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Foreword

It is an honor and a privilege to introduce this Special Edition of the African Journal of Sustainable Development, a journal that stands as a beacon of African scholarship and intellectual innovation. Prepared in partnership with the esteemed Sustainable Development Solutions Network (SDSN), this special edition is a critical outcome of the 2023 Academic Conference on Africa, held from 1-3 December 2023 at the United Nations Headquarters in New York.

Organized by the UN Office of the Special Adviser on Africa (UN-OSAA) in collaboration with UN Academic Impact and supported by the UN Peace and Development Trust Fund, the 2023 conference brought together incredibly accomplished scholars from across the continent, united by a shared vision: to redefine African futures through the power of knowledge, collaboration, and shared purpose. The diverse group of participants—academics, policymakers, practitioners—from various disciplines and sectors, discussed critical issues facing Africa and the world. The conference served as a platform not only for intellectual exchange but also for building bridges towards deeper and more meaningful collaboration between African scholars and global development actors, addressing the stark underrepresentation of African scholars in global policy discussions.

For too long, global narratives have imposed narrow limits on how Africa's potential is understood and pursued, hindering the exploration of bold, lasting pathways to sustainable development and durable peace. The Academic Conference aimed to create a vital space for African academics to challenge and reshape these narratives, contributing to the transformation of mindsets and policymaking.

This Special Edition of the African Journal of Sustainable Development is a continuation of that essential work. The theme of both the 2023 conference and this special edition, "*Redefining African Futures: The State, Resilience, and Pathways to Progress*," is both ambitious and urgent. It challenges us to look beyond the conventional narratives that have long dominated global discourses on Africa, and to instead elevate the voices of African scholars, whose insights, experiences and perspectives are crucial to understanding and addressing the continent's complex realities.

Foreword

In this context, this edition features a collection of articles that echo the themes and discussions of last year's conference, while also expanding the dialogue to address the broader challenges and opportunities that lie ahead. The contributions in this edition are as diverse as they are profound, covering a wide range of topics across the peace, security and development nexus – from governance and resilience to health, education, climate change, and beyond.

As we approach the UN Summit of the Future and the implementation of the ambitious Pact for the Future, the urgency of the challenges facing Africa cannot be overstated. In this light, the articles in this edition offer not just analysis, but inspiration. They challenge us to think differently about Africa's role in the world and to recognize its potential as a driver of innovation, resilience, and progress on the global stage. These works not only enrich the academic discourse on Africa but also provide practical insights that will guide policymakers and practitioners in their efforts to create a better future for the continent.

Looking ahead, the bridges we have built through the 2023 conference and this publication are just the beginning. The work of building connections – between scholars and policymakers, between Africa and the world – must continue with even greater urgency and resolve.

Finally, I am reminded of the powerful keynote address delivered by Prof. Wole Soyinka, Nobel Laureate, Playwright, Poet and Activist, during last year's conference. He aptly described African universities and academia as "*a self-sustaining component of overall society, autonomous in the realm of ideas, generating unlimited possibilities in virtually every field of human endeavour.*" I invite you to engage deeply with the *unlimited possibilities* presented in this special edition. Let them inspire you, challenge you, and guide you in your own work. Together, we can redefine the future of Africa and, in doing so, contribute to the creation of a better, more equitable, more peaceful and more prosperous world for all.

Cristina Duarte
Under-Secretary-General and Special Adviser on Africa, United Nations

Editors' Note

Redefining African Futures: The State, Resilience and Pathways to Progress for a Sustainable Future

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Abstract

This editorial essay introduces the special issue, which is a direct outcome of the 2023 Academic Conference on Africa convened by the United Nations Office of the Special Adviser on Africa. Proposed by the SDG Academy at the UN Sustainable Development Solutions Network and the United Nations Office of the Special Adviser on Africa, the issue conveys articles on the future of development in the region, presented as expert commentaries, to add to the discourse informing the UN Summit of the Future and events in its aftermath. With contributions from several top experts, scholars, and policymakers, the special issue conveys a wide array of perspectives on sectors such as health, education, urban development, energy, and more.

Furthermore, it highlights important issues underlying development that inhibit wide-scale and sustainable progress, including post-colonialism, gender inequality, governance, and conflict and crisis. The 19 contributions in this special issue offer rich threads of commentary that weave together a picture of various African futures—futures that are bold, transformational, and sustainable when they leverage the momentum of social policies, economic pivots, and energy transitions. The issue examines the vast potential for improved development outcomes within Africa as well as advancing the region's competitiveness at the global level. This editorial essay

provides a brief summary of the articles and encourages reflection on disrupting long-held narratives on Africa's development, better contextualizing policies and practice, and embracing the rich opportunities for African nations that are associated with current global challenges.

Introduction

In 2021, the United Nations Secretary-General issued *Our Common Agenda* as a call to action for reestablishing trust in multilateralism and creating better, more inclusive, pathways to peace and development. At a moment when regional conflicts were overwhelming global security and recovery from the COVID-19 pandemic was proving highly inequitable, *Our Common Agenda* aimed to reunite nations and communities towards the causes of peacebuilding, shared prosperity, and better global governance. To follow up the Secretary-General's call, the Summit of the Future (2024) was envisioned to mend eroded trust in the multilateral system and demonstrate that international cooperation can effectively achieve agreed goals and tackle emerging threats and opportunities.

The UN's actions have surfaced important discourse on international development and governance, and moreover, opened an opportunity to remedy the inequities and injustices that have eroded global trust. Specifically, recent actions have brought underrepresented voices to the fore and made central the question of who defines the future, and for whom? Critiques of an inequitable multilateral system have coalesced into a new Pact for the Future, a landmark declaration adopted by Member States, intended to "bring multilateralism back from the brink" (Guterres, 2024). The Summit of the Future and events in its aftermath mark an important moment in global development, one that elevates long held critiques to spur action for a more equitable and prosperous future.

Africa has a powerful opportunity to leverage current momentum to reform perspectives that have historically inhibited the continent from truly transformative progress. The moment is ripe to shift narratives centered on dependency to more equitable views on the contributions of African nations to advance multilateral agendas. As momentum from the Summit of the Future grows and events in its aftermath unfold, it is both essential and valuable to amplify Africa's voice in the next era of international cooperation and governance.

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This special issue extends on these principles and offers 19 commentaries authored by esteemed experts, from both the continent and its diaspora. Its featured authors were curated to touch on a diversity of issues and were selected due to their track record of meaningful knowledge contributions and innovative perspectives. The articles were conceived of as brief commentaries to allow a wider array of discourse from multiple stakeholders. Although the nature of the contributions took a commentary approach, each underwent a thorough peer review process. It is our hope, as editors, to establish a portfolio of insightful, informed, and impactful perspectives on the future of Africa's development, one that can shape and guide practical pathways forward.

The following sections convey a brief overview of development progress in Africa, followed by a summary of the commentaries offered in the special issue. The commentaries touch on major themes that have emerged more heavily in recent discourse on Africa's development; specifically, themes of governance and state capacity, as well as resilience, which were highlighted as leading threads of discussion in the 2023 UN conference, "Redefining African Futures: The State, Resilience, and Pathways to Progress." Furthermore, many of the articles take on sub-themes linked to the six transformations for sustainable development (Sachs et al., 2019). The editorial essay concludes with a reflection on steps forward and encourages a reframing of current development discourse.

African development and the road to 2030

From the MDGs to the SDGs

From the onset of global goal-setting with the Millennium Development Goals (MDGs) in 2000, Africa has been a central target of international development efforts. Now in the era of the Sustainable Development Goals (SDGs), Africa remains an important focus of the global agenda. Over time, the continent has seen much progress but continues to lag behind other regions. Deeper understandings of the levers and inhibitors of progress are ongoing, but there is much to reflect on in the last two decades of goal-based development.

During the MDGs, Africa achieved impressive gains, including increasing net primary school enrollments, bridging the gender gap in education, growing the representation of women in national parliaments,

and reducing child and maternal deaths (UNECA, 2015). Across several indicators, Africa was a global leader in progress, including its efforts to increase GDP per capita (UNECA, 2015) and to raise net primary school enrollment rates. Sub-Saharan Africa was exemplary in this regard, increasing enrolments more than any other region globally (UN, 2015). However, overall assessments of development progress in Africa during the MDGs often evoke rhetoric of failure given that no goals were fully achieved. For example, although the child mortality rate in Sub-Saharan Africa declined five times faster during 2005-2013 than it had from 1990-1995, the region still had the highest rate globally (UN, 2015).

Although African nations did not meet the MDGs, noteworthy progress was made when gains are viewed nationally and regionally rather than comparatively across the world. Takeuchi et al. (2015) note, depending on the indicator, up to 46 per cent of poor countries for which sufficient data were available registered better-than-expected progress on some MDG targets, even though they were not 'on track' to meet them (Kindra and Wasswa-Mugambwa, 2015). By the end of the MDG campaign, whether Africa's success could be recognized, depended on whether linear or non-linear perspectives were used to assess MDG targets and indicators. However, it was evident that considerable progress had been made, despite having far to go.

The establishment of the SDGs renewed momentum for development in Africa with a new set of 17 more complex, inter-related, and ambitious goals. The new development framework, *Transforming our world: the 2030 Agenda for Sustainable Development*, aimed to leverage the progress of the MDGs to advance development aligned with principles of sustainability. Since 2015, SDG progress in Africa has been punctuated by a series of crises but has continued onwards at varying rates.

Prior to the COVID-19 pandemic, many African nations saw marginal to moderate gains in such areas as renewable energy and water and sanitation. By 2018, one third of all new power grids were drawing on large-scale renewables (hydro and geothermal), and access to electricity had increased by 8 points to 53 per cent in the first three years of the agenda (UN, 2018). Nonetheless, the 2019 UN Sustainable Development Report (UN, 2019) cited that although progress was notable in some areas; the global commitment to the SDGs had not yet been sufficient and the most vulnerable people and countries were still at risk of being left behind. In

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2015, Africa began the SDG campaign largely under-resourced and by 2020 needs were exacerbated by the global pandemic.

The onset of COVID-19 elicited new obstacles to development, compounded existing ones, and highlighted a need for greater resilience in Africa. The pandemic provoked an economic downturn that threatened decades of progress on the continent. Although the number of poor was already projected to increase in 2020, the pandemic was anticipated to double the rate, pushing millions of people back into extreme poverty (Min, 2021). By 2024, the UN Sustainable Development Report (UN, 2024a) highlighted that global progress towards the SDGs had ground to a halt or been reversed across multiple fronts.

The combined effects of the COVID-19 pandemic, escalating conflicts, climate-related disasters, and economic instability have deepened pre-existing inequalities, particularly in Africa. Globally, between 2019 and 2022, an estimated 23 million more people fell into extreme poverty, and over 100 million additional individuals faced hunger. Furthermore, although certain health indicators saw improvement, the overall pace of global health advancements has slowed significantly since 2015 (UN, 2024a). Ultimately, the first half of the SDG timeline saw slow progress in Africa due to insufficient global commitments and has been met with ongoing challenges, amplified by vulnerabilities on the continent.

The Road to 2030

As the world moves into the second half of the 2030 Agenda for Sustainable Development, Africa stands at a critical juncture. Having passed the midpoint of the SDGs in 2023 and now in the Second Ten-Year Implementation Plan of the African Union's Agenda 2063, it is clear that development progress must be expedited to meet goals. The alignment of these milestones with the UN Summit of the Future offers African leaders and their development partners a unique opportunity to reassess progress and recalibrate efforts toward achieving the continent's development ambitions.

While Africa has made strides towards the SDGs, the pace remains insufficient to meet the 2030 deadline. Presently, Africa is significantly off track on 15 of the 17 SDGs (UN, 2024b). Persistent challenges, including political instability, violent conflict, and weak governance structures,

continue to threaten the gains made. Additionally, recent global disruptions such as the conflict between Israel and Gaza, ongoing war between Russia and Ukraine, and rising inflation have further exacerbated the region's socio-economic vulnerabilities, intensifying food insecurity, inflationary pressures, and deepening inequalities.

In particular, rising conflict and instability, including the increasing threat of violent extremism and terrorism, pose a grave obstacle to Africa's progress. Last year, global deaths from terrorism surged by 22 per cent, with Africa accounting for the majority of these fatalities (IEP, 2024). Unconstitutional changes of government have also added to Africa's challenges. Between 2020 and 2023, the continent witnessed coups in seven countries, most recently in Niger and Gabon (UN, 2024b). These events, along with the broader decline in security and rule of law, underscore the fragility of governance structures across Africa. According to the latest Ibrahim Index of African Governance, 70 per cent of Africa's population lives in countries where the rule of law and security has worsened in the past decade (Mo Ibrahim Foundation, 2023). This fragility has severely hindered progress toward sustainable development, especially in conflict-affected regions.

Despite these formidable obstacles, Africa has demonstrated resilience in advancing certain SDGs, particularly those related to environmental sustainability. Progress has been noted in goals such as responsible consumption and production (Goal 12) and climate action (Goal 13), where African nations have started implementing innovative solutions to address their environmental challenges. Yet, the broader development landscape remains uneven. Africa still lags in many essential areas, including poverty eradication (Goal 1), hunger (Goal 2), and access to quality education (Goal 4). Over 850 million people on the continent remain food-insecure, and nearly 29 per cent of school-aged children are out of school, while three-quarters of the population lack access to reliable energy (UNICEF, 2024).

The road to 2030 requires concerted efforts to address the broad range of development challenges that persist across the continent. From poverty, food insecurity, and education deficits to governance, health, and infrastructure, Africa's progress hinges on implementing inclusive, people-centered policies that promote peace, strengthen governance, and enhance climate resilience. Policymakers, civil society, and development partners

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must work together to create solutions that address not only immediate crises but also the underlying structural issues that hamper long-term development.

As the world embarks on implementing its ambitious Pact for the Future, it is essential that Africa's voice plays a central role in reshaping global priorities to reflect the continent's unique challenges and opportunities. In this context, African scholars are pivotal. Their research, insights, and innovations will continue to illuminate the complex realities that Africa faces and drive the transformative solutions needed to overcome them. The commentaries in this special issue highlight the diversity and depth of African scholarship on these matters, providing critical perspectives on the continent's development trajectory and offering new pathways toward a more resilient and prosperous future.

Overview of Commentaries

The commentaries in this special issue link to important themes highlighted in recent international conferences and discourse. Specifically, the 2023 Academic Conference on Africa, convened by the UN Office of the Special Adviser on Africa in collaboration with UN Academic Impact, provided a platform for African academics to initiate conversations on the status of development in the region. The title of the conference, “Redefining African Futures: The State, Resilience, and Pathways to Progress,” which also lends its name to this special issue, highlighted the need to amplify African academics in order to enrich development policy. Two themes guided the conference: 1. African Governance: Assessing the State of the State, and 2. Complexities of Resilience in Africa: Expanding the Perspective.

In addition to the overarching themes of governance and resilience, many of the commentaries link to Sachs's six transformations to offer practical perspectives and tangible avenues for progress (Sachs et al., 2019). Such transformations include: 1. Education, Gender, and Inequality; 2. Health, Wellbeing, and Demography; 3. Energy Decarbonization and Sustainable Industry; 4. Sustainable Food, Land, Water, and Oceans; 5. Sustainable Cities and Communities; and 6. The Digital Revolution for Sustainable Development. We have added two further transformations to cover the breadth of perspectives in this issue, which include: 7. Finance and State Capacity, and 8. Policy, Peace, and Partnerships for Development.

The summaries to follow offer a glimpse of how to rethink and reframe development efforts in Africa.

Energy Decarbonization and Sustainable Industry

Global progress on climate change has not proceeded at the rate required to meet the aims of the Paris Agreement. In recognition of this, the 2023 Nairobi Declaration on Climate Change stressed the importance of climate positive growth in Africa and acknowledged the continent's unique circumstances (IRENA, 2024). Africa remains at an important crossroads for the energy transition. The continent simultaneously needs to increase energy access, with some 570 million people without electricity (IRENA, 2024), and ensure energy sources that are sustainable and aligned with global climate objectives. The articles in this section touch on the challenges and opportunities of the energy transition in Africa. Specifically, they highlight Africa's potential to lead the world into a safer climate era, while also enhancing human development outcomes across the continent.

Antonio Pedro and Maryanne Iwara succinctly discuss Africa's comparative advantage to become a major international player in the global energy economy. Pedro and Iwara open their argument with an emphasis on the richness of natural resources abundant in Africa, noting its stock of around 30 per cent of the world's mineral reserves, specifically those critical to the global energy transition. Moreover, the authors highlight that the potential for renewable energy in Africa is vast given high solar irradiance and significant wind speed in many regions. The article positions the richness of Africa's natural resources alongside recent economic and governance frameworks as mutually beneficial. Specifically citing the African Continental Free Trade Area (AfCFTA), the authors put together the puzzle pieces of resources, governance, and global objectives to solidify Africa's potential future trajectory. They do this alongside a critique of resource extractivism and the dependence and vulnerabilities it creates in resource-rich developing countries in Africa.

