilities, equipment and disinfectants

COVID-19 has put a huge strain on health facilities against the reality that health systems in Africa are woefully ill-equipped to cope^{xcvi}. Many of the health facilities such as dispensaries, clinics and hospitals were not set up for handling the contagious respiratory disease that COVID-19 is. Moreover, testing and diagnosis require laboratory facilities and services both of which are in short supply in African health facilities particularly at community levels. Furthermore, these facilities are likely to experience surges in patient numbers meaning that preparations have to be made to handle inundations. Adapting these health facilities for the disease – essentially scaling up facilities and equipment – is therefore an important need. Hospitals will need crucial equipment such as ventilators and ICU beds and many of them need to be manufactured as global and continental channels of supply are currently broken. At community levels, much has been commented on with regards to the crowded nature of public spaces. Hand hygiene, fumigation of public spaces, provision of water and disinfectants and wearing masks have been continuously recommended as solutions. One would imagine that there is an oversupply of sanitizers, detergents and soaps and masks. However, the affordability of these products remains a major challenge for poor communities.

In the pressure exerted on the health facilities lies opportunities for entrepreneurial youth. Makeshift facilities will be required for quarantine and isolation facilities. China has demonstrated some of the approaches that African youth in the building and construction industry can tap^{xcvii}. The manufacturing and selling of screening gadgets, ventilators and ICU beds, among others, are also required in big numbers. Working with manufacturing companies, youths can get involved in manufacturing processes. Repurposing some of the factories to focus on the manufacture of medical equipment as lobbied by organizations such as the Tony Blair Institute for Global Change is a promising avenue for entrepreneurial youth from engineering fields^{xcviii}. The entry of youth into import-export businesses can help move them from places where they are in plenty to the places where they are needed.

In the short span of the pandemic we have seen lots of products produced locally in various countries^{xcix}. In some countries, innovative youth have managed to manufacture kits and equipment such as ventilators in Kenya^c and screening gadgets in Senegal^{ci}. The internet is awash with innovations ranging from local mixing of disinfectants to making soap using local

products. These innovations in the local manufacturing can be scaled up through the sharing of technical know-how across nations for instance through online information sharing systems. Entrepreneurial youth can try and figure out means and ways of supplying personal protective equipment to communities at rates lower than established suppliers.

A related opportunity revolves around research into existing and new treatment medicines. In what some have labelled “science-based entrepreneurial businesses”^{cii}, youth with the requisite skills can develop products that serve communities. For instance, since the outbreak of COVID-19, there has been talk of the potential of African herbs and foodstuff including certain fruits, vegetables to ameliorate some of the effects of COVID-19. This is an opportunity for young Africans with some skills in health and medical research to be part of the teams at medical research centres working around the clock in the search of cures and treatment. More broadly, the pandemic has heralded e-medicine and telemedicine in countries such as South Africa where some kinds of diagnosis and prescription can be done entirely online^{ciii}. South Africa is also using drones for information dissemination^{civ}. In Rwanda, robotics are now being used for diagnosis, prescription and the movement of goods and products within medical facilities^{cv}. All these and more simply call for skills transfer from one African country to another.

Supply Chains and Skills Mobility

The pandemic has affected the movement of people, goods and services thus breaking supply chains globally, regionally, within countries and within localities. It has been pointed out that lack of financial reserves and stimulus packages to mitigate losses by businesses is a particularly major problem in Africa. Additionally, we have discussed the great need for goods and services directly linked to the mitigation of the health and medical dimensions of the pandemic. Furthermore, not all African countries have the same capacity in the manufacture of essential goods and equipment necessary for managing the disease. In any case, it is evident that the stocks in goods such as medicines and laboratory gadgets and equipment would be get depleted. Overall, many brick and mortar business and those build on pre-pandemic models risk failing.

Figure 1: Goods and Products that speak to supply chains (Source: United National Industrial Development Organization)^{cvi}

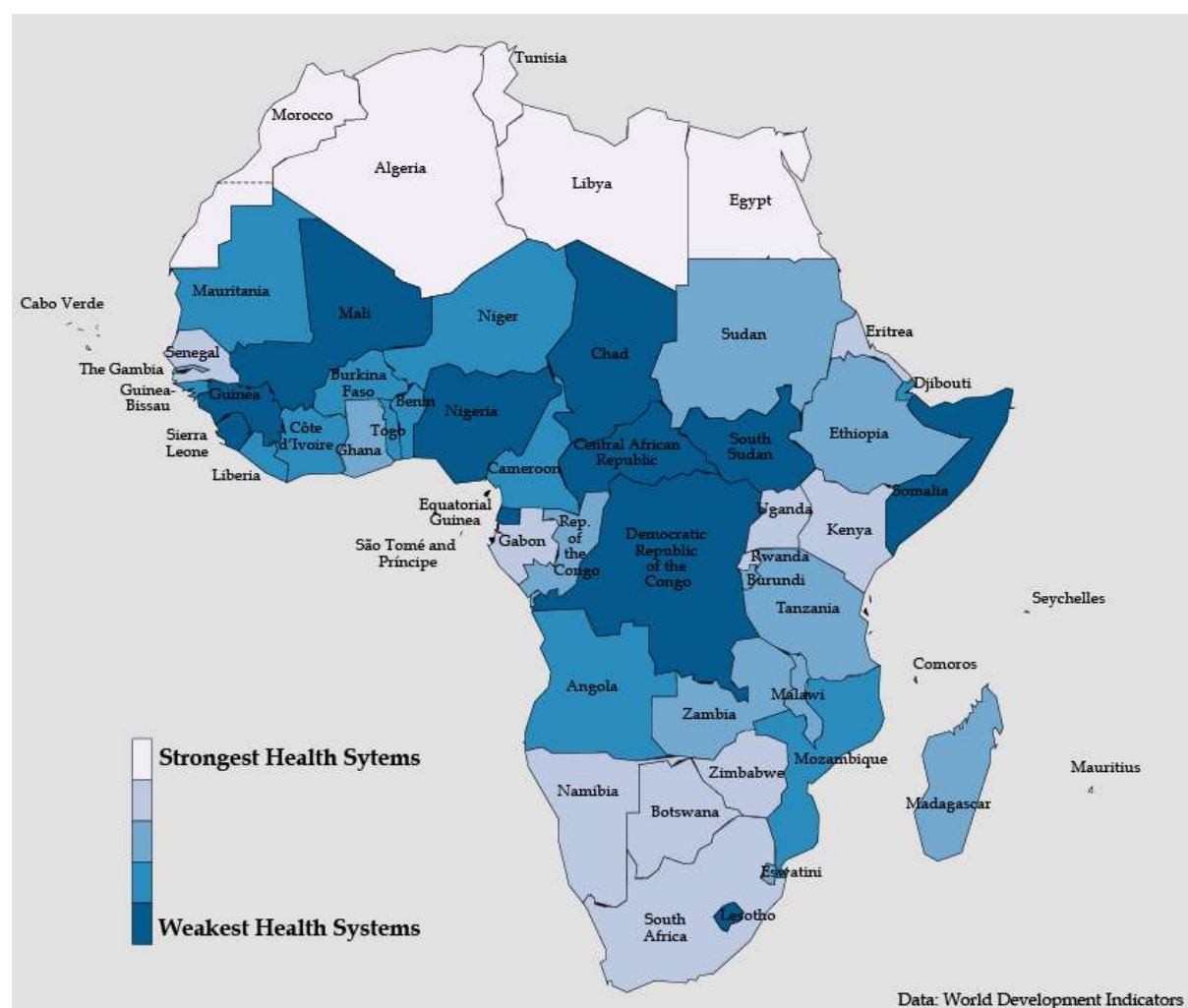
Category	Critical items identified by WHO	Example of facilities that might be repurposed
Protective personal equipment (PPE)	<ul style="list-style-type: none"> • Gloves, examination • Gloves, surgical • Goggles, protective • Gown, protective • Face shield • Mask, particulate respirator • Mask, surgical 	<ul style="list-style-type: none"> • Textile factories • Garment plants • Yarn spinning mills • Electronics assembly plants • Injection moulding facilities • Prototyping shops (including 3D printing)
Diagnostic equipment	<ul style="list-style-type: none"> • Lab screening test kit • Lab confirmation test kit • RT-PCR kit • Extraction kit • Cartridges for RT-PCR automatic systems • Swab and viral transport medium 	<ul style="list-style-type: none"> • Pharmaceutical preparations • Biopharmaceutical preparations • Pilot biotech plants • Clinical research laboratories
Clinical care equipment	<ul style="list-style-type: none"> • Pulse oximeter • Concentrator O2, 10L, 230V, 50 Hz + acc. • Nasal oxygen cannula, with prongs, • Ventilator patient, for adult, pediatric. • CPAP with tubing and patient interfaces for adult and pediatric. • Suction pump, mechanical • High-flow nasal cannula (HFNC) 	<ul style="list-style-type: none"> • Automotive production lines • Aerospace manufacturing plants • Specialized engineering service and testing facilities • Manufacturing technology and innovation centres • Vacuum cleaner assembly plants • Machining shops •

Because Africa has generally been at the tail end of the infection's trajectory, African youth entrepreneurs can study what is happening in the countries that have been devastated and learn from the success and failure factors there. For instance, which products and services were most in need at the various stages of the pandemic in China, the US and Europe? Within Africa itself, youth can undertake risk mapping^{cvi} (see figure below) per country as a means of understanding which country needs which goods and services depending on the stage at which the infections stand. It is feasible that the products and services that were in demand in Europe and the North America will eventually be required in Africa assuming that infections

will spike later. A basic skill in these regards will be internet research capabilities coupled with basic analytical capabilities.

Linking countries with higher capacities in the manufacture of essential products such as laboratory equipment with counterparts in countries with lower capacity is a promising import-export entrepreneurial path. By establishing such cross-border relationships, the youth would not only be connecting the laboratories but also opening pathways for the supply of laboratory equipment, materials such as chemicals and expertise. Given the current circumstances, governments would be willing to permit the transportation of such essential services and goods. However, this an opportunity that requires some medical and scientific knowledge as a starting point.

Figure 2: Public Health Systems in Africa



Many brick and mortar businesses will face the real danger of collapse. Youth entrepreneurs can come in to work with business owners in repurposing them in order in line with the current circumstances. For instance, a factory that was making biro pens or pencils could be repurposed to start producing equipment such as rapid testing and diagnosis kits.

The question of medical and health professionals mimics the supply chain problem. It has been pointed out that African nations have a huge shortfall in health workers ranging from nurses to public health professionals and all the way to psychologists. Yet, some of the skills required for these functions can be filled by youth with certificates in the fields of science such as chemistry, biology and physics. Moreover, in the same way that some African countries have a higher level of manufacturing capacity in goods and equipment than others, so is the case with technical and scientific expertise relevant for COVID-19 mitigation. And just as research into equipment in high levels of availability in one country and shortage in another is a requisite skill in closing the gaps, so would be the approach in the movement of technical expertise. Youth organizations can create databases of youth with technical expertise and make these available to health authorities in countries where they are needed. This way, specialists can be rapidly deployed to countries and indeed areas where they are needed most. Leveraging ICTs is also a possibility as youth with technical expertise can train and mentor their peers in other countries via online courses, online case studies.

On a broader scale, education has been disrupted and even as schools reopen in some African countries, online teaching and learning will remain a platform of choice. This is the time therefore for youth entrepreneurs to set up online teaching and learning mechanisms which will address the problem of home-learning being faced by many parents.

Related to linkages between countries is that fact that Africans are generally known to have weathered many epidemics in the past. Indeed, the 2014 Ebola virus disease outbreak has been described as close to the COVID-19 pandemic. It has been pointed out that small, informal businesses in the DR Congo, Liberia, Sierra Leone and Guinea which endured the Ebola outbreak managed to survive by adapting to the circumstances^{cviii}. Indeed, there is potential for online connections between tested and tried entrepreneurs in those countries with their counterparts in other African countries. This can be done by establishing contact between youth in those countries and other African countries through online connections.

Conclusion

In conclusion, the table below provides some of the potential ideas that youth organizations such as Youth Bridge Trust can consider in the rich area of youth entrepreneurship, opportunity-mining and addressing supply chain challenges.