Similarly, Abel Kinyondo emphasizes the opportunities associated with addressing global concerns like climate change. Seeking to find the positive in a dire situation, Kinyondo advocates that Africa can make use of current circumstances to enhance economic growth on the continent and expedite important climate action. He presents how severe socio-economic challenges across much of Africa can be remedied through the outcomes of

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climate adaptation. However, Kinyondo highlights that Africa currently lacks the adaptive capacity necessary to navigate out of the current climatic effects due to inadequate technology, institutions, financial and technical resources. Similar to Pedro and Iwara, he offers solutions such as leveraging critical minerals, and furthermore, reforming supply chains to invest in more downstream activities that would prioritize growth within Africa rather than beyond.

Education, Gender, and Inequality

According to Sachs et al. (2019), “Education builds human capital, which in turn promotes economic growth, the elimination of extreme poverty, decent work, and overcoming gender and other inequalities” (p. 806). As such, education is a key driver of development progress and specifically builds stronger social outcomes. Notably, the interconnected topics of education, gender, and inequality are synergistic with no major trade-offs. Consequently, investments in education have a high rate of return not only for the economic pillar of sustainable development but the social pillar as well. In this section, the authors reflect on necessary improvements in education, as well as the current state of gender inequality, reflected overtly in policies and governance, and more subtly in the mindsets of people.

In education, Sub-Saharan Africa has made immense gains since the MDGs campaign. From 2000 to 2015, the region saw a 20 percentage point increase in net enrolment, more than any other region in the world (UN, 2015). However, COVID-19 disrupted education systems globally and exposed inequalities as well as pushed progress backwards in many of the poorest countries. The article by Titus Pacho highlights the challenges of improving education in Sub-Saharan Africa post-pandemic. He conveys important considerations such as the obstacles associated with teachers professional development and infrastructure and resources. Moreover, he addresses challenges uncovered by the pandemic and other crises, such as the digital divide and safe learning environments. According to Pacho, developing better frameworks and more effective mobilization of resources may put Sub-Saharan Africa on a stronger path towards access to quality, equitable, and inclusive education in the post-COVID-19 era.

Turning to a perspective on gender inequality, Awino Okech introduces contemporary debates on gender and development. She highlights “a growing global movement of transnational actors working collectively and separately to undermine women’s rights and gender justice broadly” (see Okech in this issue). For Okech, there are two primary concerns most worthy of discussion: 1. rising anti-gender rhetoric linked to state-informed legislation on gender, and 2. anti-gender actors undermining multilateral spaces and agendas. Okech presents her argument through various manifestations of gender violence, particularly highlighting the rollback of reproductive rights and increasing anti-homosexual legislation in countries such as Uganda. Ultimately, Okech concludes that society requires a strengthened understanding of how anti-gender movements are impacting the global development agenda via the reduction of civil liberties for women and girls. Furthermore, she highlights that multilateral spaces must be liberated from conservative forces and returned to more progressive actors.

Sharing similar perspectives on gender inequality, Keneilwe Sadie Mooketsane explores how women have been systematically omitted from African historical narratives, which has contributed to their marginalization in political leadership and decision-making. In the article "In the Margins of Political Power: Rewriting women into history" she outlines how, despite their significant roles in anti-colonial struggles, liberation movements, and traditional societies, women are often rendered invisible in historical accounts, which remain predominantly androcentric. This exclusion reinforces male dominance and perpetuates myths that undermine women's contributions to nation-building and governance. The article argues for the importance of incorporating women's narratives into mainstream history to acknowledge their vital contributions and to challenge the gender biases that shape our understanding of African history and politics.

Health, Wellbeing, and Demography

Africa’s future development and resilience are deeply tied to the health, wellbeing, and demographic shifts of its populations. The COVID-19 pandemic exposed significant vulnerabilities in Africa’s healthcare systems, revealing the urgent need for investment in health infrastructure, workforce development, and preparedness for future pandemics. In addition, addressing the continent’s social protection systems, both formal

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and informal, is critical for building resilience and advancing sustainable development. As this section explores, insights from across the academic spectrum highlight the complex interdependencies between health, social protection, and demographic trends, offering pathways to address these challenges and foster long-term resilience.

As Tolbert Nyenswah illustrates in his article “Pandemic Risks Threaten Africa's Sustainable Development,” the ongoing threat of infectious diseases, many of which are exacerbated by severe climatic conditions, continues to challenge Africa’s healthcare systems. He argues that adopting the “One Health” approach, a collaborative strategy that integrates human, animal, and environmental health, is essential for combating emerging infectious diseases and zoonoses. Nyenswah’s analysis emphasizes the interconnectedness of these sectors, suggesting that by increasing investment in health infrastructure and workforce capacity, African states can better prepare for future pandemics. This approach dovetails with Haroon Borat’s discussion in “Expanding Social Protection in Africa: A Menu of Early Policy Ideas,” which underscores the need to expand social protection systems in response to persistent poverty despite economic growth. Together, these perspectives reinforce the idea that health and social protection are mutually reinforcing—investments in health must be paired with robust social safety nets to build stronger, more resilient societies.

Building on Nyenswah’s argument about strengthening healthcare systems, Borat’s article focuses on the structural weaknesses in social protection systems across Sub-Saharan Africa. He points out that Sub-Saharan Africa spends significantly less on social protection compared to other regions, even those with similar income levels, which leaves millions vulnerable to shocks such as pandemics. Borat highlights the importance of both traditional and technological infrastructure in building effective social protection systems, citing examples from the Democratic Republic of Congo and Togo, where innovations such as mobile-based social registries and geospatial analysis are helping to extend coverage to the informal sector. This analysis complements Nyenswah’s call for greater investment in health by showing how social protection systems, if properly resourced and expanded, can help mitigate the socioeconomic impacts of health crises and other shocks.

In this context, Zitha Mokomane provides a crucial perspective in “Indigenous Social Protection in Africa: Pathways to Resilience and Sustainable Development.” Mokomane highlights the often-overlooked role of indigenous social protection mechanisms—rooted in African traditions of solidarity, kinship, and reciprocity—in supporting community resilience. These systems, which have long served as informal safety nets, play a key role in mitigating risks in the absence of formal social protection. Bhorat illustrates that formal social protection systems in Africa remain underdeveloped and underfunded; but Mokomane’s analysis offers a complementary solution: by integrating indigenous social protection systems into formal development strategies, African nations can enhance their resilience to both health and economic crises. In essence, while formal social protection systems are being strengthened, indigenous mechanisms can provide an immediate and culturally resonant source of support for vulnerable populations.

Sustainable Food, Land, Water, and Oceans

Despite Africa’s vast land and water resources, the continent is yet to meet the food and nutrition needs of its population. More than any other region of the world, Africa still grapples with hunger and malnutrition. According to the most recent report on the “State of Food Security and Nutrition in the World,” in 2023, between 713 and 757 million people globally faced hunger, with one in five living in Africa. Moreover, Africa had the highest prevalence of hunger at 20.4 per cent compared to single-digit rates on all other continents, affecting nearly 300 million Africans in 2023. By 2030, Africa will account for 53 per cent of the projected 582 million chronically undernourished people globally. The prevalence of moderate or severe food insecurity in Africa is 58 per cent, nearly double the global average (FAO et al., 2024). The same report stresses the urgent need for agrifood system transformations to achieve zero hunger (Goal 2). The quagmire of hunger and malnutrition has reached humanitarian proportions in some countries, exacerbated by violent conflicts, climate change and weak policy environments. The commentary in this section reflects on these critical issues and offers insights for food system transformation in Africa.

John M. Ulimwengu, in his article, “Africa Pathways to Food Systems Transformation: Challenges and Opportunities,” underscores vital issues related to the transformation of food systems in Africa. He opines

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that the challenges of environmental degradation, low agricultural productivity, limited availability and adoption of yield-increasing technologies, high malnutrition rates, violent conflicts and threats to peace and security, and inadequate governance continue as major inhibitors of progress to agricultural transformation in Africa. Fortunately, he claims the opportunities for transforming African food systems are within reach, but require enabling policy environments and commitments to technological and digital innovations, empowering women and youth, supporting community-led initiatives, and leveraging the African Continental Free Trade Area (AfCFTA) to enhance intra-African trade.

Sustainable Cities and Communities

Africa is home to the fastest growing urban population in the world, with cities there expected to add an extra 950 million people by 2050 (OECD, 2020). The rapid urbanization process in Africa is generating cautious optimism with concerns about cultural assimilation, liveability, resilience, and sustainability (Kasim et al., 2020). In addition, the pattern of development in rural and urban areas has left much to be desired with its increase in slums and shanties (Mfuno et al., 2016). SDG 11 underscores the imperatives of making cities and human settlements inclusive, safe, resilient and sustainable. Addressing this challenge in Africa, where cities are urbanizing at rapid rates, creates several paradoxes. Africa has the daunting challenge of creating sustainable cities, while simultaneously navigating housing crises, crumbling infrastructure, and inadequate investments to support the rate of change.

Isaac Olawale Albert reflects on this in his commentary to offer unique and relevant solutions. He brings to light the importance of traditional institutions to the sustainability of African cities and communities. He states that the expected growth of urban areas or modern settlements in Africa may be unsustainable if traditional institutions are neglected. According to Albert, “traditional institutions” are those structures and knowledge systems that African peoples depended upon before coming in contact with modernity, but which still find relevance today, having been transmitted across many generations. These institutions are increasingly brought to cities from rural communities by streams of urban migrants, and help people to build resilience against the social, economic, political, and environmental challenges of urban living. The commentary advocates that future development of African cities should

actionably integrate these traditional institutions into urban management regimes. Albert identifies four critical areas of engaging traditional institutions for promoting the sustainability of African cities and communities: 1. giving traditional title holders more official roles in urban governance, 2. deploying the resources of traditional African institutions for dealing with emergent social, economic, political and environmental problems in cities and communities, 3. injecting more African values into urban management protocols, and 4. mainstreaming gender in the application of African traditional institutions in urban governance.

In the article, "Governance and the Resilience of Cities in Africa," Emmanuel Remi Aiyede explores the crucial role of governance in fostering urban resilience amidst rapid urbanization and heightened vulnerabilities due to climate change and other shocks. The article emphasizes that effective governance is key to mitigating these challenges by promoting social equality, enhancing adaptive capacity, and prioritizing community well-being. It advocates for smart, responsive governance structures that integrate digital technologies and citizen engagement to build resilient urban systems. It defines a smart city as one that "leverages governance and technology to enhance the benefits while addressing the drawbacks of urbanization for its inhabitants" (see Aiyede in this issue), highlighting their ability to foster economic growth, social cohesion, and environmental sustainability, as well as to address interconnected challenges, such as housing affordability, transportation access, environmental quality, protection of vulnerable populations, and enhancement of infrastructure and services by promoting long-term sustainability in the face of rapid urbanization and climate change impacts. The article emphasizes the importance of state involvement, cross-sectoral collaboration, and the inclusion of marginalized communities in decision-making processes to strengthen resilience in African cities. It ultimately highlights the challenges of fragmented governance in Africa and the need for reforms to create sustainable, resilient cities capable of withstanding future uncertainties.

Lastly, in the article by Nara Monkam and Charite Leta, the authors further examine the progress and challenges of achieving SDG 11 in Africa. Addressing the issue of urban sustainability, Monkam and Leta offer an overview of factors that challenge efforts to establish sustainable cities. Africa's rapid rate of urbanization, coupled with colonial-era planning systems, high youth unemployment, and a multitude of other factors, create a paradox for sustainable urbanization in Africa. To resolve these issues,

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Monkam and Leta explore several innovative solutions, such as digital twin technologies to advance progress. The article underscores the need for significant policy changes, increased investment in urban infrastructure, and innovative financing mechanisms to bridge the existing gaps.

Digital Revolution for Sustainable Development

The deployment of digital technologies is increasing rapidly and ushering in a new era of global growth and development. These technologies have the potential to address inequalities around the world in the ways that they transform economies and bring resources to the most vulnerable. Services critical to society such as healthcare, education, banking, and more are enhanced by the innovations of the new digital era. However, with its immense potential, comes alarming threats.

The rise of many new technologies poses serious questions to human rights, social protections, and the net good of society. This conundrum is highlighted by the Global Digital Compact (GDC), an agreement of UN Member States accompanying the UN Pact for the Future. Whether or not the GDC can effectively put guardrails on technological advancements and leverage their potential for social good is yet to be determined. The commentary in this section reflects on some of these issues, particularly the call for stronger, more effective data governance.

In the article “Operationalizing Comprehensive Data Governance in Africa,” Chinasa Okolo emphasizes the need for African Union Member States to adopt comprehensive data protection regulations to address challenges posed by the increasing use of artificial intelligence (AI) and data exploitation. Although 36 out of 55 AU countries have data protection laws, disparities exist in their quality and enforcement. In this context, the article analyzes data governance measures in Africa, outlines data privacy violations across the continent, and examines regulatory gaps imposed by a lack of comprehensive data governance to outline the sociopolitical infrastructure required to bolster data governance capacity. The article proposes the Reformation, Integration, Compliance & Enforcement (RICE) Data Governance framework, which outlines measures for policy reform, integration, cooperation, and enforcement to improve data governance across the continent. The framework advocates for regional and sub-regional collaboration, sectoral policy reforms, and the establishment of a

continental supervisory authority to ensure robust data protection and privacy.

Financing and State Capacity

Achieving the SDGs requires a focus on national planning, financing, oversight and assessment. Major investments are needed for the transformational change proposed by the SDGs, as well as further government planning to ensure effective implementation. However, countries in the Global South, particularly Sub-Saharan Africa, are under-resourced to make necessary progress on the current development agenda. Consequently, some scholars are calling for a global reassessment of how to support and strengthen financing and state capacity in developing countries. In this section, the commentary focuses on the issue of public debt, its impact to wellbeing, and effective measures of mitigation.

According to the article by Marcellin Stephane Bella Ngadena, African countries continue to experience a rapid increase in public debt, with the median public debt-to-GDP ratio reaching 61.9 per cent in 2023, while the median public debt nearly doubled, from 25 per cent to 46 per cent between 2013 and 2023. In the article, Bella Ngadena examines the impact of public debt on well-being in 41 African countries from 2012-2021, focusing on how education and health spending mediate this relationship. The study finds a generally negative correlation between public debt and well-being, but highlights that increased spending on education and health can mitigate these adverse effects. Specifically, while higher levels of public debt typically lower well-being, strategic investment in social services can counterbalance these effects, providing valuable insights for policymakers. The findings emphasize the importance of prioritizing education and health expenditures to enhance well-being despite rising debt levels in Africa.

Policy, Peace, and Partnerships for Development

The interplay between policy, peace, and development is particularly significant in Africa, where fragility and conflict remain key drivers of poverty and underdevelopment. The increasing number of conflict-affected countries, coupled with the continent's complex governance challenges, underscores the urgent need for innovative policy solutions that address the root causes of instability and foster long-term resilience. As more than 85 per cent of Africa's population is impacted by

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conflict, whether through direct involvement or proximity, the spillover effects hinder not only national progress but also regional stability (African Development Bank, 2022).

Beyond addressing issues of conflict and security, implementing new approaches to policy planning and intersectoral collaboration have immense potential to provoke change. Specifically, when the global development agenda is viewed holistically rather than as 17 disparate goals, governments can plan more efficiently and maximize investments by leveraging synergies, or in other words, SDG interlinkages. In addition to identifying these important interlinkages, intergenerational collaboration is essential to advancing progress to ensure sustainable outcomes. The role of youth cannot be neglected in this regard, particularly when topics of peace, security, and long term development are discussed. The commentaries in this section explore issues of policy, planning, peace, and partnership. Specifically they cover the critical need for restructuring African states, rethinking approaches to counterinsurgency, transforming policy planning with a deeper perspective on SDG interlinkages, and empowering the next generation of Africans to take up the charge of achieving sustainable development.

As Kelechi A. Kalu illustrates in his article, “Restructuring African States to Achieve Sustainable Development Goals,” the governance frameworks of many African states remain rooted in colonial legacies. These externally imposed structures, designed to serve European interests, leave African states institutionally weak and economically dependent, perpetuating underdevelopment. Kalu argues that, for Africa to escape this historical trap, it must restructure its state systems to support intra-continental trade, mobility, and institutionalized human rights protections. In doing so, African states can enhance their resilience; better address poverty, and secure long-term stability.

Yet, as Anouar Boukhars’s article, “Lessons Learnt from Countering Militant Groups in Africa,” demonstrates, the reality that governance deficiencies, particularly in justice and security, have fueled the rise of militant groups in many fragile African states. Boukhars highlights how militarized responses to insurgencies often undermine state legitimacy, exacerbating instability rather than containing it. His analysis of cases like Côte d'Ivoire and Kenya shows that states that combine security reforms with community engagement and improved service delivery can counter

the rise of militancy more effectively. This complements Kalu's argument, suggesting that while restructured state systems are essential for long-term resilience, immediate governance reforms—particularly in justice and service provision—are critical to restoring public trust and state legitimacy in the short term.

Shifting to a policy-oriented view, Moira Faul and Felix Laumann explore an interesting perspective on the SDGs, one that emphasizes interlinkages across goals at the regional level. Although the literature on SDG interlinkages has grown over time, it has largely overlooked the value of regional and local variations. Faul and Laumann explore this issue across Africa concluding that the continent has nuances unrecognized at the global level, particularly within the frame of often authoritative perspectives of the global north. Their findings support calls for improved knowledge equity between the global north and global south with an emphasis on creating better solutions tailored to regional and local circumstances. The article by Faul and Laumann strikes a similar note to Kalu's point that Africa's colonial legacies continue to influence its development trajectory and there is a need to break away from these one-size-fits-all approaches. Their analysis builds on the need for restructured systems of global governance by calling for more localized approaches to sustainable development.

In the broader framework of aligning Africa's goals with global development objectives, Akinlolu Olalekan Akanmu and Olubukola Oluranti Babalola in "The Future of Development in Africa within the Framework of UN Policy and the 2030 Agenda" emphasize the synergy between Africa's own Agenda 2063 and the UN's 2030 Agenda for Sustainable Development. Their analysis underlines that Africa's future development depends on effective governance and institutional strengthening, reinforcing Kalu's earlier call for structural reforms. Furthermore, Akanmu and Babalola argue that strong partnerships and multi-sectoral engagement are crucial to accelerating progress, a point that complements Boukhars's advocacy for holistic, community-centered counterinsurgency approaches. By linking institutional strengthening to broader governance reforms and regional cooperation, their analysis provides a vision for how African countries can work towards long-term development while addressing the immediate challenges of fragility.

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Lastly, this section concludes with a commentary on the value of youth, leaving us with optimism for continued progress across generational divides. Employing the Social Change Theory, Femi Oyeniya, E. Olowoyo, and Labode Popoola champion the role of youth for achieving the SDGs in Africa. They discuss the continent's rapidly growing youth population and highlight several obstacles that prohibit their success, including, unemployment, gender inequality, and limited educational opportunities. The authors offer a very practical perspective by evaluating five youth initiatives in Africa and examining how they improve the situation of young people—and society in general—on the continent. The commentary proposes collaboration between governments, civil society organizations, and the private sector in the bid to foster youth innovation, reduce poverty and improve sectors such as education and healthcare.

Conclusion

The articles in this special issue offer an array of deeply reflective and transformative perspectives on development in Africa. They surface important critiques, share new knowledge, and add to the discourse on how Africa can define sustainable futures. Each article highlights important topics related to the 2030 Agenda, and moreover, discusses many of the complexities that have emerged since the SDGs' adoption in 2015. The contributions in this issue examine how African nations have adapted to meet global goals and shown resilience amid crisis and fragility. Perhaps of greater consequence to long-term development, the contributions emphasize how the landscape of global governance and legacies of colonialism have held back the potential for wide scale progress and transformation.

It is the aim of this special issue to elevate African voices and create greater equity in the vision and implementation of our global development agenda. Through exposing long-held narratives on Africa's development and offering unique solutions and perspectives posed by the region's top experts, we endeavor to enrich and inform the high-level dialogues that have so often been driven by the global north. This issue is a call for greater reflection within policy arenas on how to localize and contextualize development objectives, give weight and power to historically underrepresented voices, and pursue global development in fair and equitable ways.

Aside from reconciling global histories of inequitable development, this issue also endeavors to highlight the vast potential for Africa to contribute to multilateral agendas. Clearly, Africa offers robust potential to lead the world into a safer era and to share critical perspectives on effective development pathways, but space must be made for this potential to flourish. Through the commentaries of this special issue, we advocate for policy makers, practitioners, and experts involved in the establishment and implementation of multilateral agendas to rethink global development and raise the voices of those most at risk of being left behind.

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Beyond Resource Extractivism and Comparative Advantaged: The Case for Energy Transitions in Africa

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Abstract

Africa's abundant renewable and non-renewable resources provide the continent with significant comparative advantages to become a major player in the rapidly changing global energy transition landscape. This is underpinned by its stock of about 30% of the world's mineral reserves including critical energy transition minerals, high solar irradiance and significant wind speed, huge carbon sequestration potential, favorable carbon emission profile, and trade frameworks such as the African Continental Free Trade Area (AfCFTA). However, this abundance is marked by deepening levels of extractivism in the form of policies, range of natural resources, and political culture and practice, which have led to increasingly exploitative and destructive activities on the continent. In our commentary, we discuss the problematic of resource extractivism and the dependence and vulnerabilities it creates in resource-rich developing countries in Africa and articulate how the path to net zero offers a new opportunity for the continent to be a global powerhouse for resource-driven climate action and investment.

Keywords: Resource Extractivism, Comparative and Competitive Advantages, Energy Transitions, Nairobi Declaration, AfCFTA

Introduction

Natural resources - ranging from critical minerals and fossil fuels to water and biomass underpin global economies and societies. Their extraction and utilization are also central to advancing the global transition to cleaner energy and economic development, providing essential materials for industry, energy production, and human consumption. From electric vehicles to solar panels and wind turbines, the global transition to clean energy is resource intensive and dependent on critical minerals such as lithium, nickel, cobalt, manganese, and graphite (World Bank 2018; World Bank 2020; UNCTAD 2020), of which Africa has in abundance (IEA 2021; Cust & Zeufack, 2023). Concomitantly, the latest International Energy Agency (IEA) 2050 Net Zero Emissions (NZE) scenario (IEA 2023) (IPCC Sixth Assessment Report), projects that the demand for nickel and cobalt will double and triple, respectively, while the demand for lithium is expected to increase tenfold between 2022 and 2050. As such, Africa's rich endowment of renewable and non-renewable resources offer significant potential for driving economic growth and accelerating the achievement of the Sustainable Development Goals (SDGs) (UN, 2015; Pedro *et al.*, 2017; Sachs *et al.*, 2019), enabling the realisation of Africa's aspirations to promote resource-driven and trade-induced industrialization and economic diversification including in the battery and electric vehicles value chain (AMV, 2009; UNECA, 2015; IRENA, 2015; Pedro, 2016; World Bank 2023).

However, achieving these goals and breaking away from the perils of resource extractivism and rentierism (Gudynas, 2010; Acosta, 2013), the "Paradox of Plenty," and the "Resource Curse" remains a challenge (Pedro, 2006; UNECA, 2011; Pedro *et al.*, 2017; Cust, & Zeufack, 2023). All of these manifests in several ways, including booms-and-busts and economic instability as a result of fluctuating global commodity prices; crowding-out other economic sectors such as agriculture; inadequate growth; export intensity and overdependence on a single or few commodities (Collier, 2010; Auty, 1993) as well as heightened competition for resource rents (Collier & Hoeffler, 2005). Relatedly, the exploitation of these resources often leads to significant environmental degradation, including deforestation, habitat loss, pollution, and climate change (Bradshaw *et al.*, 2010; Zaehring *et al.*, 2024). According to the Global Resources Outlook, natural resources extraction and use over the past five decades, have far surpassed initial targets, surging by over fourfold and is set to rise by a further 60% by 2060, contributing significantly to greenhouse gas emissions and biodiversity loss, further

triggering the triple planetary crises (Global Resources Outlook 2024). Likewise, the governance of natural resources in certain contexts has been marked by complex economic, political, and social dynamics, often resulting in unequal distribution of benefits and costs. This imbalance exacerbates economic and social inequalities, influences geopolitical power relationships, and has led to incidents of conflicts and social injustice (Bebbington *et al.*, 2008; Ross, 2012).

Concurrent with these realities, is an increasing global push for climate change action, leading to a variety of initiatives. Chiefly among them are the advancements of key international climate frameworks such as the United Nations Framework Convention on Climate Change, the Kyoto Protocol, the Paris Agreement, and the recent Nairobi Declaration, all aimed at mitigating greenhouse gas emissions, decarbonizing global production systems, and promoting sustainable development. However, the promotion of low-carbon technologies could result in the reduction of demand for, and value of fossil fuels, while the actions to divest from fossil fuels by institutional investors, may lead to the stranding of substantial proportions of Africa's resource wealth and assets, further exacerbating existing problems in fossil-fuel rich African countries.

These dynamics and global shifts have placed Africa at a pivotal juncture, with challenging trade-offs to consider. At this crucial intersection, the commitment of resource-rich African states to use their natural resources as an engine to promote inclusive growth and development, create jobs, and accelerate structural transformation through industrialization and economic diversification must be climate-friendly. For several reasons, this would make African exports competitive and capable of meeting carbon border adjustment mechanisms being imposed in other jurisdictions. However, in the case where the achievement of Africa's aspirational goals is endangered, the ramifications would be multifaceted and profound, with far-reaching implications for the continent's society and economy, and in recent days, threats to regime survival.

Conversely, as demands for critical minerals expand, the decarbonization agenda offers African mineral-rich countries huge opportunities to drive sustainable and inclusive growth and development, positioning them as potentially global hubs for green manufacturing. Yet, these advantages might not last forever. Efforts by several resource-poor countries to reduce supply-side exposure through diversification and

investment in alternative minerals (e.g., aluminum), and exploration of virgin terrains (e.g., seabed resources and outer of space exploitation), may in the future reduce the comparative advantage of African countries rich in critical minerals. To counter this, immediate action is required to transform comparative advantages into sustainable competitive advantages.

In our commentary, the concept of moving beyond resource extractivism and comparative advantages appreciates the interconnectedness of these variables and the importance of adopting global practices for the planet and people. So, it advances a variety of prognoses of transformative strategies that may help resource-rich African states reduce their dependency on exporting raw materials, enhance local economic opportunities and improve domestic productivity. Central to this is the AfCFTA adopted in 2018, and the Africa Mining Vision, both constituting reference frameworks to achieve these goals.

The proposed pathways also hinge on the implementation of integrated policies that address climate, energy, minerals, trade, and industrial development imperatives (Collier, 2010; Kaplinsky, 2011; UNECA ERA, 2015; UNECA 2016; World Bank 2023). They call for more local value addition, development of regional value chains, and adoption of growth models underpinned on beyond GDP metrics and a broader set of indicators that reflect wellbeing, sustainability, and social progress.

The Problematic of Resource Extractivism

Extractivism, characterized by the exploitation of natural resources for economic gain in resource-rich countries is the dominant feature of most African economies (Elisa, 2020). Its manifestations include poorer development outcomes and economic growth, in comparison with countries with fewer natural resources. This contradictory coexistence according to Chagon *et. al.* (2022) is as a result of socio-ecologically destructive processes of subjugation, depletion, and non-reciprocal relations, occurring at all levels of practices, and is diametrically opposed to the concept and practices of ecological, social, and economic sustainability, which the (SDGs) espouses. In Africa, this is further accentuated by the fact that the extractive sector remains an enclave with limited linkages to the local economy (Pedro, 2022) and by other structural factors which limit the options to drive structural transformation (Castel-Branco, 2014). Moreover, governance deficits in the

management of the natural resources sector have largely created risks rather than wealth (Gylfason, 2001).

First among these risks is the “Dutch Disease,” which describes an economic phenomenon where the discovery and exploitation of natural resources such as oil and natural gas triggers the appreciation of local currencies, inflation, factor flows from other sectors such as agriculture to the oil and gas sector, to name a few. These distortions in the economy were observed during Nigeria's oil boom in the 1970s, where the overt dependence and investment in the oil sector led to massive influx of foreign currency from oil exports, and increased domestic income and spending. This stringing effect also recorded a labour flight and capital move from non-tradable sectors towards the booming resource sector. As a consequence, Nigeria, once a major agricultural exporter, became a net importer of food, due to the decline in the manufacturing and agricultural sectors, and experienced inflation and the redundancy of domestic industries, non-tradable goods, and services (Corden, 1984; Neary & van Wijnbergen, 1986; Acosta, 2013; Sala-i-Martin & Subramanian, 2013).

In addition to crowding-out resources from other sectors, resource extractivism is associated with significant governance and institutional challenges, which have the propensity to lead to rent-seeking behaviours, corruption, and weak institutions, as political elites and interest groups compete for control over resource revenues (Ross, 2012). These dynamics can undermine democratic processes and have led to authoritarianism, violent conflict and the display of hegemonic behaviors and attitudes.

Resource extractivism often leads to economic booms and busts driven by global commodity price fluctuations, which are largely beyond the control of producing countries in the global South. In resource-rich countries with high export intensity or dependence on few or single commodity exports, these fluctuations have significant impact on government revenues. When prices are high, revenues increase, often leading to increased public spending and investment. When prices fall, revenues decline sharply, forcing cuts in public spending and investment, harming economic growth and development (Bleaney & Greenaway, 2001). For example, Zambia's economy is heavily reliant on copper exports, and the fluctuation in copper prices has had a direct impact on its economic stability (Fessehaie, Rustomjee, & Kaziboni, 2016).

Natural resource funds and sovereign wealth funds have been successfully established in several countries (e.g. Norway) as a stabilization mechanism, saving for future generations, curbing expenditure, and fostering investments. However, they are not a panacea, as many of such funds are non-performing and are badly managed (Bauer, 2014).

Likewise, the benefits of resource extraction are often unevenly distributed, with local communities bearing most of the costs and little of the benefits. This has led to social unrest, conflicts, and human rights abuses, further exacerbating social inequality and injustice (Bebbington *et al.*, 2008). Added to these issues are the positions taken by institutions and investors to reduce greenhouse gas emissions and exert pressure for climate solutions, which have serious implications for fossil fuel resource-rich developing countries. These movements impact oil, gas, coal, energy infrastructure and other resource-based investments in resource-rich African countries, turning assets in these sectors obsolete and non-performing. (World Bank, 2023). For example, the Carbon Tracker Initiative (2017) estimates that a substantial portion of Africa's coal reserves could become unviable, leading to significant economic losses for countries such as South Africa, who rely on fossil fuel revenues. As such, fossil fuel-based infrastructure, such as power plants, pipelines, and refineries in these regions are at risk (Burton, Lott, & Rennkamp, 2018; Bos & Gupta, 2019). Evidence in this regard include the divestment of over \$6.24 trillion in assets from fossil fuels (Arabella Advisors, 2018), and in recent times, the enactment of exclusionary policies targeting various oil and gas organisations and stock portfolios (Bloomberg, 2024; The Church of England, 2017).

Even though still hypothetical, outer space exploitation could equally strand mineral resources in Africa. The case in point being Asteroid 16 Psyche, a metal-rich asteroid located in the asteroid belt between Mars and Jupiter, estimated to be worth US\$ 700 quintillion and contains vast quantities of valuable minerals, including gold, platinum group metals, and other rare metals. The introduction of these large quantities of minerals from asteroid mining could lead to a significant oversupply in global markets, drive down the prices of minerals and other rare metals (Kargel, 1994), and reduce foreign direct investment (FDI) in terrestrial terrains (Ogwueleka, 2013).

From Comparative to Competitive Advantages: The Way Forward for Africa

According to UNU-Wider, Africa hosts 42 of the 63 elements used in low carbon technologies and needed for the 4th industrial revolution. Moreover, its abundant renewable energy resources, such as high solar irradiance, significant wind speeds, huge green hydrogen potential, and massive carbon sink assets in tropical forests such as the Congo Basin and beyond, makes the continent an ideal location for the development of solar and wind energy projects (IRENA, 2015), including green manufacturing. Amidst these, Africa is also the continent with a burgeoning population, undergoing rapid urbanization and industrialization, worse hit by climate change, and more at risk to further environmental unsustainability if current consumption and production patterns persist. Catalyzed by the AfCFTA, the above-mentioned factors can enable the continent to use its comparative advantages in resource endowments, demographic profile, and development needs to pursue endogenous growth, with both an inward and outward focus. To achieve these aspirational goals, African member States must first put industrial policy at the centre of their development agenda (Ha-Joon Chang, 2002), with smart integration of climate, trade, infrastructure development, and energy action.

Beyond the economies of agglomeration that the AfCFTA enables, actions must be also taken to determine factor and demand conditions as well as the value proposition (Porter, 2011) of each of African member States, and articulate paths to building their competitive advantages and to make the most of the AfCFTA. For instance, data analytics such as growth diagnostic studies (Hausmann, Rodrik, & Velasco, 2005; Hausmann, Klinger, & Wagner, 2008), trade decision support modeling and product space analysis, (Hidalgo, Klinger, Barabási, & Hausmann, 2007), skills gaps assessments and GIS-enabled hotspot analysis would facilitate detailed country profiling, assessments of binding constraints, and evaluation of micro-economic capabilities to support decision making, investment decisions, targeting, and prioritization. The success of this agenda requires an ecosystem for transformational change supported by sound governmental and firm strategies, well-designed and sequenced step-by-step multidimensional interventions to transform Africa's comparative advantages into lasting competitive advantages (Morris *et al.*, 2012; Saleem *et al.*, 2018; Cherif & Fuad 2019; Oqubay *et al.*, 2020; Pedro, 2022).