Figure 3: Entrepreneurship Challenges, Opportunities and Skills

1. Communicating in African languages	
Challenge	Unavailability of public service information in local languages or information rendered in technical language
Opportunity	Partnership with information and communication companies, media organizations, tech companies, civil society and community organizations, and organizations
Skills	Transcription and translation, media production skills
2. Information Overload and Overcoming ignorance and illiteracy	
Challenge	Misinformation and disinformation, ignorance, illiteracy in communities
Opportunity	Vast information and data, convening training sessions; information packaging and dissemination; partnership with mass transport and public-space organizations

Skills	Mathematical and statistical skills; scanning traditional and social media and curating data and information; fact-checking
3. Screening and testing	
Challenge	Difficulties in the identification of infections especially at community levels
Opportunity	Partnership with local governments
Skills	Mathematical and statistical skills; data analysis; chemical, physical and biological sciences
4. Facilities, equipment and disinfectants	
Challenges	Poorly equipped health systems shortage of medical products
Opportunities	Innovation in manufacturing; construction; cross-country information collaboration
Skills	Networking; chemical, physical and biological sciences; medical research
5. Supply Chain and Skills Mobility	
Challenge	Shortage of supplies; business collapse
Opportunity	Export-import business; home supplies; e-commerce rescue of collapsing businesses

Skills	Cross-border trade, change management; international human resource management; market analysis
--------	---

CHAPTER 5

Funding, Partnerships and Networks

Noxolo Ntaka

Introduction

The over-arching objective of this chapter will be focused on mapping out key organisations and networks involved in youth development work. This is particularly important considering the current political and socio-economic climate we find ourselves in as a result of the COVID-19 pandemic, which has further adversely affected young people across the African continent. In response to the aforementioned, this section will identify new strategies in terms of funding, networking and partnership opportunities that can be pursued by Youth Bridge Trust – during and post-COVID-19 – in order to aid in the social and economic advancement of youth in Africa. These opportunities will be identified bearing in mind the skills and resources currently in demand and that are scalable in this regard.

Situation analysis

A recently released report by the International Labour Organisation (ILO), has indicated that young people, globally, have borne the brunt of job retrenchments as a result of the COVID-19 pandemic^{cix}. The report, which also tracks the ongoing effects of the virus and international efforts to curb infection rates, reveals that young people are facing an array of social and economic shocks that could lead to the emergence of a “lockdown generation”^{cx}. The statistics indicate that more than one in six young people stopped working since the onset of COVID-19, while those who have remained employed have had their hours cut by 23 percent. As it stands global youth employment is on the rise in sectors that have been hard-hit by the pandemic namely manufacturing, hospitality and health care – as well as in the informal sector.

The report further indicates that prior to the outbreak, more than four in ten young people were working in the sectors most affected, with 131 million of those young people, being employed by the informal sector^{cxii}. Thus, youth who have been engaged in work that renders them vulnerable to income and job losses are particularly hit harder as they are more prone to income shocks when the economy is in crisis, due to their lower salaries and savings. Bearing this in mind, it will also be important to identify funding opportunities within the informal sector that could be crucial in creating job opportunities for young people. Figure 1

shows the global estimates of youth employment in the sectors that have been hit the hardest by COVID-19. As evident in the graph below, the concentration of young people is found in the sectors affected most by COVID-19 namely, accommodation and food services, as well as wholesale and retail trade. Additionally, given the ongoing disruptions to supply chains, sectors such as manufacturing have also been negatively impacted employment-wise^{cxii}.

Figure 1: Global estimates of Youth Employment in Hard-hit Sectors

► Table 1. Global estimates of youth employment in hard-hit sectors

Baseline employment estimates for 2020 (before COVID-19 crisis)				
Economic sector	Impact of crisis on economic output	Level of employment (millions)	Share in global youth employment (%)	Share of young women in total youth employment (%)
Wholesale and retail trade; repair of motor vehicles and motorcycles	High	74.8	17.5	41.7
Manufacturing	High	59.2	13.8	36.9
Real estate; business and administrative activities	High	16.4	3.8	43.8
Accommodation and food services	High	28.1	6.6	50.8
Transport, storage and communication	Medium-high	21.0	4.9	16.4
Arts, entertainment and recreation, and other services	Medium-high	28.4	6.6	60.3
Mining and quarrying	Medium	2.9	0.7	22.6
Financial and insurance services	Medium	4.6	1.1	54.7
Construction	Medium	33.1	7.7	5.4
Agriculture, forestry and fishing	Low-medium	123.7	28.9	36.0
Utilities	Low	2.0	0.5	21.3
Public administration and defence; compulsory social security	Low	8.6	2.0	33.3
Human health and social work activities	Low	11.8	2.7	74.2
Education	Low	13.2	3.1	69.5

Note: Impact ratings are based on the ILO's assessment of real-time and financial data (see the second edition of the *ILO Monitor*, released on 7 April 2020), ILOSTAT baseline data on sectoral distribution of employment (ISIC Rev. 4) and ILO Harmonized Microdata.

Source: ILO modelled estimates, November 2019.

Source: ILO modelled estimates, November 2019^{cxiii}

As the rate of infections remain on the rise globally, experts have indicated that Sub-Saharan Africa (SSA) – as well as other economically-disadvantaged regions – will be gravely impacted in terms of health and socio-economically. Bearing this in mind, the COVID-19 pandemic has further exacerbated challenges facing youth employment in Sub-Saharan Africa. At the start

of April 2020, the African Union estimated that close to 20 million jobs, in both the informal and formal sector, were at risk given the projected shrinkage of the continent's economies^{cxiv}. Currently, the continent boasts a population of 1.2 billion people and although it accounts for a fraction (252 544 cases) of the total number of COVID-19 cases, African economies are already facing an impending global economic downturn as oil and commodity prices are on the decline and a crippled tourism sector^{cxv}. According to the African Development Bank the continent-wide Gross Domestic Product (GDP) growth had been projected to reach 3.4 percent in 2020. However, in the scenario laid out by the African Union study, researchers have indicated that the continent's economy will shrink by 0.8 percent with an estimated 15 percent of Foreign Direct Investment (FDI) also potentially disappearing. Additionally, the African Union study listed South Africa, Nigeria and Angola as countries whose economies will be strongly impacted by the pandemic^{cxvi}.

African Monitor (AM), an independent think tank with country offices in South Africa, Uganda and Burkina Faso, has already been involved in a preliminary assessment of the Socio-Economic impact of COVID-19 on African youth. The organisation worked particularly with youth team leaders from five countries – Botswana, Nigeria, Sierra Leone, South Africa and Uganda. Their work with these teams involved documenting and identifying youth priorities in response to COVID-19 and its socio-economic impact on youth in Africa^{cxvii}. According to African Monitor's evaluation with the aforementioned youth leaders, they have indicated that young people have not received any sort of salary/compensation from employers during the lockdown, due to income loss and profit. The social cost of this therefore indicates that a number of young people are not in a position to maintain themselves or afford basic living expenses. While some governments, particularly in South Africa, have implemented measures such as the unemployment grant to assist those who are economically vulnerable and some countries distributing food parcels, local authorities still remain poorly resourced to respond to the COVID-19 crisis.

Additionally, the tragedy of businesses in the informal sector, particularly those led by youth, is their inability to access funding due to not being formally registered. As Allen Mutono writes informal businesses such as salons – which were among the 2.5 million that were expected to close due to COVID-19 – have primarily suffered as they do not qualify for the financial relief

measures that have been put in place by governments across Africa^{cxviii}. Given how cash dependant businesses in the informal sector are, many have not qualified for relief grants due to their inability to produce financial documentation. In late May of 2020 the Ghanaian government announced the establishment of the Coronavirus Alleviation Programme (CAP) business support schemes for SMMEs valued at US \$104 173 800. Similarly, in Nigeria, the Central Bank of Nigeria availed US \$2 837 025 730 in order to support manufacturing firms that have been gravely affected by COVID-19 closures. In South Africa, the government followed the same approach by implementing the COVID-19 SMME Debt Relief Finance Scheme administered by the Department of Small Business Development^{cxix}.

The aforementioned measures are indeed commendable given the impact of COVID-19 on economies in Africa. However, these measures are not without flaws. Enterprises applying for the above are expected to produce business plans, financial statements as well regulatory documentation in order to be deemed eligible. Such stringent measures not only create barriers to entry but further exclude a significant portion of businesses that could not only benefit, but also contribute economically. Bearing this in mind, it is important to not undermine the role of small entrepreneurs in the continent's economy. The World Bank's 2019 report on Small and Micro Enterprises (SME) indicated that SMEs contribute to about 40% of the Gross Domestic Product (GDP) in Africa – making this figure even higher with the inclusion of informal businesses^{cxx}.

A number of young people in countries such as Uganda had resorted to becoming street vendors, prior to the lockdown, due to the already-existing high rate of unemployment in the country. The enforcement of the lockdown has thus had dire effects as young people are losing income given that they are not allowed on the streets and do not qualify for grants. Youth, women and children are most vulnerable with little assistance from the government^{cxxi}. During this crisis it is thus paramount, that when exploring ways in which to assist youth, that young people are provided a platform to speak alongside other stakeholders especially in the rollout of interventions for the COVID-19 crisis. There is opportunity for various stakeholders to adopt proactive measures in dealing with economic recovery, providing financial support measures with a focus on marginalised youth who have experienced the greatest financial loss during this period.

It is also important to note that the impact of COVID-19 on Youth in Africa extends beyond job losses. It has also disproportionately affected young people in the education sector due to remote learning. Since 27 March 2020, 165 countries had adopted nationwide closures of educational facilities and in total this has affected 1.52 billion children and youth, according to the United Nations (UN)^{cxix}. The disruption in education and learning for youth will have medium to long consequences particularly on underprivileged and disadvantaged youth who do not have the resources to learn online. These resources include computers, cell phones, electricity, and stable access to the internet amongst others. Additionally, the impact of education will affect young women and girls disproportionately as figures indicate that they are more likely to not return to school than their male counterparts, due to them taking up domestic care roles at home^{cxix}. While the COVID-19 pandemic may have dire consequences for youth in Africa, it also presents an opportune moment for governments, civil society organisations, NGOs and the corporate sector to invest in Youth-led and Youth-orientated initiatives that could significantly impact the upward mobility of young people, both economically and socially.

Recommendations on possible interventions: Exploring Funding, Partnerships and Networks for Youth

Young people have demonstrated resilience and ingenuity in seeking solutions and ideas in times of crisis. Furthermore, they have taken initiative in adapting to models that seek to respond to the impact that COVID-19 has had on education, engagement, employment and entrepreneurship. Young people who work in the civic-engagement sector on youth-related issues would suggest the following recommendations, which speak directly to the challenges marginalised youth are currently facing. Considering the impact of COVID-19 on African economies and youth, the following areas will be explored as strategic points:

➤ Partnerships with youth-lead and orientated initiatives

Youth Bridge Trust's relevance during and post the COVID-19 economy will be determined by its willingness to respond directly to youth by partnering up with youth-led and orientated initiatives in this regard. The following list of organisations

have been identified as organisations to approach for potential partnerships on youth-related matters:

- Africa Matters
- Youth Lab
- Ikamva Youth
- Activate!
- National Youth Development Agency (NYDA)
- South Africa Institute of International Affairs (SAIIA)
- YALI Regional Leadership Centers
- Organisation of African Youth
- Democracy Works Foundation (Academy for Youth)
- African Leadership Institute
- Apolitical Academy

The aforementioned are a list of organisations that are both youth-focused and have broad reach in terms of impact and engaging with young people. Organisations such as Africa Matters, SAIIA, YALI Regional Leadership Centers as well as the Organisation of African Youth would be great to approach given their reach across the continent. Partnerships of this kind would ensure that Youth Bridge Trust is able to network and engage with young people during and post-COVID-19 through webinars and roundtable discussions – similarly with the African Leadership Institute, Democracy Works Foundation and Apolitical Academy. This is particularly important given that youth – particularly those from marginalized communities – have been left out in multi-stakeholder discussions with regards to the impact that COVID-19 has had on them. This provides Youth Bridge Trust the opportunity to find out what the key socio-economic issues are in their communities, what they are currently doing to address it and what potential partnerships can be explored from this. In a similar vein organisations such as Ikamva Youth, Activate!, Youth Lab and the NYDA all have programmes and projects that work with youth across South Africa. Seeking out partnerships with such organisations that work with disadvantaged youth also

presents an opportunity for partnership and to draw learnings from the work that these organisations do around youth-development.