Below are some of the most immediate opportunities and critical areas of intervention:

The Battery and Electric Value Chain

The battery and electric vehicle (BEV) value chain can be localized on the continent on the strength of Africa's superior cost and emissions profile (BloombergNEF, 2021). Building on the ongoing initiative to develop a BEV transboundary special economic zone between DRC and Zambia, this action should be prioritized to enable African States tap into a market estimated to reach US\$ 60 trillion by 2050. Such effort would address "the paradox of plenty" (USGS 2023; IEA 2021; Nichols, 2018; Pegg, 2006) and support the implementation of SDGS 7, 9, 11, 12, 13, 8, 3 (United Nations, 2015; Nhamo Nhamo & Nyahunda 2020; Van den Bossche, *et al.*, 2013; Mulugetta & Urban, 2010; Bertheau, Oyewo & Cader 2021; Mudenda, Zulu, & Gumbo, 2020).

The African Continental Free Trade Area

The African Continental Free Trade Area (AfCFTA) should catalyze the emergence of globally competitive regional value chains. With the creation of an integrated market of 1.5 billion people, the AfCFTA strengthens business fundamentals for "Made in Africa", and invest in Africa (UNECA, 2018; World Bank, 2023). The Protocols on Investment, Competition and Intellectual Property adopted by the African Union Heads of State and Government in February 2023 strengthen this argument. To be effective, these protocols must be ratified and domesticated in relevant national policies, laws, rules and regulations.

Carbon Credit Markets

The development of carbon credit markets in Africa would strengthen the continent's comparative advantages as a low carbon emissions destination for green manufacturing. The Africa Carbon Markets Initiative (ACMI) suggests that with carbon credits valued at roughly \$2 billion globally and potentially growing 5-50x by 2030, high-integrity carbon markets could provide significant benefits to African member States and be a critical source of climate finance for the continent, helping to push the average price for carbon credit in Africa from about \$10 USD per tonne to more than \$100 USD per tonne as sold in other jurisdictions. At the latter prices, Africa could earn about US\$ 82 billion a year, much more than what it receives through overseas development assistance.

Moreover, the creation of high-integrity registries would facilitate price discovery, strengthen investor confidence, boost transparency, and market stability (Michaelowa *et al.*, 2018; Reinsberg & Vanhala, 2020). It would also enable their acceptance in global markets, build trust and prevent fraud, (Olsen, 2019), while ensuring robust verification and validation processes (Sterk *et al.*, 2011).

De-Risking Investments

To make Africa a globally competitive investment destination for domestic and foreign direct investors (FDI), significant efforts must be made to de-risk the investment landscape on the continent. For example, eighty percent (80%) of infrastructure projects initiated across Africa fail at the feasibility and planning stage, and FDI inflows have remained stagnant at around \$40-50 billion annually, a trend that began well before the COVID-19 pandemic. Other risks that can deter investors include political instability (MIGA, 2020), environmental and social risks, macroeconomic risks, legal and regulatory uncertainties, as well as infrastructure deficits (Foster and Briceño-Garmendia 2010; Collier 2010).

De-risking investments involves actions aimed at creating a conducive policy and regulatory environment to foster productive investments. This involves streamlining regulations, improving governance, and ensuring transparency in investment processes. It also requires investments to expand transport, energy, and communication infrastructure to support economic activities and reduce costs. Additionally, it includes exploring new and innovative financing mechanisms, such as blended finance and public-private partnerships, strengthening the capacity of local institutions and stakeholders to manage and implement investment projects effectively, and promoting regional integration and cooperation to create larger markets and enhance economic resilience.

Social Compacts

Overcoming the obstacles enumerated above require multifaceted actions necessitating policy coherence and integration (Gupta & Van der Grijp, 2010), and good governance (Kolstad & Søreide, 2009). Moreover, efforts are needed to strengthen institutional capacity with a focus on technical expertise, administrative structures, and financial management (Bessada & Martin, 2015).

Securing social licenses to operate, particularly in the context of large-scale natural resources projects requires environmental stewardship, transparency, and cultural sensitivity (Boutilier & Thomson, 2011; Harvey & Bice, 2014; Jenkins, 2004; Hilson, 2012) and effective community engagement in line with the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. It also calls for the establishment of platforms for multi-stakeholder engagement aimed at bridging the gap on the understanding of costs and benefits of mining and what constitutes value for different stakeholders (WEF, 2016).

Overall, effective natural resources governance geared towards shared value creation and the path to net zero requires actions at all levels, and is a joint responsibility of host and home countries, policymakers, corporations, investors, consumer groups, civil society organisations, local communities, labour, and other stakeholders. This also requires a much broader in scope and reach multidimensional sustainable development licence to operate (SDLO) (Pedro *et al.*, 2017).

Conclusion

Africa's natural resource wealth offers huge opportunities for the continent to play a leading role in the global energy transition. To fully capitalize on its comparative advantages to build sustainable competitive advantages and avoid the ills of resource extractivism, a new dispensation is required. This calls for integrated implementation of mineral, trade, climate, energy and industrial policy, underpinned by the AfCTA, the Africa Mining Vision, and beyond GDP metrics. It also requires targeted action to de-risk investments and strengthen social compacts.

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Climate Change Innovations: a golden opportunity for Africa

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Abstract

Climate change is real and has been affecting Africa disproportionately. This is because the majority of Africans depend on nature to advance their livelihoods. Energy transition seems to be the most trending strategy to fighting it. Fortunately, at the centre of energy transition are critical minerals that are vastly available in Africa. This study reviews 60 relevant academic works to argue that climate change calls for innovations which could create not only a net good for society, but also help Africa to grow economically. This would happen if Africa shifts from investing in supply chains to engaging in global value chains through investing in downstream activities that go beyond refinery. It is, however, important for Africa to ensure that investing in global value chains does not compromise economic, social and environmental requirements of sustainable development.

Keywords: Climate change; energy transition; critical minerals; supply chains; value chains; Africa

Introduction

Africa, a vast continent, hosts diverse climatic conditions ranging from very humid to arid climates. It should be noted from the onset that while climate change affects all continents, its impact is more pronounced in Africa given the continent's limited capacity as far as mitigation and adaptation are concerned. It is not surprising then that Nyiwul (2021) shows that there is a robust negative relationship between climate change policy actions in Africa and social inequality. Climate change innovative policies could thus help to redress this situation.

It is important to note that even without factoring in climate change; Africa is already facing huge socioeconomic challenges. For instance, over 300 million Africans neither have safe drinking water nor adequate sanitation thereby, recording the lowest water coverage in the world, with rural Africa affected the most given the fact that it has only 47 per cent coverage as compared to 85 per cent in the urban settings (Nkomo *et al.*, 2006). Africa is also severely affected by various diseases such as malaria with the continent accounting for 85 per cent of malaria-related deaths worldwide (*ibid*). It follows then that climate change effects only serve to worsen an African situation that is already generally dire.

Nevertheless, it has to be said here that since Africa is not a country, different African countries are at different levels of development and, therefore, the said countries are not equally affected by climatic change. However, in general terms, climate change impacts have impoverished African people and have significantly slowed down the development trajectory of the continent (Meyer and Odeku, 2006; Nkomo *et al.*, 2006; Hope Sr., 2009; Moomaw *et al.*, 2011; Pelizzo *et al.*, 2018; Nyiwul, 2021).

It should be noted that with climate change realities facing the globe, countries have opted to reducing carbon emissions by, among other strategies, pursuing greener technologies. In this particular case, transition of energy use from fossil fuels to greener solutions has become the focus of global attention. Mining is considered to be one of the biggest carbon emitting sectors in the world (Kinyondo, 2023). Ironically, energy transition towards greener options is largely fueled by critical minerals which are vastly available in Africa. The continent, therefore, could potentially offer the solution to global climate change challenges and benefit in the process.

Unfortunately, most studies (Meyer and Odeku, 2006; Nkomo *et al.*, 2006; Hope Sr., 2009; Moomaw *et al.*, 2011; Pelizzo *et al.*, 2018; Nyiwul, 2021) mainly focus on negative effects of climate change in Africa thereby disregarding potential positive externalities that the fight against climate change can bring in the continent. It is in this context that this study is set to highlight the realities of climate change effects and the way Africa can take full advantage of the fact that it is richly endowed with minerals that are critical to transitioning to a low-carbon future. In so doing, 60 works relating to climate change, energy transition and poverty reduction in Africa were reviewed with the view to assessing the way fighting climate change in Africa could pave a way for advancing the continent sustainably.

The foregoing section introduced the study. The next section highlights the plight occasioned by climate change in Africa. This is followed by a section that identifies the impact of climate change in Africa. Thereafter, critical minerals are introduced before their link to energy transition is established. A discussion on how critical minerals could advance Africa then follows before the paper winds up with a conclusion and recommendations.

Climate Change in Africa

There is a consensus that global temperatures are unsustainable and are expected to rise by between 1.5 and 6 degrees Celsius by 2100 (Nkomo *et al.*, 2006). Meanwhile, as temperatures are expected to rise, ice caps and glaciers are expected to melt and the sea levels are projected to increase by up to 95 centimeters which, if left unabated, will result in flooding and salt water intrusion which will unsettle people, thereby, forcing them to migrate to other places (Meyer and Odeku, 2006; Nkomo *et al.*, 2006).

While as explained earlier, African countries do vary in terms of their stage of development and therefore capabilities to fight climate change, the continent has generally experienced warming starting from the 20th century at the rate of up to 6 degrees Celsius per decade (Nkomo *et al.*, 2006). The situation is equally dire elsewhere across the world. To avoid the punishing effects of climate change, the Cancun Agreement sought to limit global temperature increases to a maximum of 2 degrees Celsius with a preferred target of 1.5 degrees Celsius (Moomaw *et al.*, 2011).

It is important to note here that Africa is the least polluting continent having less than 10 per cent of total global greenhouse emission most of which is being contributed by South Africa alone (Hope Sr., 2009; Nyiwul, 2021; United Nations, 2023). Moreover, it is noted that forests can internalize carbon emission and Africa hosts massive acres of forests with capacity to store a stock of carbon that is estimated to be equal to 60 billion tonnes (*ibid*). With the top five emitters¹ responsible for over 50 per cent of greenhouse gases emissions, there have been calls for richer countries to be more responsible for their actions by financing the fight against climate change particularly, for least emitters such as African countries (Kinyondo, 2023).

¹ Those countries include the United States, China, India, Japan and Russia.

The Impact of Climate Change in Africa

Apart from the impact of climate change in Africa, there are many non-climate issues affecting the continent. Indeed, these impacts of climate change are unfolding in circumstances of fragility and instability, making them that much more challenging to address in Africa. Specifically, Africa is a continent that is plagued by social, political, economic, environmental and historical challenges that have together consigned it to vicious cycle of vulnerabilities. Some of these vulnerabilities include debt burden, poor governance, high population growth, poverty, malnutrition, low literacy rates, diseases, wars, and environmental disasters just to mention some (Kinyondo and Byaro, 2024; Byaro *et al.*, 2023; Kinyondo *et al.*, 2022; Kinyondo *et al.*, 2021; Kinyondo and Huggins, 2021a; Kinyondo and Huggins, 2021b; Kinyondo and Pelizzo, 2021; Kinyondo and Byaro, 2020; Kinyondo and Pelizzo, 2020; Pelizzo *et al.*, 2018; Nkomo *et al.*, 2006).

Climate change is especially hard for Africa because it tends to exacerbate existing problems. Perhaps the biggest effect of climate change in Africa involves reduction in rainfalls. The situation is at its worst in some parts of Africa. For instance, the Sahel region has experienced a 25 per cent reduction of rainfall over the past three decades with other parts such as Mozambique receiving abnormally heavy rainfalls on regular basis (Nkomo *et al.*, 2006). Consequently, there have been increasing episodes of droughts and floods in Africa over the past 30 years which have not only led to deaths of humans and animals but also loss of property and financial security (Nkomo *et al.*, 2006). For example, the year 2000 floods in Mozambique resulted in the displacement of two million people, loss of 350,000 jobs (*ibid.*).

Furthermore, agriculture, the biggest employer in Africa that accounts for up to 40 per cent of Africa's Gross Domestic Product (GDP), is still rainfall-dependent (Nkomo *et al.*, 2006). However, variability in rainfalls coupled with the decrease in arable lands and an ever ballooning population have meant that food output per capita in the continent has remained stagnant since 1980 (Nyiwul, 2021; Nkomo *et al.*, 2006). This is to be expected since according to Nyiwul (2021), a 2.5 degrees Celsius warming can result into a \$23 billion reduction in revenues from farming. Meanwhile, climate change could raise the prices of various staples in Africa by up to 60 per cent thereby, increasing poverty rates to up to 50 per cent by 2020 (Nyiwul, 2021). Moreover, lack of arable lands has brought about conflicts from

skirmishes between farmers and pastoralists to full-fledged civil wars such as that happening in the Sudan's Darfur region (Nkomo *et al.*, 2006).

But a more nuanced take on the impact of climate change in Africa must look at the problem from the socioeconomic angle. Indeed, while the population in the continent is tipped to hit 2.9 billion by 2100, the continent is tipped to have less food and water at the same time, due to among other factors, climate change (Nkomo *et al.*, 2006). It is not surprising then to witness an increase in the number of people living in poverty in Africa with the number expected to rise in the absence of robust measures to reverse climate change effects.

It is therefore, obvious that African countries need to adapt to climate change effects. However, the continent lacks the adaptive capacity necessary for it to navigate out of the climatic effects. Nkomo *et al.*, (2006) lists lack of strong institutions, financial and technical resources as well as lack of technological capabilities to be the ones limiting Africa's ability to adapt. It should be noted that climate change adaptation costs amount to \$30 billion a year with the Sub-Saharan African region suffering more as the cost is 1.8 percent of its GDP compared to 1.4 per cent in other regions (Nyiwul, 2021).

Effects of climate change can also damage the ecosystem (wildlife and eventually tourism) and important infrastructure such as roads, railways and bridges as it has happened in Tanzania earlier in 2024 (Kinyondo and Pelizzo, 2020; Kinyondo and Pelizzo, 2015). However, perhaps the most damaging effect of climate change as far as achieving sustainable development of African countries entails the loss of energy given the fact that most African countries rely on either nature (woods and charcoal) or hydropower for energy generation.

Lack of energy not only limits economic activities necessary for sustainable development but also forces people to use alternative sources of energy such as charcoal which destroy the environment and generate greenhouse gases to the atmosphere. The World Bank reports that only about 44.6 per cent of the Sub Saharan African population has access to electricity and as low as 22 per cent in rural areas (Nyiwul, 2021). Fighting climate change through energy transition can thus provide an opportunity to develop renewable energy that will not only help the continent transit to cleaner energies but also provide access to electricity to the majority of

Africans who currently cannot. At the centre of energy transition are critical minerals which form the main subject of the next section.

Critical Minerals in Africa

The rise of critical minerals dates back to 1915 during World War I, when Germany took control of tungsten production, an ingredient used to make weapons and ammunitions efficiently (Nakanwagi, 2023). Consequently, the war immensely increased the demand for tungsten and related critical minerals at the time. With the Germans dominating tungsten production, the rest of the developed world turned to alternative minerals so as to remain competitive, which brought the beginning of global scramble for critical minerals.

Given the importance of critical minerals, their supply is characterized by complicated global monopolies with value chains that Africa has found it difficult to crack. For instance, critical minerals are essential for the development of green energy technologies such as electric vehicles, solar and wind installations, batteries and renewable power systems. The World Bank posits that to meet the rise in global demand and avoid the worst impacts of climate change, the production of critical minerals will need to increase 500 per cent by 2050 (The African Climate Foundation, 2024).

Of importance to this study is the fact that the Global South and in particular Africa, is richly blessed with minerals that are critical to powering the energy transition which are fondly known as critical minerals. These minerals include graphite, nickel, copper, lithium, cobalt, rare earth, etc. Generally, Africa is home to over 30% of the world's mineral reserves, with almost every single country on the continent rich in at least one critical mineral. Specifically, the Democratic Republic of Congo (DRC) hosts over 70 per cent of the world's cobalt production; Zimbabwe holds the world's largest reserves of hard rock lithium; Mozambique is the world's third-largest producer of graphite; while South Africa accounts for 75 per cent of the world's supply of platinum Group Metals and 72 per cent of platinum (Nakanwagi, 2023), among others.

As explained earlier, the global value chains for critical minerals are rather prohibitive for Africa. Specifically, China, which hosts the biggest processing facilities of critical minerals in the world, is the world's largest

importer of critical minerals mainly from Africa. For instance, while 60 per cent of world's mined copper is processed in the DRC, China continues to host the largest copper smelter in the world with a global refining capacity of 40 per cent (Nakanwagi, 2023). Similarly, while DRC continues to be the world biggest producer of cobalt, the majority of its cobalt products end up in China which in turn is the largest producer and refiner of cobalt-related chemicals that are mostly utilized in the rechargeable battery industry (ibid).