➤ **Integrated intervention: Education, Technology & health care:**

The African continent needs an integrated response to COVID-19 – one that uses countries existing strengths and resources to its advantage in order to address some of its most critical challenges. Bearing this in mind, solutions that factor youth, technology and community healthcare during this time could greatly aid in countries' economies and harnessing Africa's youth demographic dividend. A number of reports related to COVID-19 in Africa have particularly focused on the continent's fragile healthcare systems as well as its lack of capacity in terms of infrastructure for critical care, the shortage in the number of doctors and in Personal Protective Equipment (PPE). The World Health Organization (WHO) predicts that 29 million to 44 million people will be infected with COVID-19 – should containment measures in Sub-Saharan Africa not be successful^{CXXIV}. The statistics show that of the aforementioned figures, 167 000 would be in need of oxygen; 52 000 to 107 000 would require breathing support in the form of ventilators; and up to 190 000 people could potentially die from COVID-19 across 47 African countries^{CXXV}.

These figures and findings evidently illustrate the need to find innovative, implementable and integrated solutions that centre health systems and youth in societies across Sub-Saharan Africa today. Two healthcare experts in Kenya have proposed an intervention that is underpinned by community-based healthcare, young people and the technology sector in order to enhance awareness on COVID-19 in terms of case detection, isolation, referral and management in Western Kenya^{CXXVI}. Given that there is still much that is not known about the virus, community-based healthcare workers have an important role to play in creating awareness and sharing information in remote areas, considering the continent's large rural population which was estimated at 60 percent in 2018 by the World Bank^{CXXVII}. Digital tools and the use of technology are not quite common in this line of work among community health care workers and thus this also presents room for innovation in terms of technology. As with many health care challenges, finding solutions to complex problems are often delegated to local and international renowned experts – an exclusionary process that leaves behind those most affected. The proposal put forth by Kenyan health care experts Neema Kaeje (Founder

of Surgical Systems Research Group) and Dan Kaseje (Professor of Public Health, Tropical Institute of Community Health), includes the following:

- The training of Young people who are currently unemployed and not in school to become community healthcare workers;
- Improving the digital skills of these young people in remote areas, who will serve as community healthcare workers, in order to improve effectiveness in screening, isolating, testing and managing potential COVID-19 cases at a community level;
- That the state forms public-private partnerships in this regard, with the aim of providing funding, training and employment opportunities for young people^{cxxviii}.

In line with the above-mentioned points the following funding, partnership and networking perspectives have been identified:

Funding Opportunities	Description
<u>EUREKA: Solutions for the next human high-impact pandemic</u>	Seeking participants to submit research and innovation project proposals aiming to provide solutions and preparedness for highly contagious human infection disease pandemics which inflict a high impact on society. (Deadline 15 July 2020, 17:00 CEST)
<u>Seedstars Growth Program 2020 for Emerging Market Start-ups</u>	Seeking proposals from emerging start-ups for a scalable growth model. Youth Bridge Trust can work with individual youth entrepreneurs to assist them in developing winning proposals. (Deadline 14 June 2020)
<u>IDRC-CRDI COVID-19 Global South Artificial Intelligence Innovation Program 2020</u>	Supporting multi-disciplinary research on how to develop and scale evidence-based AI and data science approaches that support response and recovery COVID-19 in Low and Middle-income countries. This provides YBT with an opportunity to work together with a research organisation to submit a proposal that looks at

	<p>how tech and youth can respond to the crisis and assisting in optimizing the public health systems response to COVID-19.</p> <p>(Deadline 28 June 2020)</p>
<p><u>IBM Funding for COVID-19 Digital Response</u></p>	<p>IBM is offering \$270,000 in cash prizes and direct IBM developer support to build, fortify, test, and deploy the winning ideas through IBM Code and Response. Submissions should address three main COVID-19 areas: crisis communications, remote learning, and community cooperation. YBT can consider submitting a proposal that is geared towards working with youth, thus creating possible employment opportunity, in increasing COVID-19 awareness in communities.</p> <p>(Deadline 31 July 2020)</p>
<p><u>UKRI open call – Research and innovative</u></p>	<p>Inviting proposals for projects that are up to 18 months that seek to address the health, social, economic and environmental impact of COVID-19 outbreak.</p> <p>(No closing date – proposal to be submitted at any time)</p>
<p><u>Bill and Melinda Gates Foundation</u></p>	<p>The Innovations for Improving the Impact of Health Campaigns grants seek innovative solutions that dramatically improve the planning and micro planning that will lead to improved effectiveness of campaigns to reach the most vulnerable populations.</p> <p>(Deadline 22 April 2020)</p>

The above-mentioned provide a list of funding opportunities for Youth Bridge Trust. Although some of the deadlines have lapsed, it was still important to list these organisations as they may issue further funding in the near future. Additionally, analysing the calls for funding also further provides indication on the ideas and

projects that donors are currently willing to fund given COVID-19 – which provides Youth Bridge Trust with the opportunity to possibly approach these funders with new and innovative ideas.

The following possible partnerships & networks for Youth Bridge Trust to consider working with on healthcare, education, technology and employment:

- Youth Employment Service (Yes)
- Equal Education
- The Aurum Institute
- Departments of Basic and Higher Education & Training
- ICTworks
- National Youth Development Agency

An integrated COVID-19 response of this magnitude has both medium and long-term benefits for marginalised youth. It not only has the potential to shift the status quo but can also be scalable, in order to provide employment opportunities, technological and educational training for thousands of youth from poor communities. This is an approach that should also be considered in other countries with rural populations. This is a strategy that can also be adopted for a country such as South Africa which has 33.65 percent of its population living in rural areas. In addition to providing employment for youth it also makes healthcare more accessible for people in remote areas particularly for the elderly who, under normal circumstances, are unable to easily travel to clinics and hospitals. This presents a direct opportunity for Youth Bridge Trust to contribute to youth development during and post-COVID-19 from an employment and technology perspective through partnering up with local youth organisations in rural communities, government ministries of health and potential implementing agencies. Additionally, this kind of integrated approach addresses the following:

- Alleviating youth unemployment in rural and marginalized communities;
- Providing relief to the already pressured healthcare systems;
- Providing technology and digital skills to marginalized youth in rural areas;
- Contributing to the livelihoods of marginalized youth in terms of income as well as to the economy;

➤ **Entrepreneurship & Employment:**

Entrepreneurship has always had the potential to create millions of jobs in Africa for youth. Additionally, it presents an opportunity for young people to become more independent and innovative – which is highly crucial in economies with already-existing high unemployment rates. Although young people are interested in delving into entrepreneurship, existing barriers to entry have often become a hindrance. These barriers include:

- A lack of access to information on starting a business;
- Lacking start-up capital and not qualifying for bank loans;
- Having minimal exposure to networking and mentorship opportunities;
Not having the necessary technological skills in order to partake in the digital economy

The abovementioned factors are critical in present-day entrepreneurship and would need to be addressed. Entrepreneurship is highly important particularly in the present-day climate and has immense potential towards up skilling youth provided they receive the correct amount of support. The following recommendations would be made in this regard for Youth Bridge Trust:

- Collaborating with already-existing Innovation-Hubs to set up a mentorship programme/fellowship for young entrepreneurs seeking to/*are addressing COVID-19 related challenges*;
- This mentorship programme would also provide funds for start-up capital in order to assist young entrepreneurs to get their projects off the ground;
- Provide networking opportunities in the form of seminars and webinars for young people to connect with successful entrepreneurs, share information and establish professional networks;

In line with the above-mentioned points the following funding, partnership and networking perspectives have been identified that can assist young people entrepreneurs in the informal and formal sector:

Funding Opportunities	Partnerships with innovation hubs	Networking opportunities for youth
<u>National Empowerment Fund for black entrepreneurs</u> (Deadline ongoing)	InvoTECH (Email: invotech@dut.ac.za)	<u>Young professionals Group</u>
<u>WeBloom -African Women Entrepreneurs</u> (Deadline 30 August 2020)	JoziHub (Email: info@jozihub.org)	<u>Young Entrepreneurs Network Africa</u>
<u>African Netpreneur Prize Initiative</u> (Deadline 22 June 2020)	Impact Hub (Email: Johannesburg.hosts@impacthub.net)	<u>West African Youth Network</u>
<u>Hill Justice Accelerator Innovating Challenge</u> (Deadline 5 August 2020)	The Innovation Hub (Email: marketing@theinnovationhub.com)	<u>East African Regional Youth Network</u>
<u>UNIDO Global Call "Innovative Ideas and Technologies vs. COVID-19 and Beyond"</u> (Deadline: June 30 th 2020)	Startup 90 (Email: info@startup90.com)	<u>Harambee Youth Employment Accelerator</u>
<u>Welsh Government's Wales & Africa Immediate COVID Response Grant</u> (Ongoing)	CUT FabLab (Email: info@fablab.co.za)	<u>Global Entrepreneurship Network</u>

An approach of this kind by Youth Bridge Trust would provide sustainable impact for young people in terms of funding, forming new partnerships and networks as well. Additionally, it would create self-reliance and serve to encourage youth to become employers in the job market as well. Entrepreneurship programs that fully support youth and can respond to COVID-19, have the capacity to truly drive innovation, economic development and employment and as such create tangible impact.

CHAPTER 6

Youth, Digital Economy, and the Future of Work in Africa

John Karuitha

Summary

- There is potential for Africa to leverage digital technology to improve the livelihoods of the people, especially the youth.
- The potential is exceptionally high in services and agriculture, targeting mainly small and medium enterprises.
- The digital economy demands continuous learning to adapt to the changing trends in technology.
- Critical skills include, among others, digital applications development and data analytics over and above soft skills like honesty and communication.
- To reap optimally from digital technology, Africa must upgrade skills development systems and improve public governance to attract investments into the sector.
- Governments should craft supportive policy and regularly revisit curricula to equip the youth appropriately.
- Non-state actors like YBT can lobby for the development and enforcement of pro-youth digital legislation and provide material support.

Background

History of work cannot be written as “economics versus technology”; it involves the interaction of technology with organizations created by workers, and it involves the creation of power relationships based on age, gender, and ethnicity^{cxxix}.

Several factors will come together to define the future of work in Africa: beginning with the current COVID-19 epidemic and in the next three decades. First, Africa’s population is overwhelmingly youthful (*see figure 1*) and projected to rise to 2.5 billion by 2050, second only to Asia (*figure 2*). By then, more than one in two Africans will reside in urban areas. Second, compounding the grim unemployment figures that prevail, African economies are

and will continue to be dominated by the informal sector^{CXXX}. The scale of economic informality has implications on the prospect of decent jobs. Third, across the globe, researchers note a trend in *de-industrialization*, where the share of GDP from manufacturing relative to the service sector is declining^{CXXXi CXXXii}. For Africa, the trend portends premature de-industrialization as few countries on the continent ever had notable industrial capacity in the first place. Critically, global warming and climate change will constrain Africa's quest to provide for her people.

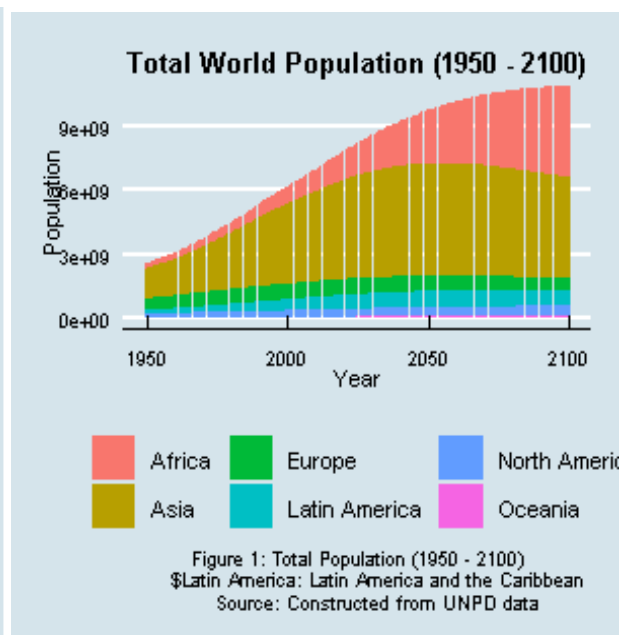
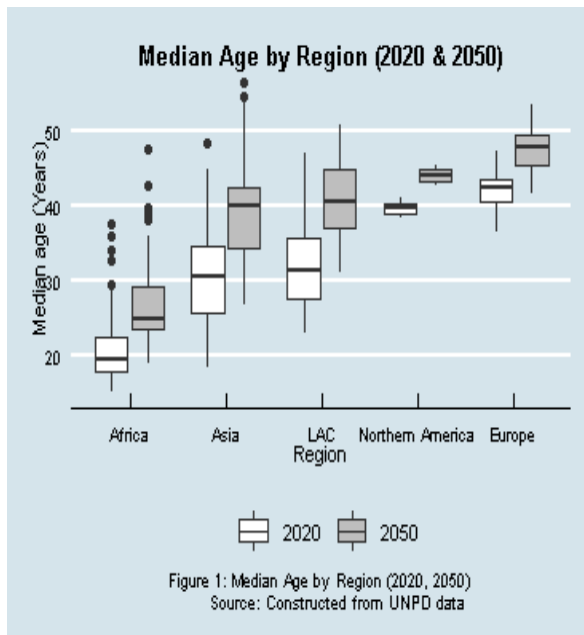
All this is in the backdrop of a rise in the digital economy- from block chain-powered Fintech to Internet of Things (IoT) to data-driven business models. In the past, manufacturers across the globe shifted their production bases to countries with lower production costs, mainly arising to the cost of labour. The trend benefited many countries in Asia and Latin America, as Gaurav Nayyar of the Brookings Institute notes^{CXXXiii}. Just when Africa is maturing to attract such firms, technology has changed the landscape. Take Adidas as an example. The sportswear giant has developed a speed factory in Ansbach, Germany that "uses computerized knitting, robotic cutting, and 3D printing to produce athletic footwear". The consequence is the elimination of labour wage competitiveness between countries. Although it may not happen to all sectors, manufacturers in Africa could gradually join the mass automation- dubbed industry 4.0 - to remain competitive both in the local and global industrial race^{CXXXiv}.