Meanwhile, the largest consumer of end products of such critical minerals from China is the European Union (Nakanwagi, 2023). Thus, while it is clear that there is a huge demand for Africa's critical minerals; Africa is largely not part of the value addition equation. As a result, while the value of critical minerals has increased tenfold over the years due to increased demand by global brands such as Tesla, Dell, Microsoft, Samsung, Huawei and Apple (Nakanwagi, 2023), the same cannot be said about benefits that African countries are getting from of its critical minerals.

It is thus clear that in order to maximize retention of value of the continent's critical mineral industry, focus needs to be redirected towards developing competitive value chains. This is because investment in downstream activities has a potential to unlock job opportunities, technological infrastructure, skills transfer as well as more rents. In turn, these benefits can bring economic growth and sustainable development to Africa.

Moreover, in order for Africa to gain maximum benefits from critical minerals, downstream investments should go beyond mineral processing. In fact, this limitation has been raised by McKinsey and Company (2020) which explained that Africa has over the years invested heavily in supply chains rather than value chains to its economic disadvantage. McKinsey and Company rightly suggests that Africa is focused on investing in logistics aspects that is processing, railroads and shipping which are mainly for exporting raw minerals instead of focusing on comprehensive market approach by investing on assembly and manufacturing, product design and engineering, research and development, among others, which are central to value addition.

A comprehensive market approach is not without its hurdles though. For instance, while smelting capacity can increase the possibility of value addition in Africa thereby, allowing the continent to maximize value retention, it requires energy that is not currently available or adequate in

the continent. For instance, Zambia has four major copper smelters at the moment. However, three of them operate at less than 50 per cent of their capacity due to both unavailability/inadequacy of energy and corresponding high costs (Woldu, 2023). A more coordinated approach which appreciates the fact that for mining to work, related sectors such as energy have to also be boosted is the only way forward for value addition in Africa. Africa must act now because as the world is bracing itself for a definite future deficit of critical minerals, there is a possibility of recycling technologies to replace critical minerals possibly leaving Africa's critical minerals stranded (McClellan *et al.*, (2016).

Critical Minerals and Energy Transition

Traditionally, critical minerals have been almost exclusively used in healthcare and automobile industries (Nakanwagi, 2023). However, due to climate change effects, the same have increasingly been used to produce green energy solutions. Specifically, energy transition is dependent on the availability of critical minerals such as lithium, graphite, antimony and cobalt which are highly needed to create green products such as batteries for electric vehicles. Other minerals such as nickel, helium, bismuth, caesium, rubidium and copper are essential for producing green energy technologies such as wind turbines, solar panels, and electric vehicles and for energy storage.

With an ever increasing world population, there is a greater pressure to make use of finite resources. This has been done to the detriment of the environment. One of such cases is on the use of critical minerals for energy purposes. Indeed, according to the International Energy Agency (2021), in order for the world to honour the Paris Agreement, the global production of critical minerals has to increase by a factor between three and 42 to meet renewable energy targets.

Africa is still at an infant stage of energy transition. This is in line with the McClellan *et al.* (2016) report which suggests that while OECD countries have considerably moved towards renewables, nuclear and gas as their main sources of energy, the non-OECD countries are still predominantly relying on coal. Traditionally, production of iron and steel uses the most energy, followed by nonmetallic minerals such as cement and non-ferrous metals when considering total production (Ibid). However, based on production per ton, non-ferrous metals lead followed by iron and

steel with the non-metallic metals being the least in terms of energy intensity (ibid).

It is obvious that Africa lacks adequate energy infrastructure to add value to critical minerals. To put this in perspective, let us consider for instance, bauxite refining which requires over 3,000kWh per metric ton of refined product on average while cobalt requires almost 4,700kWh (Hendrix, 2022). Guinea with 23 per cent of world bauxite can only provide electricity to 45 per cent of its population; DRC with 70 per cent of the world's cobalt can only supply electricity to 19 per cent of its population; Similarly, Mozambique which ranks the sixth in global graphite production can only provide electricity to 56 per cent of its population (Hendrix, 2022). Clearly, if Africa has to engage in global value chains it needs to start to produce abundant but low-cost energy.

So far we have established the fact that while climate change affects the entire world, it affects African populations the most because it mostly relies on natural resources such as land, water and forests for their livelihoods and energy needs (UN Women, UNDP and UNEP, 2015). Fortunately, Africa can make use of its vast critical minerals resources to generate green energy sources thereby fighting climate change at the same time achieving sustainable development (Meyer and Odeku, 2006). It is rather encouraging to find that the consumption of renewable energy is on the rise in Africa as it grew by an impressive 10 per cent between 1995 and 2010 (Nyiwul, 2021). Other things remaining constant, the growth is projected to rise by a further 16 per cent by 2040 (ibid).

Critical Minerals, Energy Transition and Africa's Development

Effective management of critical minerals can spur Africa's economic growth and sustainable development (Kinyondo, 2024). In essence, Africa must determine to develop sustainable value chains for critical minerals that are linked to demands in the Global North (Nakanwagi, 2023). Sub-Saharan Africa is unique in the sense that, it is a region mostly affected by climate change, yet it is rich in critical minerals that are at the centre of energy transition and thus it can offer the greatest escape route from absolute poverty among its populace through attainment of economic growth and sustainable development. Indeed, critical minerals could not only benefit African countries through bringing revenues for host countries via production sharing arrangements, royalties and income taxes

but also through generating jobs, transferring skills and technology thereby enhancing inclusive growth and sustainable development (Kinyondo, 2024; UNCTAD, 2015).

Sustainable Development Goal 8 seeks to "achieve full and productive employment & decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value by 2030". However, only five million new jobs are created in Africa for more than 12 million youth joining the labour force annually (UNCTAD, 2015). Meanwhile, the extractive sector is currently employing around one per cent of Africa's workforce (ibid). Critical minerals subsector could thus offer job opportunities for millions of youths in Africa if the continent engages in value addition. In fact, more could be created. Specifically, while extractive industries may not create many direct jobs, but their linkages with the broader economy may help generate additional jobs (Kinyondo, 2024). These linkages could generate value retention; create demand for locally produced goods and services; build an enabling environment for new industries using skills and capabilities acquired from critical minerals. Meanwhile, Artisanal and Small Scale Mining (ASM), as a labour intensive mining process, is, well known for generating more direct and indirect jobs than Large Scale Mining (LSM) as it creates more than 8 million direct jobs which support over 45 million people Africa-wide (Tomassi and Kinyondo, 2024; Huggins and Kinyondo, 2019; Kinyondo and Huggins, 2019).

The importance of creating value chains in Africa cannot be overemphasized as it has been ingrained in the Africa Mining Vision (AMV) of 2009. The Vision sees opportunities within the mining sector that, if taken advantage of, it could bring about economic transformation in Africa. Specifically, the AMV (African Union, 2024) proposes that Africa should invest, among others, in the following for it to leverage minerals for economic transformation:

- (a) Investment in geological information so as to identify untapped minerals;
- (b) Investment in critical inputs particularly, energy;
- (c) Investment in local mineral beneficiation and skills and technological transfer;
- (d) Investment in designing tax regimes that can accommodate the shifting value of commodities in the global market;

- (e) Investment in research and development as well as human capital; and
- (f) Investment to secure capital from local and regional sources to enable African businesses to develop local content.

Development Finance Institutions (DFIs)

The AMV approaches value addition from the angle of integrating the mining sector into development policies at local, national and regional levels (African Union, 2024). At the local level, local content policies are encouraged (Kinyondo, 2024; Huggins and Kinyondo, 2019; Kinyondo and Huggins, 2019; Kinyondo and Villanger, 2017). On the other hand, at the national level, different countries have formulated laws which restrict exportation of raw minerals as a means to stimulate local content and development through value addition and achieve a higher amount of local human and material resources for downstream production and, thus, capture higher revenue up in the value chain. Meanwhile at the regional level, the AMV proposes that strengthening linkages between the mining sector and other sectors of the economy would build and encourage economic transformation. This can be achieved through creating:

- a. downstream linkages into mineral beneficiation;
- b. upstream linkages into mining capital goods, consumables, and services;
- c. spatial linkages into infrastructure, power, and logistics; and
- d. knowledge linkages into skills and technological development.

It should be noted that more than 15 years later since its promulgation, the implementation of the AMV among African countries has not been forthcoming. Indeed, apart from South Africa, which in the late 1990s invested significantly in beneficiation, other African countries continue to mainly export raw minerals (Brandcom Partner, 2023). Indeed, current estimates show that up to 70 per cent of mined minerals are exported raw to Asia or Europe for refining (ibid).

That said, there has been an increasing eagerness to reverse this situation in Africa. For instance, Tanzania, Zimbabwe and Namibia have implemented national bans on exporting unprocessed minerals in recent past only to overturn them (Huggins and Kinyondo, 2019; Kinyondo and Huggins, 2019; Kinyondo and Villanger, 2017; Kolstad and Kinyondo, 2017). Meanwhile, Ghana announced the approval of the country's Green

Minerals Policy, effectively banning the exportation of unprocessed mineral resources (Brandcom Partner, 2023).

Unfortunately, without clear strategy and diversified ownership structures in place, these policies could actually serve as deterrents to foreign investment while creating export bottlenecks (Kolstad and Kinyondo, 2017). Clearly, Africa continues to experience trade imbalances as it continues to export raw minerals as opposed to finished goods which are valued several times higher. Woldu (2023) illustrates this fact by using the case of Zambia which is one of the biggest copper producers in Africa. The country exports Stage 1 raw and refined copper (13.7 per cent and 54.6 per cent respectively) which accounts for 68.3 per cent of its GDP. Simple calculations by Woldu (2023) reveal that finished copper products from Zambia are sold at a price which is 25.86 times greater than the stage 1 refined copper that the country exports to the rest of the world. This implies that Zambia not only loses much of the value of its copper but also exports jobs, which could have been available in the country if value addition was done locally.

One thing that is clear is that, the best approach that African countries should adopt to ensure that they benefit from critical minerals is by being more proactive and developing downstream capacity in processing (Hendrix, 2022). In other words, instead of exporting raw minerals, Africa should begin to engage in activities that at least involve refining of critical minerals to the level of intermediate goods before they do export them. For instance, instead of exporting bauxite and iron ore, African countries should at least export aluminum and steel.

Meanwhile, Africa must work to eliminate bottlenecks that hinder it from engaging in global value chains. As Kinyondo (2024) rightly demonstrates, being endowed with numerous mineral commodities is one thing but benefiting from them is another. The continent should, therefore, seek to graduate from just being richly endowed with critical minerals to actually benefiting from them. To do that, Africa must address a number of bottlenecks. Nakanwagi (2023) lists some of the primary obstacles that still prevent Africa from realizing its full benefit potential through value addition which have to be redressed by African countries. They include:

- a. Lack of geological information.
- b. Scarce or costly energy supply;

- c. Lax tax regimes that easily allow multinationals to reduce their tax burdens.
- d. Extremely high rates of raw or stage 1 refined mineral exports;
- e. Inadequate level of technical skills, technology, and research;
- f. Corruption and poor revenue management;
- g. Human right abuses, lack of security and electricity; and
- h. Poor waste management.

Conclusion and Recommendations

Climate change is real and has been affecting African countries disproportionately. This is because the majority of Africans depend on nature to advance their livelihoods. Consequently, climate change effects such as droughts and abnormally warm weather and heavy rains, among many others, tend to exacerbate poverty situations in Africa particularly, in the Sub-Saharan region. This unfortunate situation happens even when Africa emits the least of greenhouse gases in the world's atmosphere.

In responding to this global challenge, the world came together under the Cancun Agreement arrangement and agreed to limit temperature rises to the maximum of 2 degrees Celsius with the preferred limit being 1.5 degrees Celsius. There are various strategies to aligning to this target. However, energy transition seems to be the most trending one. It involves shifting towards low-carbon technologies.

Fortunately, at the centre of energy transition are critical minerals that are vastly available in Africa. The said minerals are responsible for making green solutions such as wind solar panels, wind turbines and electric vehicles. It follows therefore, that energy transition has a potential to help Africa fight climate change. Moreover, it can provide cheaper and reliable electricity to millions of Africans who do not have access to it at the moment.

Of importance to this study though is the fact that since critical minerals are available in Africa, the continent can use them to advance itself. It is however, noted in this study that Africa needs to change course from merely engaging in supply chains to partaking in value chains. However, this would require that Africa shifts its emphasis from just investing in logistical infrastructure such as roads, railways, shipping to

investing in downstream activities that add value to critical minerals. The new thinking should thus ensure that Africa focuses on:

- building robust databases of geological information in collaboration with relevant institutions such as think tanks and academic and research institutions both local and regional;
- exploring ways to source (affordable, clean & reliable) energy supply to operate refineries and smelters;
- building and/or expanding refineries and smelting facilities using Public Private Partnerships;
- ensuring that African businesses can attract capital from both local and regional sources;
- legislating and enforcing local content policies which focus on technological transfer, research and development, beneficiation and locally supplied goods, services and workers;
- enacting and enforcing legislation that severely reduce the export of raw minerals;
- where possible, establishing and enforcing protectionist policies to protect local businesses (based on merit) and tariffs that are fair, effective, & targeted and;
- Improving intra-African trade and redressing trade imbalance with the rest of the world.

Overall, climate change and the resulting need for energy transition offer Africa an opportunity to not only fight climate change but also attain the Sustainable Development Goals, Africa's Agenda 2063, Africa Mining Vision and ultimately helping it to achieve economic growth and sustainable development. But this, as it has been shown in this study, can only happen if African countries start playing a more substantial role in the value chain for critical minerals rather than just a role as exporters of raw minerals. In other words, Africa's advancement, in the midst of climate change challenges, can be achieved if African countries can use critical minerals to diversify their economies via building an industrial base that can help them scale up production and exports intermediate to finished goods to the rest of the world.

In conclusion, as much as critical minerals have been heralded as possible catalysts for Africa's advancement, further challenges abound. Indeed, production of critical minerals does produce negative externalities such as environmental degradation just like other minerals. Moreover,

production of some of the critical minerals for example copper and lithium require a lot of water, something which has brought water stresses and droughts in some parts of the world such as in Zambia and Chile. African countries should, therefore, be vigilant and ensure that critical minerals boom does not compromise economic, social and environmental aspects of sustainable development it seeks.

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Towards Inclusive and Equitable Quality Education in the post-COVID-19 Africa

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Abstract

This commentary reflects on critical areas that sub-Saharan African countries should focus on to improve their progress towards achieving Sustainable Development Goal 4 for inclusive and equitable quality education, lifelong learning and to strengthen educational resilience in the post-COVID-19 era. The commentary argues that there is a need to develop relevant strategies and implement robust policies to improve teacher professional development, educational infrastructure, access to information and communications technology, a safe learning environment, and the fight against corruption and embezzlement of education resources.

Keywords: Sustainable Development Goal 4, COVID-19, quality education, inclusive education, sub-Saharan Africa

Introduction

Education is key to achieving the 2030 Agenda for Sustainable Development. The Sustainable Development Goal (SDG) 4 for inclusive and equitable quality education and lifelong learning opportunities for all is founded on the principle that education is a fundamental human right and an enabling right. To achieve this right, countries must ensure universal equal access to inclusive and equitable quality education and lifelong learning opportunities, which should be free and mandatory, leaving no one behind, regardless of gender, disability, or social and economic status UNESCO (2017b). Nelson Mandela asserted that education is the most powerful weapon for changing the world. Ensuring all individuals have equitable access to high-quality education is essential for tackling social and economic issues such as inequality, unemployment, and poverty (Mauti, Pacho and Nyatuka, 2023). While many African countries have made

significant strides towards quality education for all, many children are still out of school due to several interrelated factors, including but not limited to geography, gender, extreme poverty, disability, crises, conflict, and displacement (UNESCO and the African Union Commission, 2023). In sub-Saharan Africa, 58% of children of upper secondary school age do not attend school (UNESCO and the African Union Commission, 2023). Implementing Sustainable Development Goal 4 presents significant hurdles for many sub-Saharan African countries, as the region still has the world's highest out-of-school population (UNESCO, 2024).

The progress towards inclusive and equitable quality education and lifelong learning opportunities for all as envisioned by the Sustainable Development Goal (SDG) 4 has been hugely impacted by the outbreak of the coronavirus disease (COVID-19), leading to learning losses in many countries (United Nations, 2023). The pandemic led to the closure of schools and disrupted the traditional face-to-face learner-teacher interaction. Learners were forced to abandon their studies with no definite plans for resumption. Educators had to assume new roles and instructional strategies that were foreign to them and the learners. Many educators and students lost interest in teaching and learning, resulting in poor educational outcomes due to insufficient skills in the application of technology and inadequate funding and facilities (Mahona and Mkulu 2020).

The suspension of physical classes in educational institutions due to the COVID-19 pandemic brought unique challenges to students and educators in delivering curriculum content and achieving inclusive and equitable quality education and lifelong learning across sub-Saharan Africa (Mahona, Pacho, and Adewoyin 2022). Learners from sub-Saharan African countries suffered the most due to inadequate technological development and financing in the education sector, worsening inequality in inclusive and equitable access to quality education. The COVID-19 situation challenged educators and policymakers to evaluate their level of preparedness to provide education during a crisis and enhance educational resilience. The COVID-19 pandemic also provided unprecedented potential for the education sector to integrate technology in education and distance and online learning. It necessitated the development of innovative approaches to education to enhance uninterrupted learning. To mitigate the challenges brought about by the pandemic, there is a need to build a more resilient education system that can endure future crises. Education in the post-

COVID-19 era in sub-Saharan Africa requires a paradigm shift and a reinvention.

Leading the way in promoting sustainable development goals should be one of the key responsibilities of education. Experience, however, indicates that many educational institutions in sub-Saharan Africa do not give education for sustainable development the importance it deserves. There is less formal emphasis on teaching young people about their obligations to promote sustainable development. The transformative role of education can be realised by fulfilling the right to quality education and lifelong learning more inclusively and equitably, which is a catalyst for achieving the Sustainable Development Goals (Benavot, Williams, and Naidoo, 2024).

The important question to address is: How can sub-Saharan African countries achieve SDG 4? Addressing this question requires a paradigm shift in education in terms of improving education financing, making education free and compulsory, increasing the number of teachers, improving basic school infrastructure, and embracing digital transformation (United Nations, 2023). This commentary explores critical areas that sub-Saharan African countries should focus on to achieve inclusive and equitable quality education and lifelong learning and strengthen educational resilience in the post-COVID-19 era. These include improving teacher professional development, educational infrastructure, access to information and information technology, establishing a safe learning environment, and curbing corruption.

Teacher Professional Development

The Sustainable Development Goal (SDG) 4 calls for a substantial increase in the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least-developed countries and small island developing states (UNESCO, 2017b). While teachers are the key to achieving the SDG 4 targets, the scarcity and unequal distribution of properly qualified teachers, particularly in poor regions, exacerbates the equity gap in schooling (Saini, Sengupta, Singh, *et al.*, 2023; UNESCO, 2017b).

Many countries in sub-Saharan Africa have committed to implementing the competency-based curriculum (CBC) in their education

systems. The governments of these countries consider the competency-based curriculum to be instrumental for development. The competency-based curriculum differs from a knowledge-based, content-driven, and teacher-centric curriculum. According to UNESCO (2017a), a competency-based curriculum emphasises what learners are expected to do rather than what they are expected to know. In the CBC, competency is viewed as the ability to apply knowledge, skills, values, and attitudes appropriately in specific contexts. The new CBC educational dispensation requires competent and high-quality teachers equipped with the requisite knowledge, skills, values, and attitudes to effectively implement the CBC. However, many countries in sub-Saharan Africa are grappling with a shortage of qualified and motivated teachers, negatively impacting the quality of education due to a lack of continuous professional development opportunities for teachers.

Teachers are the main agents of change in the implementation of a competency-based curriculum (CBC), yet many of them in sub-Saharan Africa often lack the requisite skills to be effective. Although most teachers are familiar with technology, for instance, the inadequate training given to them needs to be upgraded to reduce the digital gap (Fernandez-Cruz and Fernandes-Diaz, 2016). According to Momanyi and Rop (2019), there is inadequate preparation among teachers to facilitate the development of digital competence among students since they have not been sufficiently prepared to implement the curriculum. Additionally, there are complications in the implementation of CBC because teachers face a variety of challenges, including a lack of in-service training, insufficient teaching and learning resources, overcrowded classrooms, and students' readiness to accept the learner-centred approach (Nyoni, 2018).

The implementation of a competency-based curriculum (CBC), especially in schools within marginalised communities in sub-Saharan Africa, has had myriad challenges on how best to support teachers and other stakeholders to facilitate this approach. Teachers face many challenges ranging from lesson planning, teaching methods, managing learning, and assessment in implementing the CBC. There is also a lack of a coherent, sustainable policy framework to support in-service teachers through continuing professional development. Competency-based education in sub-Saharan Africa will only succeed by putting the teacher at the centre of implementation with a focus on pedagogy (Ngaruiya, 2023). To enhance teaching quality and keep teachers up-to-date with innovative pedagogical

approaches, there is a need to improve investment in teacher training and continuous professional development, specifically in marginalised areas.

One of the most cost-effective approaches to teacher professional development is through school-based professional learning communities (SBPLCs). This approach is widely recognised for developing teachers' competence and student outcomes (Antinluoma, Ilomäki, and Toom, 2021). The professional learning communities' strategy is founded on organisational learning theories, where teachers learn and develop their capacities through collaborative practices, sharing expertise and knowledge, developing new approaches, and investigating other practices. There is a general agreement that professional learning communities can improve instruction by offering teachers opportunities to reflect on their instructional strategies to improve student learning outcomes and become agents of change (Antinluoma, Ilomäki, and Toom, 2021; Chuang and Ting, 2021). School-based professional learning communities' practices can effectively update teachers' knowledge, skills, and abilities to implement a competency-based curriculum. Since teachers are fundamental agents for guaranteeing quality education, they should be empowered, adequately recruited and remunerated, motivated, professionally qualified, and supported within well-resourced, efficient, and effectively governed systems (UNESCO, 2017b).

Educational Infrastructure

The Sustainable Development Goal (SDG) 4 calls for the construction and improvement of educational facilities that are child, disability, and gender sensitive and provide safe, non-violent, inclusive, and effective learning environments for all (UNESCO, 2017b). This implies the need for adequate physical infrastructure and safe, inclusive environments that nurture learning for all, regardless of background or disability status (Saini, Sengupta, Singh, *et al.*, 2023; UNESCO, 2017b).

The availability of educational facilities has improved significantly over the years due to government capitation in sub-Saharan Africa. However, many educational institutions still lack or have inadequate and poor basic infrastructure and requisite physical facilities like ramps to support learning for physically challenged learners. Braille machines for visually impaired learners are also lacking in most educational institutions. A survey of children with disabilities in 42 countries, including 19 sub-

Saharan African countries, indicated that children with functional disabilities were more likely to drop out of school and that girls were more likely than boys to be out of school (Jones, 2019). This slows down the achievement of SDG 4, which encourages the building and upgrading of education facilities that are child, disability, and gender sensitive and provide safe, nonviolent, inclusive, and effective learning environments for all. Inclusive education should therefore be accorded serious consideration so that physical facilities can be made user-friendly for the diverse categories of learners.

A deliberate change of mindset by all educational stakeholders is necessary to enhance the quality and inclusiveness of the educational infrastructure required for inclusive and equitable quality education and lifelong learning opportunities for all. Actions in this regard would include increased funding to the education sector, effective supervision by the school educational officers and boards of management, and holding those in charge of managing educational institutions accountable for the funds they receive for educational infrastructural development. In his book, *Not Yet Uhuru*, Jaramogi Oginga Odinga (1968) asserts that there is an additional danger that money would be spent not on essential administration and services but on politics and prestige spending. It is unfortunate that in the 21st century, some educational institutions in sub-Saharan Africa still lack essential facilities like well-equipped laboratories, libraries, classrooms, workshops, and sports facilities. Therefore, sub-Saharan African countries must give SDG 4 the priority it deserves by improving investment in quality infrastructure.

Information and Communications Technology

The Sustainable Development Goal (SDG) 4 requires a considerable increase in the number of youth and adults with information and communications technology (ICT) skills, by type of skill (UNESCO, 2017b). Information and communications technology infrastructure in educational institutions in sub-Saharan African countries is critical for improving learning outcomes through ICT-supported pedagogical techniques and developing digital skills necessary for the rising role of digital technologies in the labour market (UNESCO and the African Union Commission, 2023). On the contrary, a lack of ICT infrastructure restricts the ability to gain digital skills in educational institutions and to close the enormous digital divide within and across countries (UNESCO and the African Union Commission, 2023). Despite the COVID-19 pandemic demonstrating African countries have demonstrated resilience and adaptation in implementing digital

learning through radio, television, and online channels, the limited availability of digital devices, internet connections, power supplies, and distant learning programs hampered students' learning capacity, particularly in marginalised areas. While 73% of African countries reported employing ICT learning methodologies, only 39% helped students with disabilities, and 24% supported students living in rural regions (UNESCO and the African Union Commission, 2023). Even though internet connectivity has increased by 65% since 2015, post-COVID-19 progress in closing the digital gap has slowed down (United Nations, 2023).

Teaching and learning during a crisis would not be complicated if information and communications technology (ICT) were readily accessible to teachers and learners. Many educational institutions in sub-Saharan African countries, especially in marginalised areas, are characterised by inadequate access to ICT and the internet. Poor access to technological devices and the internet hinders learners from effectively participating in the learning process. Many educational institutions in marginalised areas have little or no access to the internet, thus hampering access to inclusive and equitable quality education and lifelong learning. Yet, broadband technology and instant messaging have the potential to provide remote communities with unparalleled access to educational resources (Basye, 2014). The internet, for instance, has the potential to eliminate the disadvantage of vast distances. Therefore, there should be a deliberate effort to guarantee that everyone has fair access to the internet.

Global challenges such as COVID-19 call for investing in ICT infrastructure. Open and distance learning (ODL) models can enhance educational resilience by allowing uninterrupted teaching and learning. Open and distance learning involves access to education devoid of constraints of time and place and offers flexible learning opportunities (Ghosh, Nath, Agarwal, and Nath 2012). ODL can enhance equity in education by promoting uninterrupted learning. The justification for ODL is that it is flexible and can easily be adopted in schools within marginalised communities. Additionally, ODL allows teachers to grow professionally wherever they are and at their own pace and context. Finally, UNESCO and the African Union Commission (2023) recommend innovative reforms to improve ICT in education through investments by ministries of education to support access and connectivity for learners, collaborating with mobile phone companies and broadband service providers to expand ICT infrastructure, and installing solar panels in educational institutions in rural

areas to offset the digital divide and allow learners to learn both at home and at school.

Safe Learning Environment

The Sustainable Development Goal (SDG) 4 calls for ensuring safe and inclusive learning environments (UNESCO, 17b). The right to education necessitates access to safe, inclusive, and supportive learning (Global Protection Cluster, n.d.). Any attempt to the contrary is tantamount to a violation of the right to education, thereby hindering efforts towards access to education. All learners and educators have the right to attend educational institutions that are safe and conducive to learning. Nevertheless, some educational institutions in sub-Saharan Africa continue to face occurrences that have long-term, catastrophic consequences for learners, parents, educators, and the community.

Many sub-Saharan African countries are facing the challenge of political instability and conflict, accompanied by human rights violations and crimes against humanity. Since independence, African countries, one after another, have become immersed in political unrest, which has often brought about conflict, violence, and civil wars. When the African continent is closely examined, it becomes clear that many of the following nations—Kenya, Uganda, Rwanda, Burundi, South Sudan, Sudan, Eritrea, Ethiopia, the Democratic Republic of the Congo, Somalia, Chad, Guinea, Liberia, Nigeria, Sierra Leone, Ivory Coast, Algeria, Tunisia, Egypt, Libya, Angola, Zimbabwe, and South Africa—have either experienced or are currently experiencing intra-state conflicts (Pacho, 2013). Conflicts have become pervasive, and civil strife is a tragic and persistent plight for the population. The common effect of conflicts is their destabilising character, so far as the political life, the economy, and the social progress of the people are concerned. In addition, there are psycho-social effects associated with conflict. These include trauma, rapes, torture, distrust, people being maimed or killed, populations being displaced, and family lives being disrupted as close kin are lost or separated.

Despite the emphasis given to the attainment of SDG 4 on the provision of quality education that is equitable and inclusive, refugee and displaced children are being left behind. Conflicts have a disturbing effect on education, including the destruction of infrastructure, the closure of educational institutions, school dropouts, a loss of interest in education, and

poor educational outcomes. Learners who are exposed to conflict situations are not only affected physically and mentally but also disrupted in their learning, which contributes to high dropout rates and a general feeling of insecurity among learners and educators. In 2022, there were 2.17 million school-aged refugee children in the East, Horn of Africa, and Great Lakes regions, of which 1.11 million (51%) were out of school (UNHCR, 2023). Conflict, therefore, is one of the major challenges sub-Saharan Africa faces. There is a need to find enduring solutions to the problem of conflict to achieve the peace necessary for sustainable development and the achievement of inclusive and equitable quality education and lifelong learning opportunities for all.

Sub-Saharan African countries must provide safe and secure learning environments to achieve SDG 4. Improving the quality of education in emergencies is one of the ways that can contribute to equitable and inclusive education. The term “education in emergencies” refers to quality, inclusive learning opportunities for all ages in situations of crisis, including early childhood development, primary, secondary, non-formal, technical, vocational, higher, and adult education. Education in emergencies should provide physical, psychosocial, and cognitive protection that saves and sustains lives. (INEE, 2018). Education in emergencies aims to safeguard children’s right to education. Therefore, all parties to a conflict must adhere to the Safe Schools Declaration, which is an inter-governmental political commitment and agreement that outlines a set of commitments to strengthen the protection of education from attack and restrict the use of schools and other learning institutions. The purpose of the Safe Schools Declaration is to protect students, teachers, schools, and other learning institutions from some of the worst effects of armed conflicts (Save the Children, 2022).

Corruption

Corruption has become a cancerous growth in many sub-Saharan African countries (Pacho, 2013). Some of the identified corrupt practices in education include fraud in tendering, syphoning of school supplies, ghost deliveries, fraud in the appointment and deployment of teachers (favouritism, bribes, gifts), ghost teachers, absenteeism, illegal fees (for school entrance, exams, assessment, private tutoring), manipulating data to misrepresent, and bribes or favours during inspectors and auditors’ visits (United Nations Development Programme, 2011). Once corruption is extensive in a country, development goals are impaired. Corruption hampers

efforts to achieve SDG 4 by diverting resources meant for educational development and improvement to serve a few individuals at the expense of educational infrastructure. According to Kirya (2019), corruption hurts the quality of education, robs schools of resources, increases the cost of education, and contributes to service delivery, low-quality infrastructure, and poor education outcomes.

Given its devastating effects on education, unless sub-Saharan countries commit themselves to the fight against corruption, progress towards achieving inclusive and equitable quality education and lifelong learning will not be realised. The United Nations Development Programme (2011) suggests the following measures to tackle corruption and financial misconduct in the education sector: a robust legislative framework, criminal sanctions, stricter penalties and disciplinary action, and codes of conduct for education personnel (including head teachers, inspectors, education authority staff, teachers, and ancillary staff) to enhance professional behaviour and performance.

Conclusion

Sub-Saharan African countries face several challenges that hinder their ability to provide inclusive and equitable quality education and lifelong learning opportunities to all learners. These include inadequate teacher professional development, poor educational infrastructure, inadequate access to information and communications technology, unsafe learning environments, and corruption. Addressing these challenges to achieve Sustainable Development Goal 4 calls for an urgent multi-faceted approach and collective effort from every person, the government, the private sector, civil society, educators, communities, and society at large. Implementing the call for a global partnership for sustainable development as envisioned in Sustainable Development Goal 17 can enhance the mobilisation of the means required to achieve Sustainable Development Goal 4 based on a spirit of strengthened global solidarity. By investing in teacher professional development, educational infrastructure, advanced technology, creating a safe learning environment, and robust anti-corruption legislation, sub-Saharan African countries can strive towards promoting inclusive and equitable quality education and lifelong learning and strengthen educational resilience in the post-COVID-19 era. Finally, in the words of António Guterres, Secretary General of the United Nations, “Unless we act now, the

2030 Agenda will become an epitaph for a world that might have been” (United Nations, 2023).

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Gender Contestations and the Implications for Inclusive Societies

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Abstract

This paper examines contemporary debates on gender and the state in Africa as a contribution to debates that will inform the United Nations (UN) Summit of the Future in September 2024. Specifically, this paper focuses on two intersecting questions. The first is the rising anti-gender rhetoric and concomitant creation of a trust deficit between society and state through state informed legislation on gender. In examining the anti-gender rhetoric, the paper notes that this is a challenge that is not only contained to the African continent but reflects a growing global movement of transnational actors working collectively and separately to undermine women's rights and gender justice broadly. The second and interlinked issue is the capture of multilateral spaces specifically the UN by anti-gender actors and the implications this capture has on undermining the UN common agenda as set out in the Secretary General's report Our Common Agenda in 2021. This paper draws on an analysis of grey and academic literature to examine the manifestations of anti-gender movements across Africa and its implication for the reduction of civil liberties for women and girls. This paper offers two recommendations. The first is the importance of state accountability for the compounded violence against women and girls that anti-gender movements create. The second is the need to protect the UN from capture by conservative forces.