Understandably, this is heightening technology anxiety mainly due to perception of technology displacing most jobs^{CXXXv}. However, some of the evidence suggests that technology will likely generate more jobs than it will render obsolete, but with financial trade-offs of supporting and redeploying affected workers. The potential job displacement calls for a paradigm shift in human resource development, and especially the up-skilling of existing workforce with substantial costs to governments and corporations. Importantly, digital disruption is unlikely to be a one-off occurrence. Both employers and employees must continuously evaluate their relative positions as newer technologies emerge^{CXXXvi}. Africa should leverage the digital economic opportunities to sustainably provision jobs, feed the swelling population, and manage the inconceivable urban sprawl. That said, the pathway to a sustainable digital economy on the continent is not straight forward.

By digital economy, we adopt the definition that breaks down the digital economy into three sections as follows, (i) the digital enabling infrastructure needed for computer networks to exist and operate, (ii) the digital transactions that take place over the platform (e-commerce), and (iii) the content that digital economy users create and access^{xxxvii}. It is worth noting that the present crisis may come with opportunities and force new ways of doing things. For instance, there has been a notable rise in the use of contactless payments and online shopping, especially in countries with lockdown measures. People could probably get more conscious about their health, leading to a higher demand for digital wearables that track the health of individuals. All this points to a sharp spike in digital work opportunities. How, then can Africa's best utilize this opportunity to uplift its mostly youthful population?

In this article, I review the future of work in Africa considering the projected rise of the digital economy and Africa's youthful population, and the disruption occasioned by COVID-19. The discussion then unfolds around the following questions.

- How will the digital economy shape the future job market landscape for the youth in Africa?
- What opportunities and constraints does the digital economy place on Africa's quest for economic prosperity for the youth?
- How best can Africa leverage digital technologies to generate jobs for the youthful population?
- What set of skills would best position the youth in Africa for the future of work?
- What lessons can Africa draw from the COVID-19 epidemic regarding the future of the youth and work?



The Prospects of Digital and Digitally Mediated Work in Africa

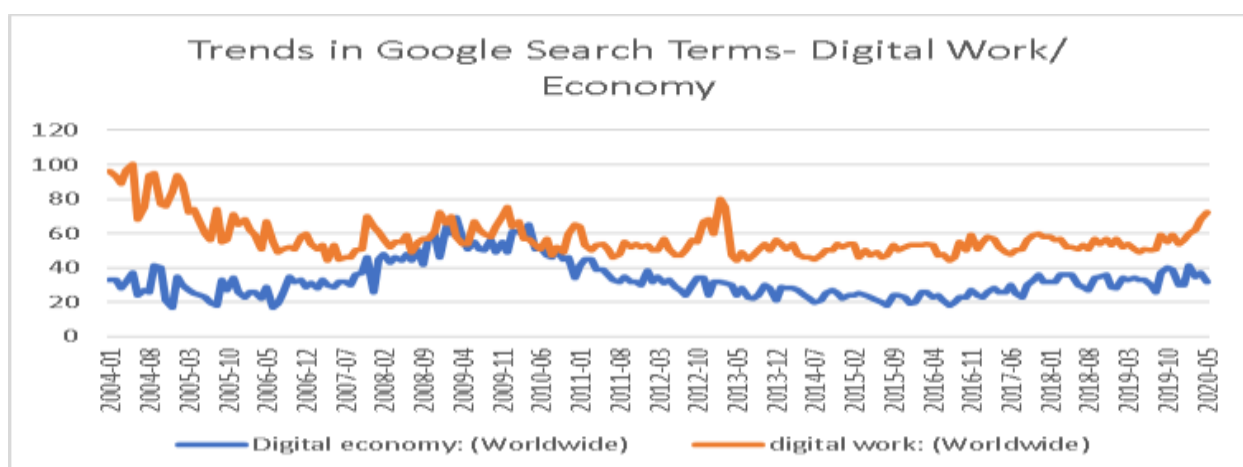
A 2016 World Bank report, titled *Digital Dividends*,^{cxxxviii} posed some critical insights into the impacts of digital technology on economic growth, job opportunities, and public sector service delivery. In developing countries, three issues stood out. First, businesses in poorer countries adopt technology at a slower pace than expected. Second, the automation of mid-level jobs has led to the hollowing out of the labour market shrinking the proportion of wages going to labour. Finally, public service delivery is not improving despite automation. The report attributes the situation to the unsuitable regulatory environment, inadequate skills development systems, and corrupt public sector governance. That is not to mean that digitization has not revolutionized business. Digital technology has shaken manufacturing with novel techniques like robotics automation, sensors, artificial intelligence (AI), big data, cloud computing, virtual reality (VR), augmented reality (AR) and additive manufacturing like 3D printing^{cxxxix}.

Still, going forward, we must sieve fact from hype relating to the prospects of digital and digitally mediated work in Africa. Globally, the highest expectation of a digital economy and work culminated in the dotcom bubble in the early 2000s. The period around the bubble exhibited the highest popularity of digital economy and digital work, respectively, as per the data from Google Trends (*see figure*). Whether the context surrounding the dotcom bubble burst has changed is still an open question, and one we must answer in order not to repeat

the mistakes of the past. We can draw parallels with the current COVID-19 pandemic that has made society rethink the place of work digitization, especially in the services sector like education. If the dotcom bubble resulted from hype, the current situation allows us the opportunity to assess the feasibility of mass work digitization in many sectors. The use of digital work tools like Zoom, Google Hangouts, and Microsoft Teams has spiked to stem the spread of the virus. The extent of the sustainability of “home as the new office” model is under the microscope^{cxl}.

Even before the COVID-19 struck, Africa sat in a peculiar position regarding the digital economy. Unlike the developed countries, some researchers posited that Africa could skip the industrialization phase of development, with the service industry set to dominate. In the past two decades, industrialized countries have undergone *de-industrialization* with manufacturing accounting for an ever-falling share of GDP- much because of most firms shifting production to low-cost countries like China^{cxli}. As noted, in Africa, it portends premature “de-industrialization” given that most countries on the continent were yet to build a significant industrial capacity. Furthermore, much of the economic activity is informal, estimated at 85% of the economy^{cxlii cxliii cxliv}. With digital technology supporting industrial output in the global industrial North, it is unlikely that Africa could use the cheap pool of labour to dominate global industrial output, as China did successfully^{cxlv}. Given the preceding, Africa should leverage digital technology in two key areas: services and agriculture- without necessarily abandoning other sectors of the economy.

Figure 3: Trends in Google search for the Terms Digital Work/ Digital Economy



Source: Author’s Construction from Google data

A Place for the Youth

If Africa has an opportunity in the digital economy, it is chiefly due to the youthful population. Younger people are more receptive to emerging technologies than the elderly^{cxlvi}. Hence, Africa can tap on the youth potential to cater to rising digital work opportunities in, among other areas, applications development for computers and mobile devices and online clerical jobs. Nowhere is this more evident than in the emerging digital hubs in Africa where work in the human cloud- handling outsourced work from the developed world. The available research shows that digital work opportunities are available and increasing. For instance, research shows that globally, digital work opportunities are increasing at a rate of 15% annually^{cxlvii}. The opportunities range from the skilled - applications development to the semi-skilled like online clerical work^{cxlviii}. India serves as an example of harnessing digital technology to empower the youth through its well-known digital outsourcing job market^{cxlix}.

However, age alone is not sufficient. Training in the ever-changing trends in digital technology is paramount to keep the labour force relevant and to equip the upcoming workers with core skills. Again, the purchasing power disparities mean that workers in Africa will demand less pay than equivalent workers in the developed world, especially when taking minimum wage legislation into account. Proponents of the remote digital economy decry the lack of fundamental rights that come with formal work - sick pay, job protection, ability to negotiate remuneration. Examining digital work from the proponents' perspective raises concerns that it could aggravate the precarious job conditions in the informal sector that already persists in Africa^{cl}. In hindsight, the rise of the digital economy means an increase in workers exposure, and more so in old age with inadequate or no pension. The youth will not remain forever young.

The New Digital Divide

The digital divide, the uneven access and distribution of Information and Communication Technologies (ICT) in societies^{cli}, had held back the realization of the benefits of the technological revolution in Africa considerably. It is not that the divide has narrowed. Although most Africans now own or can afford a smartphone, it is not the case for personal computers or tablets from which to access most of the digital work. Energy is still a challenge, although some countries in the continent have made strides in widely availing electricity. On the flip side, the widespread availability of computing devices has flipped the digital divide on

its head. A new entrepreneurial class is mining data from the devices and using it to power a new wave of data-driven businesses. Facebook, Google, and Uber are but examples of firms using the model. Take Uber as an example. The threat to meter taxi ranks has forced some local entrepreneurs in Africa to come up with similar digital platforms to serve specific localities. However, not all forms of digitally powered business models could lend themselves to this level of replication. As an example, several start-ups in Africa now provides cab-hailing services in small towns where giants like Uber find it inefficient to operate, while others compete directly with Uber^{clii}. The localized model does provide insights into how digitization can scale to accommodate the low ends of the market.

Businesses in Africa, mainly small, micro-, and medium enterprises (SMMEs), now face this sort of digital divide- using data to drive business decisions. The divide is no small matter. While small and medium-sized businesses mainly competed among themselves in a limited geographical vicinity, firms like Amazon and Alibaba now pose direct competition to these firms, both in terms of pricing and accessibility. The big firms have an upper hand that they can utilize data to garner insights into consumer behavior. This data analytics divide may concentrate even more power on conglomerates. As it turns out, it is not only the possession of hardware that matters but also the skills to utilize the data from the hardware. Again, this reality underlines the need for perpetual readiness in dealing with and taking advantage of digital disruption.

The informality of Africa's businesses means that they are yet to tap on the data-driven model^{cliii}. If a business lacks a point of sale (POS) terminal, for example, it is hard to capture, store and retrieve data that could prove useful in customer profiling for potential sales promotions and advertisement. If such terminals are inaccessible or unaffordable to small, micro-, and medium enterprises (SMMES), it presents an opportunity not just for hardware, but for the development of applications that tap into such data and point managers to the business opportunity. The current tools of data analytics may not be suited for small enterprises which present a void that skilled youth can fill. Importantly, atop the traditional digital know-how, skills in data analytics could prove useful.

Soiling the Gadgets: Agriculture and the Digital Revolution

Agriculture is the dominant economic activity in Africa, employing 65% of the population directly or indirectly. However, primarily due to low productivity, it accounts for 35% of GDP^{cliv}. With about 50% of Africans still residing in rural areas in the next three decades, agriculture will remain a vital source of livelihood. Global warming and climate change, coupled with the limited capacity to open more acreage of farmland,^{clv} threaten agricultural productivity in Africa.

The world's *next billionaires will arise from agriculture and agribusiness*^{clvi}, and a good proportion of them will be from *Africa*. Feeding a projected population of over 2 Billion^{clvii} people is a lucrative opportunity that the youth should be encouraged and equipped to take. One of the problems that have plagued Africa's agriculture is that the youth shun it. The elderly who dominate farming may have neither the energy, the know-how, nor the drive to optimize output. Importantly, the sort of intensive agriculture needed to produce enough to feed the population must necessarily leverage digital technology- including data analytics discussed before, over and above the traditional manual and mechanical farming methods.

Agriculture, especially in Africa, has yet to benefit fully from digitization. The central tenet was that farmers in Africa suffered acute information asymmetry which digital technology could bridge. So far evidence is mixed- with much of it pointing to digital technology lowering price volatility. Much of the benefits of digitization in Agriculture related to availing agricultural extension, improving the marketing information systems, and improving buyer-seller coordination^{clviii} but is yet to be exploited. While those above remain the weak central points in Africa's agriculture, digital technology is arising in unexpected areas. Researchers in Kenya, for instance, are collecting data based on local knowledge systems regarding the weather to forecast weather patterns, an essential element for rain-fed agricultural systems. Opportunities for digitization in Africa's Agriculture lies in resolving these old problems. The youth could take a cue on such gaps to provide digital solutions for farmers and business people in other sectors.

“Viral” Economy: COVID-19 and Digital Work

A discussion on digitization and the future of work is not complete without looking into the way COVID-19 has and will affect the future of work. While most organizations occasionally

toyed with the idea of location-independent workers, COVID-19 has forced an implementation of some degree of it. Take learning institutions as an example. Crowded places are ideal for epidemics to take root. COVID-19 means that the prospects of the traditional classroom will be diminished to some degree and more people experiment and come to appreciate online learning^{clix}. Even in fields like the physical sciences where online classes may not be entirely feasible, some degree of digitization could still find its way. The increased prevalence and acceptance of online education with COVID-19 avails an opportunity for the youth to disseminate and garner skills in their specialties. Critically, the digital economy is very dynamic, meaning that individuals must keep learning to remain relevant in their respective fields. COVID-19 has not only affected learning. More people will likely try out the digital marketplace for various other goods and services. Hence, there is likely to be a market for digital platforms that avail these markets. Currently, digital platforms do not cater to the markets in Africa^{clx}. There is a gap that is especially glaring in linking small, micro, and medium enterprises, and informal businesses to markets.

Roadblocks on the Path to the Digital Economy for the Youth

Numerous issues may constrain the youth from participating in the digital economy. This section highlights these roadblocks and offers potential solutions. On the demand side, potential digital workers face three significant hurdles: capability, access, and networks. The issue of capability is the major stumbling block, where workers lack the necessary skills required in the digital workspace. Even when they have skills, access to digital work could be hard given the necessity to verify credentials and capabilities online. Access to online work is also linked to networks- the social and physical connections that, for instance, would allow for referrals to digital work—just like in the traditional economy, having connections accelerates chances of getting work.

Similarly, on the supply side, knowledge of potential digital workers and, critically, trust in them. These two components relate to the ease of access to digital work described earlier. These hurdles could be addressed using basic approaches like mentorship, coaching in critical skills like writing a resume, and digital credentialing and identity verification systems^{clxi}.

Ideal Youth: Essential Skills Set for the Digital Workplace

While much emphasis is on hard skills, I start by emphasizing the critical soft-skills that the youth should garner to reap from the digital economy. The soft skills are key given that to participate in digital work meaningfully, issues like trust stand out.

Soft Skills

Although the business will be increasingly digital, the place of interpersonal relationships does not diminish. In the digital space, these relationships are especially vital, given that trust is central in business transactions. Several character traits, and especially honesty, is especially valuable in the digital workspace. If a customer requires service, the provider should be straight forward enough to build and maintain trust^{clxii}. Again, communication is a vital skill in any business and more so in the digital marketplace where vendors and customers do not get to meet face to face. Importantly, communication skills are vital in marketing digital goods and services. The skills here include writing, speaking/ presentation, and listening as applied to the digital workspace. Noteworthy also is the skill set in essential foreign languages to take advantage of growing digital markets like China and India. Affective skills deal with the moods, feelings, and attitudes towards people and tasks. In the digital workplace, positive attitude towards work, including self-drive are vital. If digital consumers sense an apathy on the side of the online worker, they are less likely to place an order for goods or services^{clxiii}.

Hard Skills

Besides, one of the barriers to participation in the digital economy by the youth is the lack of capability. For the digital economy, the essential hard skills start with computer operating skills, especially those of the prevalent operating systems like Windows and Linux. Also, given the projected population rise in Africa, there will be demand for workers to deploy an additional digital infrastructure of communication networks. Other skills that will come in handy include the following.

Business Skills

The possession of business skills will enable the youth to make sense and adapt to the demands for digital products among clients. Much of the business skills required relate to the applicability of digital technology in business. Hence, youths must gain an understanding of business processes to design solutions suited to potential clients. The skills span finance and

accounting, operations management and logistics and supply chain and the place of IT in enhancing these roles. Also, knowledge of the business will enable the youth involved in digital work to design products that have business value. Also, an understanding of the digitally enabled business landscape is vital to be able to make a business case to a potential consumer of a digital product is a crucial strength for any digital entrepreneur^{clxiv}.

Domain Expertise

At times, it is necessary to have a digital worker who is skilled in the field that they work in. For instance, youth with skills in Agriculture would best suit digital work in agriculture. Likewise, a pharmacist with enhanced business skills would best serve clients in the field. With this perspective, the youth cannot narrowly focus on acquiring digital skills without developing the equally, if not more critical domain knowledge skills set which enables them to see the broader picture. Digital skills cannot be of much utility in isolation to the broader economy^{clxv}.

Computer Programming for Applications Development

Computer programming, especially that related to mobile phones applications development, is likely to see a bright future. As the world gets more wired, phones are increasingly accessible to more people as the divide between personal laptops and mobile phones is blurring. The opportunities to create mobile phone application applications are likely to form a significant portion of digital work^{clxvi}. While also targeting the higher end of the market, it is paramount to design apps with small, micro, and medium enterprises in mind- including those in the informal sector. Critically, the apps should be compatible across platforms, from mobile to desktop environments. However, developing applications requires a high degree of expertise^{clxvii}. The Youth in Africa can tap into this opportunity to develop applications that address local challenges like market information, best practices in agriculture such as disease and pest control, among others.

Data Analytics

The field of data analytics is one of the fastest-growing sectors of the digital economy. Unfortunately, not many small and medium enterprises have fully tapped into their digital repositories to garner insights into their customers- including their tastes and preferences,

consumption patterns^{clxviii clxix}. The information would enable businesspeople to predict future sales and hence optimize inventory levels. Data analytics encompasses a variety of skills, from basic statistics to data analysis tools to machine learning. The tools used in data analytics vary from commercial packages like SAS and Stata, to open source, increasingly popular analytics environments such as Python and R^{clxx}. The skills would be especially paramount in small and medium enterprises that dominate the business landscape in Africa and the world. The analytics skills call for quite substantial investment in learning descriptive, diagnostic, prescriptive and predictive analytics.

Information Security

The COVID 19 pandemic could accelerate the adoption of online business practice among small and medium enterprises, presenting digital work opportunities for the youth. As more businesses move online, so do criminals seeking an opportunity to swindle. Information and network security have been a rising skill in demand among employers across the globe, and Africa is no exception^{clxxi}. For the small and medium enterprises that dominate Africa's business landscape, securing *the* digital infrastructure presents an opportunity for work. For instance, the best practices for information security for any firm calls for the education of employees on how best to guard against online crime. Given that online crime is evolving, creating information awareness in firms presents an endless work opportunity. The same applies to the development, maintenance, and enforcement of cybersecurity policies in areas such as bring your own device (BYOD)^{clxxii}.

Education and Mentorship Opportunities for Digital technology

There are some relatively low-cost opportunities to pursue courses in analytics. Massive Open Online Courses (MOOCs) sites like Coursera^{clxxiii} and EdX^{clxxiv} offer short courses in data analytics at the cost of \$400, with opportunities for a cost waiver for most deserving students. Other options like Udemy, Data-Camp, Future Learn, and Code Academy, among others, provide even cheaper and viable alternatives. Education institutions like the University of Cape Town are also providing short courses online in these areas of study^{clxxv}. Mentorship opportunities are also coming up with the realization of the potential of digital technology. These are just a few of the numerous opportunities for the youth to develop digital skills^{clxxvi}. If governments and other stakeholders get together, it is possible to develop an even more

vibrant ecosystem of skills development by augmenting the existing online resources with additional support for the youth such as internship placements where they could garner relevant experience.

Continuous Learning

Survival in the digital economy is a marathon and not a sprint when it comes to learning. The digital world is dynamic, and skills acquired today will not necessarily suffice tomorrow. For digital workers, it means internalizing continuous learning. Academic education will be useful in laying the foundation for life-long learning, which would take the form of one-on-one short courses, seminars, online classes, and webinars. Again, attitudes must change to accommodate the need for regular skills upgrade^{clxxvii}.

The Role of the Government

In the future of digital work, the government has a role to play by mainly creating an enabling environment for digital businesses to take root. The role of the state includes but is not limited to crafting a supportive regulatory environment. A case in point is the provision of public governance to attract investments in the digital tech industry. Also, the case of social security systems, especially pension is critical. Most of the digital work lacks the benefits of regular jobs, workers in this industry risk exposure to financial hardship later in life. The availability of flexible pension contribution scheme could go a long way in dealing with this problem. However, the availability of a scheme does not guarantee that individuals will use it.

Also, sound policies around digital upgrading (value addition) in data value chains is critical to ensure that big business does not benefit from the data collected to the exclusion of local economic actors. The policies should cover the control and ownership of data, data privacy, and regulation of cross border data flows, and critically, building skills for the utilization of data in the digital era. A critical entry point for the government is crafting curricula that cater for the requisite skills for the future of digital work. Given that technology is fluid, governments should regularly review curricula. Importantly, support universities, vocational training institutions will go a long way in equipping the youth with the required skills. The support should target research capacity, equipment, and the training of tutors on trending skills. Finally, the enforcement of intellectual property rights will safeguard innovation, allowing the youth to reap from their originality. In a digital economy, people need higher and

continuous learning. For youth-focused organizations like the YBT, lobbying is critical to ensure that youth supportive curriculum policies are in place and continually updated^{clxxviii}.

Conclusion

The future of the world of work is increasingly digital, although not all sectors will be affected the same way. Africa, and more so the youth on the continent can reap from the digital revolution. However, governments and non-state actors on the continent must put in place appropriate mechanisms to prepare the youth for the digital workplace. For the youth of Africa to benefit, countries must take steps to equip them with requisite skills. In addition to skills development, there should be an emphasis on lifelong learning. If handled well, the digital economy holds a promise to augment most sectors of the economy, and importantly, create employment for the youth. However, digital work does jeopardize the pension system given that most of the work tends to be piece rate, meaning that social security planning should also be part of the preparation for digital work.

Notes:

ⁱ H. Plecher, "Youth Unemployment in South Africa," *Statista*, February 12, 2020, [https://www.statista.com/statistics/813010/youth-unemployment-rate-in-south-africa/#:~:text=Youth%20unemployment%20rate%20in%20South%20Africa%20in%202019&text=According%20to%20the%20source%2C%20the,Africa%20was%20at%2053.18%20percent;____InternationalLabourOrganization\(ILO\),%20YouthUnemploymentinAfrica,%20https://www.ilo.org/africa/areas-of-work/youth-employment/lang--en/index.htm#:~:text=In%20sub%2DSaharan%20Africa%2C%20unemployment,cannot%20afford%20not%20to%20work.&text=Of%20the%2038.1%20per%20cent,account%20for%2023.5%20per%20cent;](https://www.statista.com/statistics/813010/youth-unemployment-rate-in-south-africa/#:~:text=Youth%20unemployment%20rate%20in%20South%20Africa%20in%202019&text=According%20to%20the%20source%2C%20the,Africa%20was%20at%2053.18%20percent;____InternationalLabourOrganization(ILO),%20YouthUnemploymentinAfrica,%20https://www.ilo.org/africa/areas-of-work/youth-employment/lang--en/index.htm#:~:text=In%20sub%2DSaharan%20Africa%2C%20unemployment,cannot%20afford%20not%20to%20work.&text=Of%20the%2038.1%20per%20cent,account%20for%2023.5%20per%20cent;)

ⁱⁱ Joe Bavier and Guilia Paravicini, "Africa could Lose 20 Million Jobs Due to Pandemic: AU Study," *Reuters*, April 5, 2020, <https://www.reuters.com/article/us-health-coronavirus-africa-economy/africa-could-lose-20-million-jobs-due-to-pandemic-au-study-idUSKBN21NOKX>

ⁱⁱⁱ African Development Bank, Jobs for Youth in Africa: Catalysing Youth Opportunity across Africa," https://www.afdb.org/fileadmin/uploads/afdb/Images/high_5s/Job_youth_Africa_Job_youth_Africa.pdf.