Keywords: gender ideology, anti-gender, gender justice, multilateralism, feminist movements

Introduction

The UN Secretary General Our Common Agenda report (2021) sets out an agenda of action, designed to strengthen and accelerate multilateral agreements – particularly the 2030 Agenda – and make a tangible difference in people’s lives. The report refers to the importance of renewing the social contract between governments and their people and within societies (United Nations, 2021). The emphasis on rebuilding trust and embracing a comprehensive vision of human rights is seen as critical to ensuring the active and equal participation of women and girls, without whom no meaningful social contract is possible. Further, Our Common Agenda refers to putting women and girls at the centre, laying emphasis on the role of discriminatory laws in curtailing a gender just world (United Nations, 2021). Yet, in the last five years there have been concerted efforts to reverse gender justice including at the UN through growth of contemporary movements that view themselves as being against “gender ideology” (Corredor, 2019; Kovats, 2018).

From Chile, Argentina, Colombia, France and Germany Christian evangelical churches and far right political parties such as Alternative for Germany and Union for Popular Movement have mobilised policies concerning sex education, anti-bullying in schools, and LGBTQ1rights (Corredor, 2019: 613). At the UN organisations such as Family Watch International and UN Family Rights Caucus have organised at the UN specifically in relation to the sustainable development goals to challenge what they view as a “radical sexual rights agenda” (See McEwen and Narayanaswamy, 2023). Additionally, the Vatican which holds observer status as the UN and is influential in its mobilising power at critical events such as the Commission of the Status on Women is noted by Corredor (2019: 615) as one of the first places where gender ideology was used to refer to “misleading concepts concerning sexuality and the dignity and mission of the woman” are driven by “specific ideologies on ‘gender.’” (See also Moosa, 2013).

In this paper, I examine the logics that inform these movements, and the tactics and strategies adopted in a series of connected and disconnected movements that are transnational in nature. The concerted function of these movements is to reverse freedoms and rights championed over decades by women’s rights activists including as part of the Millennium Development Goals and its successor the Sustainable Development Goals. More importantly, the extensive mobilisation by “gender ideology” actors that extends to the majority world particularly in Africa as well as in multilateral

spaces, poses a threat to the commitment to enabling the equal participation of women and girls as envisioned by Our Common Agenda. In this paper, I read these movements as part of the factors that shape the closure of civic space and the reduction of civil liberties for many women and girls across the globe generally and the African continent specifically.

Civic space is defined as “the set of conditions that allow civil society to organise, participate and communicate freely and without discrimination, and in doing so, influence the political and social structures around them” (CIVICUS, 2019). For civic space to exist, civic engagement which is viewed as a commitment to political and social issues expressed in various ways beyond parliamentary politics must be enabled (Uldam and Vestergaard, 2015: 3). Therefore, the state has a “duty to protect its citizens and respect and facilitate their fundamental rights to associate, assemble peacefully and freely express views and opinions” (CIVICUS Monitor, 2021).

Analysts argue that in thinking about shrinking civic space, it is less the size or freedom than the shape or nature of participation in civic space which has changed in recent years (See Ayvazyan, 2019; Hossein *et al.*, 2018). The space for formal organising has been restricted, targeting civil society organisations (CSOs), human rights defenders, social movements and struggles of marginalised and disempowered groups such as women, racialised or ethnic minorities and indigenous populations, NGOs and the independent media. The CIVICUS 2024 state of civil society report notes that approximately 118 countries such as Bangladesh, Venezuela, Kyrgyzstan, Senegal and Sri Lanka “have serious civic space restrictions and only 2.1 per cent of people live in countries with open civic space” (2024:8).

The means by which state and non-state actors close civic space vary depending on the region and country and range from legal to extra-legal. The 2019 CIVICUS Monitor report also identifies three major indicators of an open civil society. These indicators are the right to associate, the right to assemble peacefully and the right to freedom of expression and have been used to signify an overall shrinking civil society in Africa (CIVICUS Monitor, 2019).

Put together the indicators of closing space above and actions taken by governments have resulted in governments creating legal and administrative barriers that make the operational environment for civil society difficult. The second trend relates to the criminalisation, stigmatisation and delegitimization of human rights defenders. Lesbian Gay

Bisexual Trans* (LGBT) groups are delegitimised through accusations that their actions undermine the family, morality and traditional values. In the section that follows, I trace the evolution of gender ideology movements globally and the tactics they deploy through an engagement with feminist scholarship on the gendered nature of state making. I subsequently explore their manifestation in Africa through a case study.

Gender Ideology Movements Globally

Across Europe and America, there has been a growth of “conservative and, in part, fundamentalist social movements against the perceived threat of what they call, depending on the context, ‘gender ideology, ‘gender theory,’ or ‘genderism’” (Kovats, 2018). The proponents of gender ideology movements' central focus ranges from contempt of liberal feminist attempts at gender mainstreaming and gender equality platforms such as the 1995 Beijing platform for action to feminist and queer intellectual contributions to the development of gender studies (Kourou, 2020). Gender ideology movements conceive of gender as a single ideology by rejecting the truth of sexual differences and mobilising conservative and fundamentalist sectors of society (Kourou, 2020).

Chapman (2019) who examines the rise of anti-gender movements in Europe and America views them as a resurgence of nationalism. It is well established in literature the fundamental role that gender as a social construct plays in nationalist and populist states that mobilise various versions of ethno-nationalism. I rehearse some of this scholarship below to illustrate how gender as a social construct and power relation and women as the embodiment of how unequal power relations function come into sharp focus during moral panics.

Nationalism can be understood as a process of formation, or growth, of nations; a sentiment or consciousness of belonging to the nations with the core concern being to promote and consolidate its wellbeing. Walby (1990) asserts that nations and national projects are gendered projects, Gender and its intersection with race, sexuality and religion acts as a marker by which nations represent themselves, assign value, and provide symbols around which to rally’ (Thompson, 2019: 3). Consequently, women and men’s bodies become containers for societal ideas that define acceptable cultural interpretations of masculinities and femininities which become potent metaphors for expressing nation’ (Banarjee, 2006).

Yuval Davis and Anthias (1989, 7) foundational work *Woman- Nation State* offer five ways through which women and nationalism become entangled. I consider four below. One as biological reproducers of members of ethnic collectivities in that their reproductive capacities are used to either control the population by limiting the reproductive capacity and activity of women to reduce people born from specific ethnic groups or encourage population growth of the 'right kind'. The focus on reproduction and social reproduction has become an important focus of the movements concerned with gender ideology. Often these concerns are animated by the risks to declining populations due to liberal feminism and reproductive choice on the one hand and non-normative sexualities on the other hand. There is a long tradition of feminist scholarship that shows how the surveillance of women's bodies and sexualities considered as deviant become of national interest through a focus on reproducing the nation and women as the 'bearers of masculine honour' (See Mupotsa, 2008; Matebeni *et al.*, 2015; Nyeck, 2020; Okech, 2019). Women's bodies and their sexuality are often 'symbols of homeland tradition and cultural markers' distinguishing them from the indigenous populations and are also sites of 'ideological and material struggles (Tinarwo and Pasura, 2014). Gender ideology movements are therefore concerned with the "decreasing population numbers, the degeneration of tradition and family values, and the moral panic over the future of children" (Kourou, 2020).

Two, women are said to participate as reproducers of the boundaries of ethnic/national groups, in this the ways in which they should have children is controlled. Anti-gender ideology movements are often entangled with far-right movements that are invested in politics of race that reifies whiteness as superior. I use far right to refer to political parties and movements often hostile to liberal democracy but accept popular sovereignty and the minimal procedural rules of parliamentary democracy. Support base is derived from challenging pluralism and targeting minority rights but publicly condemning the use of violence as an instrument of politics (See Ravndal and Enstad, 2023). Consequently, the focus on reproduction by gender ideology groups slowly begins to be aligned ethno-nationalist ideas of state and society.

Three, women participate in the ideological reproduction of the collectivity and as transmitters of its culture, by this they are seen as the 'cultural carriers' of the ethnic group. As a movement(s), gender ideology organizations develop their discourse and ideological position against:

“women’s rights; lesbian, gay, bisexual, transgender, and queer (LGBTQ) issues, administrative policy instruments such as gender mainstreaming as well as the public financing of gender studies departments. The advocates of these platforms tend to regard all political and non-governmental actors, administrative staff, and scientific researchers who focus on these issues as a single homogeneous group and an organized lobby” (Kourou, 2020).

Debates on race and gender by gender ideology movements often mobilize notions of culture and cultural distinctions as important to defining why non-normative women and sexualities as well as knowledge production as a threat to the ethno-nationalist state.

Four, as signifiers of ethnic and national differences thus constituting as symbolic figuration. In this area, the connections between anti-migrant, anti-Black and anti-gender movements become implicit with women and their bodies as battle grounds to mediate these manufactured crises to the nation-state.

Implicit in these configurations is the co-constitutive role that masculinities play (Yuval-Davis and Anthias, 1989: 7-8). Evident in Davis and Anthias explorations of gender and nationalism is Nagel’s (2010, 252) explicit consideration of how masculinity must be read alongside women’s co-option into the state. Nagel (2010: 252) asserts that women occupy a position that ‘reflects a masculinist definition of femininity and of women’s proper place in the nation’. Embedded within a discourse on masculinity and nationalism is the place of women’s sexuality. The bulk of far-right mobilization is ‘anchored in an opposition to pro gender norms as they are enshrined in several UN and African Union declarations and policy commitments through support for what are construed as traditional gender roles. The invocation of a vision of gender relations where women do not exercise levels of freedom and agency that remain contested in the world today, is argued to emanate from staking a claim to a version of masculinity in a rapidly changing, globalized world in which they are unsure of their place as men (Chapman, 2019).

Gender discourse becomes a scapegoat to understand and resolve the failures of the neoliberal agenda that are at the root of inequalities across the globe. Neoliberalism in pushing for withdrawal of the state from market

regulation and the establishment of market incentives to organize economic, social and political activity reduces the responsibility of governments (See Chang, 2003). Feminist economists' interventions draw attention to how the high costs of privatised public goods creates a racialised, gendered and class-based pattern of exclusion that reproduces gendered patterns of informal and invisible labour and social relations (See Mezzadri, 2020). The shift in socio-economic and political gender dynamics has altered traditional gender roles. Reproduction is seen as critical to national survival and women's rights, choices, and aspirations are seen as a threat to that (Banarjee, 2006). Proponents of gender ideology use gender as a vehicle for reclaiming power in a world that they believe is profoundly disempowering (Butler, 2019). By mobilizing around a perceived threat of gender, gender, in turn, meets a specific public concern deeply embedded within patriarchal constructions of family, the nation, and religion (Kourou, 2020; Butler, 2019).

Consequently, far right and gender ideology movements connect around global developments, such as new reproductive technologies, debates on same-sex marriage, the growth and expansion of gender studies programs (Kourou, 2020). The emergence of these movements across the globe in countries with different political landscapes but similar characteristics such as the rise of populist alt-right movements, the growing adoption of gender equality and LGBTQ legislation, and similar mobilizing language about the return to family values and religion indicate the transnational nature of gender ideology movements (Kourou, 2020; Kovats, 2018).

It is important to note that these movements are not anti-gender ideology because they intend to reclaim traditional religiously grounded constructions of gender power and relationships. They are dedicated to upholding gendered power relations that are embedded within state institutions and social practices. Gender ideology movements reject what they believe to be a move away from natural binary identities. To do so, they drew on feminist scholarship and activism as illustrative of an emerging more progressive gender ideology that must be thwarted for the preservation of society. Gender ideology movements appropriate progressive terms such as gender or feminisms as a means of attacking and delegitimizing progressive organizing, creating a moral panic in society (Kuhar & Paternotte, 2017). Beyond what may be viewed as the material impact of these movements is the intellectual attack on gender and feminist studies that have offered the basis for the gender discourse now accepted as normative,

which separates biological sex and gender as socially constructed by a set of patriarchal power relations (See Kovats, 2018; Butler, 2019; Lazar, 2005).

Though the gender ideology pervasive today is found and experienced differently across society, it is contestable (Lazar, 2005). However, there are three strategies that are used by these movements. The first is linked to discourse particularly around the role of family values and heterosexual marriage. The second key area of gender ideology movement strategy is dissemination. By dissemination of narratives that attack the notion of gender that portray queer people and feminists as dangers to society and the family (Kuhar & Paternotte, 2017). Third, is influencing legislation to codify these narratives. In the section that follows, I examine the Uganda homosexual act as a case study of the far-reaching impacts of gender ideology movements transnationally and the expansive ways a seeming attack on non-normative groups in society is the gateway to curtail broader freedoms for women and girls. Repealing discriminatory laws and addressing the political and social conditions that enforce harm and violence directed at specific groups is at the center of inclusive development practice and core to the 2021 Our Common Agenda report of the UN secretary general.

Uganda and the Anti-Homosexuality Act

On 26th May 2023, Ugandan President Yoweri Museveni passed the anti-homosexuality bill that turns into law a wide-ranging act that among other things includes a ten-year jail term for “attempted homosexuality”, death sentence for “aggravated homosexuality”. The new anti-homosexuality act is an adjusted reprisal of the 2009 Bahati Bill, that was thwarted by a technicality - the lack of a quorum parliament (See Tamale, 2009).

The Ugandan law is reflective of a spate of laws across Africa that are argued to protect the heterosexual African family, “African values”, “traditional values” and a rejection of “Western norms”. Similar laws have been seen in Ghana and Kenya. In July 2021, eight members of the Ghanaian parliament proposed the *Promotion of Proper Human Sexual Rights and Ghanaian Family Values Bill 2021* (Joy News, 2021). On 7th April 2023, a Kenyan member of parliament declared that he had introduced a Family Protection Bill in parliament which among other things prohibits sexual health services and sexual health rights education (Gachie, 2023). By corraling moveable notions of “African culture”, “Christianity” and “family values”, these bills

crackdown on basic sexual and reproductive health services and education for women and girls including lifesaving HIV/AIDS services. While claiming to target gender and sexually diverse people, they in effect mobilize very specific notions of heterosexuality that are designed to reconstitute a conservative interpretation of gender relations and roles. I argue that these laws are not about protecting the “family” or “African values” but are an implementation of a desire to re-assert patriarchal norms in fast-changing societies where significant shifts in thinking about gender have altered the organisation of the domestic and public sphere.

An examination of the process that led to the Ugandan law reveals the transnational funding and mobilisation that can be understood alongside the evolution of adjacent discourses in Europe in particular. On funding, Provost and Sekyiamah (2022) investigative review points to donor funded churches and associated groups that propelled anti-LGBTQI legislation in Ghana whilst the same development funders concomitantly pledge support for LGBTQI rights through other funding streams and public rhetoric. This contradictory funding pattern is also observed in Uganda with funding for the Inter Religious council of Uganda. While it can be argued that funding for these church groups was for support towards activities such as anti-corruption initiatives, the fact that these resources supported institutions that work against core principles that these donors stand for, points to the larger question of the politics of donor funding and its role in real transformative social change.

Staying with funding, is the role that US evangelical churches have played in both supporting anti-LGBTQI rhetoric through “training” and financial resources. This strategy was evident in American evangelist Scott Lively’s role in the 2009 Bahati Bill and more recently the role of groups such as Family Watch International in the anti-homosexuality law Museveni assented to (Centre for Constitutional Rights, 2012; Wephekulu, 2023). The convergence between Christian fundamentalist groups, conservative secular actors and political organising should be a critical concern for multilateral agencies such as the UN who are interested in ensuring that the social contract between state and society sustains rather than erodes the rights of women and girls. The capture of formal political spaces such as parliaments, political parties, and legislation as the sites for gender ideology organising poses a major risk for the pact contained in the UN Our Common Agenda (2021). Additionally, as observed by Sonia Correa, the transcontinental nature of what she terms as a hydra with these groups acting and mobilising

across Africa, Latin America, Europe and North America (Correa, 2017' Carbajal, 2022). Anti-gender, gender ideology and anti-LGBTQI groups' ability to mobilise vast transnational financial resources, illustrates a growing coalition of actors which include far right parties and faith-based groups.

Conclusions

In closing, there are two major recommendations I offer in a paper that sought to illustrate the major contemporary threat to the gender and women's rights landscape. The first recommendation concerns our collective understanding of how anti-gender movements are radically shaping the reduction of civil liberties for women and girls. While the UN common agenda centres the importance of reversing discriminatory laws, transnational anti-gender movements under the guise of protecting society from non-normative sexualities effectively reverse significant progress for women and girls. Additionally, these movements' mobilisation around legislative agendas creates conditions for heightened surveillance of civil society organisations through laws regulating donor funding, delegitimization tactics used by governments against critical civil society organisations and the gendered targeting of feminist organisers pursuing the redistribution of gendered power (See Okech, 2021). It is impossible to disconnect the rising cases of femicide that have generated country wide movements in places such as Kenya and South Africa, from the accompanying discourses around traditional masculinities that accompanies anti-gender movements (See Okech, 2021). Greater investment in building inclusive communities is required to renew the social contract with citizens, called for by the UN Secretary General. At the heart of this renewed social contract is enhanced accountability and commitment to understanding and guarding against the movements that exacerbate inequalities on the one hand and the limiting retrogressive laws that opportunistically deploy "culture" as a justification.