^{iv} Julius Agbor, Olumide Taiwo, and Jessica Smith, "Sub-Saharan Africa's Youth Bulge: A Democratic Dividend of Disaster?" Washington DC: The Brookings Institution, Africa Growth Initiative, 2018. <https://newint.org/features/2018/01/01/youth-bulge>

^v Wangui Kimari, "Africa Needs to Drop the 'Youth Bulge Discourse,'" *The New Internationalist*, January 1, 2018,

^{vi} International Labour Organization, "As Job Loses Escalate, Nearly Half of Global Workforce at Risk of Losing Livelihoods," ILO Press Release, April 29, 2020, https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_743036/lang-en/index.htm

^{vii} United Nations Inter Agency Network on Youth Development, "Statement on COVID-19 and Youth," April 23, 2020, <https://www.un.org/development/desa/youth/news/2020/04/unianydl/>

- viii Nasi Rwigema, "COVID-19 Youth Perspectives," Mo Ibrahim Foundation, May 20, 2020, <https://mo.ibrahim.foundation/news/2020/covid-19-africa-youth-perspectives-nasi-rwigema>; Natasha Kimani, "COVID-19 in Africa: Youth Perspectives," Mo Ibrahim Foundation, May 13, 2020, <https://mo.ibrahim.foundation/news/2020/covid-19-africa-youth-perspectives-natasha-kimani> and Anta Taal, "COVID-19 in Africa: Youth Perspectives," May 7, 2020, <https://mo.ibrahim.foundation/news/2020/covid-19-africa-youth-perspectives-anta-taal>
- ix Aya Chebbi, "COVID-19 in Africa: Youth Perspectives," Mo Ibrahim Foundation, June 9, 2020, <https://mo.ibrahim.foundation/news/2020/covid-19-africa-youth-perspectives-aya-chebbi>
- x Tariro Bure, "COVID-19 In Africa: Youth Perspectives," Mo Ibrahim Foundation, June 2, 2020, <https://mo.ibrahim.foundation/news/2020/covid-19-africa-youth-perspectives-tariro-bure>
- xi Neema Kaseje and Dan Kaseje, The European Sting, May 25, 2020, "How Youth and Technology can Drive Africa's COVID-19 Response," <https://www.weforum.org/agenda/2020/05/covid-19-and-young-people-in-sub-saharan-africa/>
- xii Gilbert M. Khadiagala, "Policy Report on Youth Political Participation and Leadership in Botswana," Gaborone: Westminster Foundation for Democracy (WFD), 2018.
- xiii Busani Bafana, "African Youth Demand a Seat at the Table," *Africa Renewal*, April 2018; Francis Kuwonu, "Nurturing Young Leaders," *Africa Renewal*, April 2018.
- xiv Robin-Lee Francke, "Youth Day: President Ramaphosa Challenges Youth to Put Forward Ideas to Change the Economy," IOL News, June 16, 2020, <https://www.iol.co.za/news/south-africa/youth-day-president-ramaphosa-challenges-youth-to-put-forward-ideas-to-change-the-economy-49440719>
- xv Mo Ibrahim, "Governance Lags behind Youth Expectations and Needs," in Mo Ibrahim Foundation, *Bolstering Good Governance: The Imperative of Inclusion and Efficiency*. London: Mo Ibrahim Foundation, 2020.
- xvi Ngozi Okonjo-Iweala, "Strategies for Winning the Fight against Corruption," in Mo Ibrahim Foundation, *Bolstering Good Governance: The Imperative of Inclusion and Efficiency*. London: Mo Ibrahim Foundation, 2020.
- xvii Monica Kirya, *Anti-Corruption in COVID-19 Preparedness and Response. Mainstreaming Integrity into Pandemic Plans and Policies*. Bergen: Chr. Michelsen Institute, 2020.
- xviii James Stent, "COVID-19: Global Experts Suggest Plan for Informal Settlements," GroundUp News, April 17, 2020, <https://www.groundup.org.za/article/covid-19-global-experts-explain-how-assist-informal-settlements/>; UN Habitat, "Key Messages on Informal Settlements and COVID-19," <https://unhabitat.org/key-messages-on-covid-19-and-informal-settlements>
- xix Thione Niang, "Raising the Voice of Young People in Governance," in Mo Ibrahim Foundation, *Bolstering Good Governance: The Imperative of Inclusion and Efficiency*. London: Mo Ibrahim Foundation, 2020.
- xx Landry Signe, "Africa Youth Leadership: Building Local Leaders to Solve Global Challenges," Washington DC: The Brookings Institution Africa Blog, March 27, 2019.
- xxi Job Amupanda, "The African Union (AU), the African Youth Commission (AYC), and the Pan-African Youth Union (PYU): Sabotaging or Bureaucratizing the Youth?" *Stichproben Winer Zeitschrift Kritische Afrikastudien*, vol. 18, no. 35, 2018, pp. 73-82.
- xxii Landry Signé. *Africa's Role in the Fourth Industrial Revolution: Riding the World's Biggest Wave of Disruptive Innovation*. Forthcoming. See the summary online: landrysigne.com.
- xxiii Mo Ibrahim Foundation. 2019. *Africa's Youth: Jobs or Migration. Demography, economic prospects and mobility* [online] 01 June, available from: https://mo.ibrahim.foundation/sites/default/files/2020-01/2019_Forum_Report_0.pdf
- xxiv AU Assembly Decision (Assembly/AU/Dec.601 (XXVI))
- xxv Ibid
- xxvi African Peer Review Mechanism. 2020. *Africa's Governance Response to Covid-19*, APRM [Online] 10 June, available from <https://www.aprm-au.org/publications/africas-governance-report-to-covid-19/>
- xxvii Nathalie Baptiste. *Africa's Supposed Failure to Achieve the Millennium Development Goals*, Foreign Policy in Focus [Online] 01 June, available from <https://fpif.org/africas-supposed-failure-achieve-millennium-development-goals/>
- xxviii Ibid
- xxix Global Taskforce of Local and Regional Governments, UNDP and UN Habitat. *Roadmap for localising SDGs* [Online] 01 June, available from https://www.uclg.org/sites/default/files/roadmap_for_localizing_the_sdgs_0.pdf
- xxx Ibid

^{xxxix} Stephane Richard. 2019. Reasons why most Africans aren't on the internet – and how to connect them, World Economic Forum [Online] 01 June , available from <https://www.weforum.org/agenda/2019/08/3-reasons-why-most-africans-arent-on-the-internet-and-how-to-connect-them/>

^{xxxix} African Peer Review Mechanism APRM Significant as a Regional Mechanism for Sharing Best Practices on SDGs AND Agenda 2063, APRM [Online] 01 June, available from <https://www.aprm-au.org/publications/aprm-significant-as-a-regional-mechanism-for-sharing-best-practices-on-sdgs-and-agenda-2063/>

^{xxxix} Japhet Biegon. 2020. 19 years ago today, African countries vowed to spend 15% on health, African Arguments [Online] 01 June , available from <https://africanarguments.org/2020/04/27/19-years-africa-15-health-abuja-declaration/>

^{xxxix} Personal Interview, Ms. Sarah Hamouda, SDGs Expert ,African Peer Review Mechanism Continental Secretariat, 02 June 2020

^{xxxix} African Union. 2020. Agenda 2063 :The Africa We Want [Online 2 June 2020] ,available from <https://au.int/en/agenda2063/overview>

^{xxxix} Ibid

^{xxxix} AU Youth Charter. [Online 2 June 2020] , available from <https://www.africa-youth.org/frameworks/african-youth-charter/>

^{xxxix} Extract from AU Youth Envoy, Ms. Aya Chebbi during the Youth Policy Dialogue hosted by the United Nations Commission for Economic Affairs and Generation Unlimited

^{xxxix} All information sourced from the African Union Website

^{xl} Personal Interview, Mr Osten Chulu, Rwanda United Nations Development Programme (UNDP) Senior Economist , 01 June 2020.

^{xli} African Union. 2019. Africa Governance Report : Promoting African Union Shared Values. [Online 2 June 2020] available from https://au.int/sites/default/files/documents/36418-doc-eng-the_africa_governance_report_2019_final-1.pdf

^{xlii} The Presidency. Address by President Cyril Ramaphosa on South Africa's Response to the Coronavirus Pandemic, Union Buildings, Tshwane. 17 June 2020. <http://www.thepresidency.gov.za/speeches/address-president-cyril-ramaphosa-south-africa%E2%80%99s-response-coronavirus-pandemic%2C-union-buildings%2C-tshwane-4>, accessed 19 June 2020.

^{xliii} John Mowat. 2015. Towards a New Conceptualisation of Marginalisation. European Educational Research Journal, Vol. 14(5) 454–476. <https://journals.sagepub.com/doi/pdf/10.1177/1474904115589864>

^{xliiv} African Union. 2013. AU Agenda 2063: The Africa we Want. African Union (online) 10 June 2013. https://au.int/sites/default/files/documents/36204-doc-agenda2063_popular_version_en.pdf, accessed 27 May 2020.

^{xliiv} NGO Pulse. 2020. Covid-19 in South Africa- Overview of the NGO Funding Situation and Fundraising Efforts. <http://www.ngopulse.org/blog/2020/04/22/covid-19-south-africa-%E2%80%93-overview-ngo-funding-situation-and-fundraising-efforts>, accessed 19 June 2020.

^{xliiv} Enrique Mendizabal. 2020. How Covid-19 Is Affecting Funding, and What Think Tanks and Donors Can Do About It. On Think Tanks (Online). <https://onthinktanks.org/articles/how-covid-19-is-affecting-funding-and-what-think-tanks-and-donors-can-do-about-it/>

^{xliiv} 702 Radio. 2020. How are Local Non-Profit Organisations Impacted by the Covid-19 Shutdown. <http://www.702.co.za/articles/380039/how-are-local-non-profit-organisations-impacted-by-covid-19-and-shutdown>, accessed 19 June 2020.

^{xliiv} Source: Simon O'Connell. 2020. How To Reform NGO Funding. World Economic Forum (Online). <https://www.weforum.org/agenda/2020/04/how-to-reform-ngo-funding-so-we-can-deal-with-threats-like-covid-19/>

^{xliiv} Source: Simon O'Connell. 2020. How To Reform NGO Funding. World Economic Forum (Online). <https://www.weforum.org/agenda/2020/04/how-to-reform-ngo-funding-so-we-can-deal-with-threats-like-covid-19/>

ⁱ UNICEF. 2020. Covid-19: How to Include Marginalised People in Risk Communication and Community Engagement. UNICEF (Online) https://www.unicef.org/ukraine/media/5396/file/covid_marginalized_eng.pdf, accessed 27 May 2020.

- li UNESCO. 2020. Covid-19 Impact on Education. UNESCO (Online). <https://en.unesco.org/covid19/educationresponse>, accessed 28 May 2020.
- lii UNECA, 2020. How Covid-19 is Changing the World: A Statistical Perspective. UNECA Online Report. <https://www.uneca.org/publications/how-covid-19-changing-world-statistical-perspective>, accessed 28 May 2020.
- liii ITU. Measuring Digital Development: Facts and Figures 2019. ITU Publications (Online). <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf>, accessed 18 June 2020.
- liv Sharon Dell and Wagdy Sawahel. 2020. African Universities Urged to Put Classes Online. <https://www.universityworldnews.com/post.php?story=20200320093558384>, accessed 29 May 2020.
- lv Edward-John Bottomley. SA Has Some of the Most Expensive Data, A New Report Says- but It Is Better for the Rich. Business Insider SA, 05 May 2020. <https://www.businessinsider.co.za/how-sas-data-prices-compare-with-the-rest-of-the-world-2020-5>, accessed 19 June 2020.
- lvi Connecting Africa. 2020. Most Expensive Data Prices in Africa. http://www.connectingafrica.com/author.asp?section_id=761&doc_id=756372&image_number=3, accessed 19 June 2020.
- lviii According to Mphure, the impacts of the digital divide in the era of covid-19 have been far reaching and will push organisations to reorient their methodological approaches.
- lix Kingsley Igbor. 2017. Africa's Jobless Youth Cast a Shadow Over Economic Growth. African Renewal (Online) <https://www.un.org/africarenewal/magazine/special-edition-youth-2017/africas-jobless-youth-cast-shadow-over-economic-growth>
- lx ILO. 2020. ILO Monitor: Covid-19 and the World of Work. ILO (Online) https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_740877.pdf pp.2.
- lxi African Development Bank. Catalysing Youth Opportunity in Africa. https://www.afdb.org/fileadmin/uploads/afdb/Images/high_5s/Job_youth_Africa_Job_youth_Africa.pdf, accessed 29 May 2020.
- lxii AU, op cit, 2013.
- lxiii Mphure, Interview.
- lxiv UNECA, op.cit. 2020.
- lxv The Presidency, Op Cit.
- lxvi International Growth Centre. 2020. The Shadow Pandemic: Gender-Based Violence and Covid-19. ICG (Online). <https://www.theigc.org/blog/the-shadow-pandemic-gender-based-violence-and-covid-19/>
- lxvii UN Women. 2020. Covid-19 and the Link to Violence Against Women and Girls. UN Women (Online) <https://africa.unwomen.org/en/news-and-events/stories/2020/04/covid-19-and-the-link-to-violence-against-women-and-girls>, accessed 28 May 2020.
- lxviii African Union Youth Division Webinar. Ensuring Meaningful Youth Mobilisation, Community Engagement and Volunteering During Covid-19. 29 May 2020.
- lxix Moussa Kondo. (Country Director- Accountability Lab Mali). WhatsApp Interview with Luanda Mpungose. 1 June 2020.
- lxx AU Youth Division, op cit, 2020.
- lxxi Mphure, Interview.
- lxxii UNICEF. 2018. Youth Advocacy Guide. Voices Of Youth (Online). <https://www.voicesofyouth.org/tools-resources/youth-advocacy-guide>
- lxxiii The author co-facilitated three of the four workshops held in Kenya, Mozambique, Cote D'Ivoire and Uganda to co-create the Advocacy Guide.
- lxxiv See The United Nations Economic Commission for Africa. 2020. COVID-19 in Africa: Protecting Lives and Economies, available from: https://www.uneca.org/sites/default/files/PublicationFiles/eca_covid_report_en_rev16april_5web.pdf
- lxxv For instance Paul King. 2016. Why Are Younger People More Creative Than Adults? Forbes [online] 3 August, Available at: <https://www.forbes.com/sites/quora/2016/08/03/why-our-brains-become-less-creative-as-we-get-older/#4b208f777955> [accessed 2 May 2020]
- lxxvi Raymond W.Y. Kao. 1993. Defining Entrepreneurship: Past, Present and ? *Creativity and Innovation Management*, Volume 2 Number 1 March 1993

- ^{lxxvii} Nicole Martins Ferreira. 2020. What is Entrepreneurship? Entrepreneur Definition and Meaning, Oberlo [online] 14 January, available from: <https://www.oberlo.com/blog/what-is-entrepreneurship> [accessed 2 May 2020]
- ^{lxxviii} Cambridge Dictionary. ND. Entrepreneurship, [online] ND, Available from: <https://dictionary.cambridge.org/dictionary/english/entrepreneurship> [accessed 2 May 2020]
- ^{lxxix} AIDS Accountability International. 2017. The Urgency we Require: The State of African Youth Report in the Context of the Realization of the Demographic Dividend, 2nd Edition. Available from: <http://www.aidsaccountability.org/wp-content/uploads/2017/12/AIDS-Accountability-International-State-of-the-African-Youth-Report-2nd-Edition-Digital.pdf>
- ^{lxxx} Business Directory. ND. Entrepreneurship. [Online] ND. Available from: <http://www.businessdictionary.com/definition/entrepreneurship.html> [accessed 2 May 2020]
- ^{lxxxi} For instance: Wise Sambo. 2016. Factors affecting youth entrepreneurship development in Kibera district, Kenya, Problems and Perspectives in Management, Volume 14, Issue 3, 2016; Germinah Evelyn Chiloane-Tsoka and Amrei Botha (2015). Factors influencing urban youth entrepreneurship development in sub-Saharan Africa. Problems and Perspectives in Management, 13(4-1), 230-239; Jacqueline Kew. 2016. Obstacles and Opportunities for Youth Entrepreneurship: A Co-ordinated Approach Critical to Promote Youth Entrepreneurship, Available from: [file:///C:/Users/Bob%20Wekesa/Downloads/Obstacles-and-Opportunities-for-Youth-Entrepreneurs Jacqueline-Kew ASRI%20\(1\).pdf](file:///C:/Users/Bob%20Wekesa/Downloads/Obstacles-and-Opportunities-for-Youth-Entrepreneurs%20Jacqueline-Kew%20ASRI%20(1).pdf); Jacques De Jongh and Natanya Meyer. 2017. An Investigation into the Factors Affecting Young People's Entrepreneurial Inclination: The Case of Selected Areas in South Africa, International Journal of Business and Management Studies, Vol 9, No 2, 2017
- ^{lxxxii} Gretchen Mcculloch. 2020. Covid-19 Is History's Biggest Translation Challenge, WIRED [online] 31 May, Available from: <https://www.wired.com/story/covid-language-translation-problem/> [Accessed 20 June 2020]
- ^{lxxxiii} See <https://translatorswithoutborders.org/covid-19>
- ^{lxxxiv} <https://techcrunch.com/2020/04/10/apple-and-google-are-launching-a-joint-covid-19-tracing-tool/>
- ^{lxxxv} See <https://odihpn.org/magazine/ebola-a-crisis-of-language/>
- ^{lxxxvi} See <https://www.afro.who.int/news/who-urges-caution-countries-africa-ease-lockdowns>
- ^{lxxxvii} See Mathematica, available from: <https://www.mathematica.org/features/covid-19-curated-data-modeling-and-policy-resources>
- ^{lxxxviii} See <https://africacheck.org/>
- ^{lxxxix} With regards to social workers, see Shahana Rasool. 2020. Social workers are an untapped resource to address the psychosocial effects of Covid-19, Mail and Guardian [online] 13 April, available from: <https://mg.co.za/article/2020-04-13-social-workers-are-an-untapped-resource-to-address-the-psychosocial-effects-of-covid-19/> [accessed 6 June 2020]
- ^{xc} See <https://www.offerzen.com/blog/covid-19-faqs-finding-a-tech-job-in-a-remote-world>
- ^{xci} See <https://www.iol.co.za/business-report/opinion/covid-19-last-straw-for-some-media-in-sa-47653018>
- ^{xcii} See <https://www.id-hub.com/2020/04/02/the-importance-of-diagnostic-testing-for-covid-19/>
- ^{xciii} See <https://africacenter.org/spotlight/innovations-needed-prevent-covid-19-catching-fire-africa-cities/>
- ^{xciv} Dr Julia de Kadt, Christian Hamann, Gillian Maree, Dr Alexandra Parker, Graeme Götz, Melinda Swift, Dr Rob Moore, Samkelisiwe Khanyile, Christina Culwick, Samy Katumba, Yashena Naidoo, Sandiswa Mapukata, Darlington Mushongera. 2020. Responding to the COVID-19 pandemic in Gauteng, Gauteng City-Region Observatory, Available from: <https://www.gcro.ac.za/research/project/detail/responding-covid-19-pandemic-gauteng/> [accessed 6 June 2020]
- ^{xcv} See <https://www.unv.org/Volunteer-for-COVID-19-pandemic-response>
- ^{xcvi} For instance, Bamidele Johnson Alegbeleyea and Rana Kadhim Mohammed. Challenges of healthcare delivery in the context of COVID-19 pandemic in Sub-Saharan Africa, IberoAmerican Journal of Medicine 02 (2020) 100-109
- ^{xcvii} See <https://economictimes.indiatimes.com/news/politics-and-nation/china-offers-to-build-makeshift-covid-19-hospitals/articleshow/74854005.cms?from=mdr>
- ^{xcviii} See <https://institute.global/sites/default/files/inline-files/Tony%20Blair%20Institute%20C%20A%20Guide%20to%20Repurposing%20Manufacturing%20to%20Create%20Medical%20Equipment%20in%20Africa.pdf>
- ^{xcix} See <https://www.samrc.ac.za/research-for-our-people/covid-19-research>
- ^c See <https://www.standardmedia.co.ke/article/2001370068/nandi-brothers-improvise-portable-ventilator>
- ^{ci} See <https://www.newscientist.com/article/mg24632823-700-cheap-and-easy-1-coronavirus-test-to-undergo-trials-in-senegal/>

- cii David Gann and Mark Dodgson. 2020. How an entrepreneurial approach can help end the COVID-19 crisis, World Economic Forum [online] 29 April, Available from: <https://www.weforum.org/agenda/2020/04/how-an-entrepreneurial-approach-can-help-end-the-covid-19-crisis/> [accessed 19 June 2020]
- ciii See <https://medicalfuturist.com/covid-19-was-needed-for-telemedicine-to-finally-go-mainstream/>
- civ See <https://www.voanews.com/covid-19-pandemic/drones-spread-word-about-covid-19-rural-south-africa>
- cv See <https://www.aa.com.tr/en/africa/robots-boost-rwandas-fight-against-covid-19/1847225>
- cvi See <https://www.unido.org/news/covid-19-critical-supplies-manufacturing-repurposing-challenge>
- cvi Africa Center for Strategic Studies. 2020. Mapping Risk Factors for the Spread of COVID-19 in Africa, Online [3 April], available from: <https://africacenter.org/spotlight/mapping-risk-factors-spread-covid-19-africa/> [Accessed 20 June 2020]
- cvi Alison Buckholtz. 2020. Ebola-era Lessons for the Private Sector, International Finance Corporation [online] March 2020, available from: https://www.ifc.org/wps/wcm/connect/news_ext_content/ifc_external_corporate_site/news+and+events/news/insights/lessons-ps-ebola-1 [accessed 19 June 2020]
- cix ‘More than one in six young people out of work due to COVID-19’ (2020). *International Labour Organization*, [online], Available at: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_745879/lang-en/index.htm. (accessed: 29 May 2020).
- cx ‘More than one in six young people out of work due to COVID-19’ (2020). *International Labour Organization*, [online], Available at: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_745879/lang-en/index.htm. (accessed: 29 May 2020).
- cx ‘The ‘lockdown generation’ has been hit hardest by COVID-19’ (2020). *Mail & Guardian*, [online], Available at: <https://mg.co.za/coronavirus-essentials/2020-05-27-youth-unemployment-covid-crisis-south-africa/>. (accessed: 29 May 2020).
- cxi ‘ILO Monitor: COVID-19 and the world of work. Fourth edition’ (2020). *ILO*, [online], Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf. (accessed: 15 June 2020).
- cxi ‘ILO Monitor: COVID-19 and the world of work. Fourth edition’ (2020). *ILO*, [online], Available at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_745963.pdf. (accessed: 15 June 2020).
- cxi ‘Africa could lose 20 million jobs due to pandemic: AU study’ (2020). *Reuters*, [online], Available at: <https://www.reuters.com/article/us-health-coronavirus-africa-economy/africa-could-lose-20-million-jobs-due-to-pandemic-au-study-idUSKBN21NOKX>. (accessed: 30 May 2020).
- cxi ‘Africa could lose 20 million jobs due to pandemic: AU study’ (2020). *Reuters*, [online], Available at: <https://www.reuters.com/article/us-health-coronavirus-africa-economy/africa-could-lose-20-million-jobs-due-to-pandemic-au-study-idUSKBN21NOKX>. (accessed: 30 May 2020).
- cxi ‘The Socio-Economic impact of COVID-19 pandemic on African Youth’ (2020). *African Monitor*, [online], Available at: <http://www.africanmonitor.org/1104-2/>. (accessed: 27 May 2020).
- cxi ‘The Socio-Economic impact of COVID-19 pandemic on African Youth’ (2020). *African Monitor*, [online], Available at: <http://www.africanmonitor.org/1104-2/>. (accessed: 27 May 2020).
- cxi ‘COVID-19: How to save the African entrepreneur’ (2020). *Africa portal*, [online], Available at: <https://www.africaportal.org/features/covid-19-how-save-african-entrepreneur/>. (accessed 27 May 2020)
- cxi ‘Small and Medium Enterprises (SMES) Finance’ (2020) *The World Bank Group*, [online], Available at: <https://www.worldbank.org/en/topic/sme/finance>. (accessed 27 May 2020).
- cxi ‘Small and Medium Enterprises (SMES) Finance’ (2020) *The World Bank Group*, [online], Available at: <https://www.worldbank.org/en/topic/sme/finance>. (accessed 27 May 2020).

-
- cxix 'The Socio-Economic impact of COVID-19 pandemic on African Youth' (2020). *African Monitor*, [online], Available at: <http://www.africanmonitor.org/1104-2/>. (accessed: 27 May 2020).
- cxii 'Everyone Included: Social Impact of COVID-19' (2020). *United Nations: Department of Economic Affairs*, [2020], Available at: <https://www.un.org/development/desa/dspd/everyone-included-covid-19.html>. (accessed 28 May 2020).
- cxiii 'Assessing the impact of COVID-19 on young people' (2020). *Accord*, [online], Available at: <https://www.accord.org.za/analysis/assessing-the-impact-of-covid-19-on-young-people/>. (accessed 28 May 2020).
- cxiv 'How youth and technology can drive Africa's COVID-19 response' (2020). *World Economic Forum*, [online], Available at: <https://europeansting.com/2020/05/25/how-youth-and-technology-can-drive-africas-covid-19-response/>. (accessed 28 May 2020).
- cxv 'How youth and technology can drive Africa's COVID-19 response' (2020). *World Economic Forum*, [online], Available at: <https://europeansting.com/2020/05/25/how-youth-and-technology-can-drive-africas-covid-19-response/>. (accessed 28 May 2020).
- cxvi 'How youth and technology can drive Africa's COVID-19 response' (2020). *World Economic Forum*, [online], Available at: <https://europeansting.com/2020/05/25/how-youth-and-technology-can-drive-africas-covid-19-response/>. (accessed 28 May 2020).
- cxvii 'Rural population (% of total population) – Sub-Saharan Africa' (2018). *The World Bank Group*, [online], Available at: <https://data.worldbank.org/indicator/SP.RUR.TOTL.ZS?locations=ZG>. (accessed 28 May 2020).
- cxviii 'How youth and technology can drive Africa's COVID-19 response' (2020). *World Economic Forum*, [online], Available at: <https://europeansting.com/2020/05/25/how-youth-and-technology-can-drive-africas-covid-19-response/>. (accessed 28 May 2020).
- cxix MASON, P. 2016. *Postcapitalism: A guide to our future*, Macmillan.
- cxx UNU-WIDER. 2019. *Transforming Informal Work and Livelihoods* [Online]. Helsinki, Finland: UNU_WIDER. Available: <https://www.wider.unu.edu/project/transforming-informal-work-and-livelihoods> [Accessed May 4 2020].
- xxxi RODRIK, D. 2016. Premature deindustrialization. *Journal of economic growth*, 21, 1-33.
- xxxii SSOZI, J. & HOWARD, E. 2018. The non-classical structural economic transformation of Sub-Saharan Africa: urbanization with premature deindustrialization. *Africagrowth Agenda*, 15, 8-12.
- xxxiii NAYYAR, G. 2019. *What do automation and artificial intelligence mean for Africa?* [Online]. New York: The Brookings Institute. Available: <https://www.brookings.edu/blog/future-development/2019/07/16/what-do-automation-and-artificial-intelligence-mean-for-africa/> [Accessed June 20 2020].
- xxxiv DELOITTE 2017. *Industry 4.0: Is Africa Ready for Digital Transformation?* Johannesburg, South Africa.
- xxxv ARNTZ, M., GREGORY, T., LEHMER, F., MATTHES, B. & ZIERAHN, U. Technology and jobs in the fourth industrial revolution. IZA Workshop: Labor Productivity and the Digital Economy, 2017.
- xxxvi RAINNIE, A. & DEAN, M. 2020. Industry 4.0 and the future of quality work in the global digital economy. *Labour & Industry: a journal of the social and economic relations of work*, 30, 16-33.
- xxxvii UNITED NATIONS DEVELOPMENT PROGRAM 2019. *Digital Livelihoods for People on the Move. Migrant Union*. New York: United Nations Development Program (UNDP).
- xxxviii PEÑA-LÓPEZ, I. 2016. World development report 2016: Digital dividends.
- xxxix RAINNIE, A. & DEAN, M. 2020. Industry 4.0 and the future of quality work in the global digital economy. *Labour & Industry: a journal of the social and economic relations of work*, 30, 16-33.
- cxl PALMERO, F. 2020. Will COVID-19 Be a Tipping Point for Technology? <https://www.cmswire.com/digital-workplace/will-covid-19-be-a-tipping-point-for-technology/>.
- cxli GRABOWSKI, R. 2017. Premature deindustrialization and inequality. *International Journal of Social Economics*.

- cxlii DUNGY, T. N. & NDOFOR, H. A. 2019. A dialogue on the informal economy in Africa. *Africa Journal of Management*, 5, 401-407.
- cxliii GELB, A., MEYER, C., RAMACHANDRAN, V. & WADHWA, D. 2017. Can Africa be a manufacturing destination? Labor costs in comparative perspective. *Center for Global Development Working Paper*.
- cxliv INTERNATIONAL LABOR ORGANIZATION (ILO). 2018. *More than 60 per cent of the world's employed population are in the informal economy* [Online]. Geneva: ILO. Available: https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_627189/lang--en/index.htm [Accessed June 20 2020].
- cxlv CADOT, O., DE MELO, J., PLANE, P., WAGNER, L. & WOLDEMICHAEL, M. T. 2016. Industrialization and Structural Change: Can Sub-Saharan Africa Develop without Factories? *Revue d'économie du développement*, 24, 19-49.
- cxlvi PEW RESEARCH CENTER. 2018. *Teens, Social Media & Technology 2018* [Online]. New York: Pew Research Center. Available: <https://www.pewresearch.org/internet/2018/05/31/teens-social-media-technology-2018/> [Accessed June 20 2020].
- cxlvii BAREFOOT, K., CURTIS, D., JOLLIFF, W., NICHOLSON, J. & OMOHUNDRO, R. 2019. Research Spotlight: Measuring the Digital Economy. *Survey of Current Business*, 99, 1-13.
- cxlviii UNITED NATIONS DEVELOPMENT PROGRAM 2019. Digital Livelihoods for People on the Move. *Migrant Union*. New York: United Nations Development Program (UNDP).
- cxlix SHANKAR, U. 2017. Digital Economy in India: Challenges and Prospects. *Management*, 2, 6-11.
- cl COYLE, D. 2017. Precarious and productive work in the digital economy. *National institute economic review*, 240, R5-R14.
- cli TURIANSKYI, Y. 2020. *COVID-19: Implications for the 'digital divide' in Africa* [Online]. Available: <https://www.africaportal.org/features/covid-19-implications-of-the-pandemic-for-the-digital-divide-in-africa/> [Accessed June 20 2020].
- clii WAKAMA, A. 2018. *Top 7 African taxi-hailing apps giving Uber a run for its money* [Online]. IT News Africa. Available: <https://www.itnewsafrika.com/2018/06/top-7-african-taxi-hailing-apps-giving-uber-a-run-for-its-money/> [Accessed June 20 2020].
- cliii LAVERY, M. P., ABADI, M. M., BAUER, R., BRAMBILLA, G., CHENG, L., COX, M. A., DUDLEY, A., ELLIS, A. D., FONTAINE, N. K. & KELLY, A. E. 2018. Tackling Africa's digital divide. *Nature Photonics*, 12, 249-252.
- cliv BANSON, K. E., NGUYEN, N. C. & BOSCH, O. J. 2016. Using system archetypes to identify drivers and barriers for sustainable agriculture in Africa: a case study in Ghana. *Systems Research and Behavioral Science*, 33, 79-99.
- clv HALL, C., DAWSON, T., MACDIARMID, J., MATTHEWS, R. & SMITH, P. 2017. The impact of population growth and climate change on food security in Africa: looking ahead to 2050. *International Journal of Agricultural Sustainability*, 15, 124-135.
- clvi GEROMEL, R. 2012. *From What Sector Will The Next Billionaires Come?* [Online]. New York: Forbes. Available: <https://www.forbes.com/sites/ricardogeromel/2012/12/07/from-what-sector-will-the-next-billionaires-come/#73ef91896de9> [Accessed June 20 2020].
- clvii ELRYS, A. S., METWALLY, M. S., RAZA, S., ALNAIMY, M. A., SHAHEEN, S. M., CHEN, Z. & ZHOU, J. 2020. How much nitrogen does Africa need to feed itself by 2050? *Journal of Environmental Management*, 268, 110488.
- clviii DEICHMANN, U., GOYAL, A. & MISHRA, D. 2016. *Will digital technologies transform agriculture in developing countries?*, The World Bank.
- clix KATZ, R. L., CALLORDA, F. M. & JUNG, J. 2020. Can Digitization Mitigate COVID-19 Damages? Evidence from Developing Countries. *Evidence from Developing Countries (May 14, 2020)*.
- clx RADANLIEV, P., DE ROURE, D. & VAN KLEEK, M. 2020. Digitalization of COVID-19 pandemic management and cyber risk from connected systems. *arXiv preprint arXiv:2005.12409*.
- clxi UNITED NATIONS DEVELOPMENT PROGRAM 2019. Digital Livelihoods for People on the Move. *Migrant Union*. New York: United Nations Development Program (UNDP).
- clxii ONDIEKI, C. M., KAHIHU, N. & MUTHONI, S. 2019. Integration Of Soft Skills Into The TVET Curriculum In Kenya. *Integration*, 6.
- clxiii DEJAEGHERE, J., MORRIS, E. & BAMATTRE, R. 2019. Moving beyond employment and earnings: reframing how youth livelihoods and wellbeing are evaluated in East Africa. *Journal of Youth Studies*, 1-19.
- clxiv ANDREEV, V. N., SIGANKOV, A. A., CHERVENKOVA, S. G., ABARINOV, S. N. & SHATSKAYA, I. V. Knowledge Mapping as a Task of Personnel Training of Digital Economy Companies. 1st International Conference on Emerging Trends and Challenges in the Management Theory and Practice (ETCMTTP 2019), 2020. Atlantis Press, 83-87.
- clxv TURTON, T. L., BANESH, D., OVERMYER, T., SIMS, B. H. & ROGERS, D. H. 2020. Enabling Domain Expertise in Scientific Visualization With CinemaScience. *IEEE Computer Graphics and Applications*, 40, 90-98.

-
- clxvi OKONKWO, C. W., HUISMAN, M. & TAYLOR, E. Socio-Economic Contributions of Mobile Applications in Africa: Impact of Local Mobile Applications. 2019 International Multidisciplinary Information Technology and Engineering Conference (IMITEC), 2019. IEEE, 1-8.
- clxvii ASONGU, S. & NWACHUKWU, J. C. 2017. Mobile phones in the diffusion of knowledge and persistence in inclusive human development in Sub-Saharan Africa. *Information Development*, 33, 289-302.
- clxviii MULLAN, M. 2019. The data-driven airport: How daa created data and analytics capabilities to drive business growth, improve the passenger experience and deliver operational efficiency. *Journal of Airport Management*, 13, 361-379.
- clxix KOKINA, J., PACHAMANOVA, D. & CORBETT, A. 2017. The role of data visualization and analytics in performance management: Guiding entrepreneurial growth decisions. *Journal of Accounting Education*, 38, 50-62.
- clxx GALLAGHER, M. & TREDAFILOV, R. 2018. R vs. Python: Ease of Use and Numerical Accuracy. *Journal of Business and Accounting*, 11, 117-126.
- clxxi PARKER, A. & BROWN, I. Skills Requirements for Cyber Security Professionals: A Content Analysis of Job Descriptions in South Africa. International Information Security Conference, 2018. Springer, 176-192.
- clxxii CRUMPLER, W. & LEWIS, J. A. 2019. *Cybersecurity Workforce Gap*, Center for Strategic and International Studies (CSIS).
- clxxiii Coursera: <https://www.coursera.org/>
- clxxiv EdX: <https://www.edx.org/>
- clxxv University of Cape Town: <https://www.getsmarter.com/courses/university-of-cape-town>
- clxxvi See for instance, the Africa Data Science Intensive (DSI) mentorship program 2020 for young African students, available at <https://www.opportunitiesforafricans.com/africa-data-science-intensive-dsi-program-2020/>
- clxxvii PWC, N. 2020. *Lifelong learning: how to stay relevant in the digital age* [Online]. The Netherlands: PWC. Available: <https://www.pwc.nl/en/insights-and-publications/services-and-industries/people-and-organisation/lifelong-learning-how-to-stay-relevant-in-the-digital-age.html> [Accessed June 20 2020].
- clxxviii UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD) 2019. Digital Economy Report 2019: Value Creation and Capture: Implications for Developing Countries. In: UNCTAD (ed.). New York: UNCTAD.