The second recommendation focuses on the capture of UN spaces such as the Commission on the Status of Women, by conservative forces (See McEwen and Narayanaswamy, 2023). There is an inherent contradiction in this capture and the risks it poses for the very institution that has developed significant women's rights instruments such as Convention on the Elimination of all forms of Discrimination against Women (1979), Beijing Platform for Action (1995) and UN Security Council Resolution 1325 (2000)

to name a few. The Secretary General's Our Common Agenda names upgrading the UN as an important pillar and within it a systems wide policy that puts people at the centre. The Summit of the Future provides a good opportunity to recommit to these fundamental values on gender equality and people centered development including limiting the use of the UN spaces to advance conservative gender positions that reduces rather than promotes gender parity.

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In the margins of Political Power: Rewriting women into history

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Abstract

History is biased towards men. The prevalence of history as gender biased is central to the marginalization of women in different folds. Although African women were an integral part of the liberation struggle, nationalist movements, women's movements, and development their contributions were omitted in historical narratives. Although women fought alongside men, they were later not accorded the same recognition. Women are also missing in monuments and symbolic artefacts, despite their contribution to national developments. Notwithstanding their omission in historical political narratives, women assumed leadership roles as healers, rainmakers, queens, chiefs and war veterans. Post-independence women are found in the margins of political leadership. The absence of women in public memorials and omission in history inadvertently validates the exclusion of women in political leadership and decision-making. An understanding of the historic positions of women in African societies is useful in determining the evolution of women into their current positions and roles in society. The invisibility of women remains a challenge and has been extended to modern day systems of governance. This paper contributes to writing women into history by recording historic contributions of women, and highlighting omissions of women and the implications of the omissions on governance.

Keywords: Women, political leadership, history representation, gender equality, exclusion, development

Introduction

Gender inequality remains prevalent in Africa. Women and girls endure poverty, gender-based violence, harmful practices and child

marriages, inequalities in access to education and economic opportunities among other challenges in most parts of the continent and elsewhere. Women are underrepresented in positions of political decision making and leadership. The gender inequality in decision making is detrimental as it marginalizes women's interests and opportunities for emancipation. The importance of equal representation in political decision-making cannot be over emphasized. Thus, the constant state of quest for strategies to improve representation and gender equality. Notwithstanding this, historically women were leaders, they were combatants in times of war, spiritual healers, rainmakers, and chiefs. Weir (2007) argues that women were central to politics in Southern Africa, demonstrating leadership in political, ritual, and military affairs. Parpart (1986) indicates that some women held high political office either through hereditary or election as queen mothers, queens, chiefs, or as village head women. Over time women failed to maintain this leadership status.

Historic omissions and contributions

History has proven unfavourable to women as historic records have erased women and nationalist discourses omitted women despite their roles, importance and contribution to the liberation struggle and development. Historiography tends to dismiss or downplay the involvement of women in political struggle (Suttner 2007). However, this dismissal does not mean lack of engagement. Carrier and Nyamweru (2016) argue that particular histories and figures are selected for memorialization, elevated to heroic status while others such as women are excluded from narratives of nation building. This is a common phenomenon across the African continent. Akuffo (2023) reflecting on the erasure of women in Ghanaian history indicates how state led commemorative acts and memorializing practices belie women's effort and historize men as founders of Ghana. While only six men are memorialized as Ghana's independence heroes, Akuffo (2023) argues that four women who led a petition drive for their release are equally deserving of memorialization.

Women in history have been identified as invisible, missing, voiceless, marginalized, absent, omitted, nameless, and other connotations that signify inferiority in representation. The same limited representation is found in political representation, where women are poorly represented in political leadership globally. The marginalization of women in history and political leadership is a cause for concern. While continuous efforts are made

to restore women to history and rewrite their narratives and enhance female representation there is no significant progress. This paper tracks the implications of the absence of women in historic narratives and symbolic representations on policy and development, the role and place of education in addressing the absence of women in historic narratives and determines likely policy interventions and recommendations. To improve the political, social, and economic participation of women and eradicate gender inequalities, a comprehensive appreciation of history and its influence on the current state of affairs is critical. An understanding of how and why discrimination takes place is useful in determining sustainable solutions.

From its inception, history as written by men, barely features women, rendering women invisible. According to Zeleza (2005), some histories ignore women while others mention them in passing. Hence the argument that women have been written out, ignored, and overlooked by history. The predominantly patriarchal power structures in society have made the absence of women in history possible, this however does not make women's stories less remarkable or less worthy, hence the need to restore women to history. The ultimate goals of women's history are to restore women to history and history to women (Burton, 1992; Kelly-Gadol, 1987). Barnes (2007) argues that despite having fought for independence, women were later isolated and disregarded; their stories were never told.

Notably, the Government of Zimbabwe indicated

Little has been documented about the role played by women in the course of the protracted struggle for independence. The fault lies at the feet of Zimbabwean women themselves. And yet the national liberation struggle marked a major breakthrough for the liberation of women in this country. Women fought side by side with men on equal footing, demonstrating that they were indeed a force to reckon with, and thus destroying the old age myth that a woman's place is in the kitchen (Barnes, 2007, p. 249).

The pictures of women in history textbooks show women in their domestic roles, caring for children, in the kitchen, in portraits with their husbands (Chiponda & Wassermann, 2011). The authors choose to confine women to private roles, however, it is apparent that women in history were engaged in other activities.

In the same vein, Van Heynengian (2007) decries the disregard for women's experiences in war and the lack of records, thus presenting incomplete studies on war. The lack of documentation is a constant feature in the literature on women and history. Suttner (2007) argues that without a record of contributions, many people may die without anyone knowing they were underground operatives. Scholars claim that such submissions are ignored because they present women in a way that is contrary to the norm, in a way that is not accepted as feminine. For instance, Chiponda and Wasserman (2011) argue that women in history textbooks are rarely presented with traditionally masculine roles.

Although women fought alongside men and received the same training, claims of gender equality are disputed. Barnes (2007) claims that the war perpetuated male-dominance and that women performed gendered roles as they cooked, washed clothes, and performed sexual services for the guerrillas. Women in war endured sexual abuse (Barnes, 2007; Suttner, 2007) and were generally excluded from positions of power and authority (Barnes, 2007). On the contrary, Suttner (2007) shows that women wielded a level of authority and responsibility as persons in command. Some positive benefits that women got from the war and liberation struggles were that they became politically concertized. Van Heynengian (2007) argues that through the war experience, women sharpened their political consciousness, their construction as belonging purely in the private sphere changed, and the women initiated a women's movement.

Memorialization has also proven to be an exercise biased towards men. However, both men and women are found to have contributed to nation building and are deserving of commemoration. The depiction below illustrates the gender bias in memorializing practices.

Walking into the headquarters of the African Union at Addis Ababa, Ethiopia, one is quickly confronted at the entrance by a display of about 50 Africans, all men, ascribed with the legacy of African nationalists. These men are noted to have worked towards attaining independence or rebuilding Africa. Sadly, not a single woman's image adorns this seeming 'historical wall'. Men, apparently, monopolize the nationalist narrative in Africa. Very few accounts or writings depict women conspicuously as political players or avid influencers of the anti-colonialism discourse. While Africa's anti-colonialism and

nationalism discourse hardly include the role that women played as nationalists, the fact remains that women distinguished themselves in the colonial and nationalist struggle as powerful, self-determining and yet matriarchal (Ifeanyi-Ajufo, 2021).

In addition to the recorded absence of women in political discourse on nationalism, the liberation struggle and statues, Chiponda and Wassermann (2011) also confirm that women are underrepresented, misrepresented, and marginalized in history textbooks. This creates and perpetuates a negative image of women. Students who read the textbooks are made to believe that women were absent in history and or incapable of leading. In fact, women tend to be portrayed in feminine and domestic roles in history textbooks (Chiponda & Wassermann, 2011).

Representation of women in history textbooks

Research shows that in two of the commonly used history textbooks in the United States women constituted less than three percent of the content and two percent of the content dealt with women and in one in South Africa women were absent in discursive content (Chiponda & Wassermann, 2011). Most studies conducted on the invisibility of women in historical narratives used content analysis. They analyze how men and women are represented and count their images. Several studies have been conducted in the developed and developing countries where textbooks have been reviewed for depictions of content related to women and men and comparisons raised. Most researches indicate common results showing omission of women in history, unfavourable representation of women, less mention and reference to women, fewer visuals of women and are generally male versions of history (Blumberg, 2015; Shrivastava, 2017; Zeleza, 2005; Zungu *et al.*, 2014). While more research has been done in the developed countries, the erasure of women's historical narratives is prevalent in both the developed and developing countries.

Women are considered historically unimportant, incapable, and contributing very little to society outside the domestic sphere (Chiponda & Wassermann, 2011, p. 13). The history texts tend to report on gender stereotype roles. History text book reviews in the US, UK, South Africa referenced in Chiponda and Wasserman (2011) have shown that women were not discussed on political and economic decision making activities, and

were shown as observers in scientific discoveries. In addition, numerically men appear more both in text and pictures. UNESCO (2019) also reports that studies that have studied text books generally find fewer images of women and girls, women are portrayed in stereotypical roles and men as professionals, women and contributions of women tend to be ignored.

Women in historical leadership

Although conspicuously missing in history, women have historically assumed leadership roles. Zungu *et al.*, (2014) highlight the need to document historic tales of women in political affairs, they use an illustration of Mkabayi, a powerful female political figure in Zulu history who became a regent when her father died while her brother was too young to take the throne. In Botswana, reference is made to a time when Ntebogang ruled until her son was of age, and ultimately managed to get popular support (Nkomozana, 2008). Many other female figures assumed leadership roles in the continent.

In many African countries including South Africa, Zimbabwe, and Mozambique, women were part of the liberation struggle. They were war veterans, fighting alongside men in the mau mau conflict in Kenya (Thomas, 1996) and the Chimurenga war in Zimbabwe for instance, and were part of the African national journeys to independence. According to Akuffo (2023, p. 1013) women in Ghana were “deep in the trenches with the men, organizing mass demonstrations, convening, participating, leading petition, hiding from the police when prison was eminent, being loyal members and leaders of nationalist movements, risking their lives amidst bombings and assassinations, and financing campaigns”, however, they remained marginalized in political decision making. In South Africa women shaped history as they played a role in the relaxation of the pass laws, marched in protest, faced police batons, teargas and guns as they fought for freedom, equal rights and social justice (Zungu *et al.*, 2014). Notwithstanding this, records are economical in showing the roles played by women and in identifying heroines, but instead literature shows war as exclusively male.

The exclusion of women from political power

It is important to note that the erasure of women from historical narratives has implications on policy and governance. Policies are required to deal with resultant inequalities, to ensure inclusion and establish

possibilities for redress. As Shrivatsa (2017) notes, it is important to question the historical invisibility of women in mainstream historical narratives in examining causes and effects of economic development or political freedom. This implies a relationship between history and contemporary realities.

Despite being found in the margins of political discourse and historical narratives it is evident that women have been an important part of leadership in Africa. Highlighting their contributions is valuable as it demonstrates their capacity to lead, their contribution to the protection of women's rights and liberties and to development. The extent of their participation contradicts the rate at which their participation is understated in historical narratives. It is also not aligned to the perspective that confines women to domestic roles. The participation of women in the women's movements, war and the liberation struggles, and in the nationalist discourses qualifies women as candidates for public office. However, there has been limited to no transition into such political leadership. In some countries like Zimbabwe and Angola women remained underrepresented in decision making and leadership positions post the liberation struggle despite their contribution to independence and the liberation. The situation was however, better in South Africa where women became a part of the new political leadership and government.

Notwithstanding the blatant male dominance, women across African countries often mobilized against issues and policies that disadvantaged them and spoke together in one voice, advocating for their needs, sometimes militantly so (Thomas, 1996). Women organized around their rights and fought against governments and discriminatory laws. In South Africa, women marched against the apartheid regime against the use of passes. Several changes in governing laws can be traced to the effectiveness of women's movements. In Botswana, the women's movement influenced the government to review laws that were discriminatory against women. The women's movements across African countries have been noted to have contributed to democratisation. Despite the valuable contributions of women and the influence exerted through women's movements, women generally failed to sustain power in new structures of governance and remained marginalized from political authority and power. Women's movements made long-term gains, however their contributions towards nation-building were circumvented as governments responded to women's needs.

Implications of the absence of historical narratives and political discourse

According to Ramtohl (2020) historical and socioeconomic trajectories of African nations have influenced the presence of women in parliaments. Women are just as underrepresented in parliament as they are in history in many African countries. However, in some cases such as South Africa, women who were an important part of the struggle were considered an important part of the new dispensation. The lack of representation of women in historical leadership and their representation as feminine and weak creates an impression where women are considered inexperienced, incapable or misplaced. This further marginalizes women and limits their opportunities to advance into leadership positions. If history records do not present women as the key and valuable actors that they are, their absence in modern day governance structures will appear conventional.

As long as women remain misrepresented our understanding of society, politics and the political economy remains flawed. According to Zeleza (2005) feminist historians have an urgent call to recover women's history, redress balances, and develop new theoretical frameworks that better explain the real world. The study of women's lived experiences, recording of women's narratives can be a meaningful way to add female perspectives and experiences to mainstream discourse. To close the knowledge gap created by the missing experiences of women, feminist researchers collect data that "exposes previously known and repressed experiences of women and disrupt traditional, essentialist beliefs pertaining to women's capacities and behaviours" (Brooks & Hesse-Biber, 2007). According to Zeleza (2005), history is undeniably androcentric and underestimates the contribution and role of women in African societies, this has unremitting consequences. It presents women as inferior to men and as victims of male oppression, and misses an opportunity to count the victories of women and present them equally as warriors and leaders in their own right. In fact, Blumberg (2015, p. 12) argues that lack of attention to the achievements of women in curriculum and textbooks as well as the invisibility of women may contribute to students' low self-esteem and lack of confidence.

Textbooks are an important part of history teaching. They are a means for transferring knowledge therefore their content and the way it is presented is critical. According to Chiponda and Wassermann (2011, p. 13) students are likely to consider the way men and women are portrayed in the

text books as unquestionable and historically truthful. Yet the reality is that women are underrepresented, misrepresented and marginalized. An opportunity for positive reinforcement for young girls is lost in the missing visuals and stories of female leaders in textbooks. History has an impact on the lives of women and their understanding of gender and politics. Gender bias in textbooks limits girls from reaching their full potential (Blumberg, 2015). The female identity and experiences are not captured, this limits validation for the girl child as they may not identify with male heroes. A predominantly male history perpetuates male superiority as it associates success and achievement with maleness. It is equally important that the stories, voices and achievements of women be on record. The history of women teaches us about women, culture and society.

The importance of capturing women's history cannot be overstated. The absence of women in history can be interpreted as implying lack of capacity and skills, which is not necessarily the case. Zeleza (2005) argues that poor coverage of women and the tendency to view women's lives as peripheral and unchanging reflect the absence of concepts about women's historical experiences. Women's experiences are useful for the theorisation of history. Scott (1996, p. 3) argues that "by recovering women's stories of women's activism, feminists provided not just new information about women's behaviour, but new knowledge – another way of understanding, of seeing, women, and another way of seeing and understanding what counted as history". The female perspective and insight is an important source of knowledge.

The role and place of education in dealing with the erasure of women

Education is an important tool for transformation, it can be used to change mindsets and help people embrace the need for and value of gender equality. Education can also perpetuate inequality if there is no proper consideration. With reference to textbooks, the education system can be viewed as perpetuating gender biases and silencing women. Schools can carefully consider gender sensitive teaching materials. Other aspects of teaching including teacher training, pedagogy and school culture may also contribute to gender inequality. Teachers require gender sensitive training to assist them to deal with biases. Gender transformation requires conscientious efforts as gender stereotypes are intrinsic and ingrained in different ways. For the attainment of gender equality, it is necessary to change some cultural

practices, beliefs, and traditions. Teaching and learning can be used to transmit knowledge and to create new cultures.

Outside the school environment the public also requires sensitization and education on gender equality. Education presents a platform to educate the public on harmful practices that hinder gender equality, the need for adequate representation of women in textbooks and in political discourse.

Policy recommendations

Increased visibility of women

Improved visibility of women can improve their opportunities for recognition of their achievements and capabilities. The presence and visibility of women contributes to improved societal perceptions of women as leaders. Governments can adopt quotas to increase the number of women in parliament. While this may not guarantee substantive representation it would enhance the visibility of women. The visibility of women as leaders can affirm and encourage other women to pursue political leadership.

Rewriting women's histories

Discourse influences the conceptualization of gender and location of power in modern societies. Transformation of the rhetoric on dynamics of power calls for women's voices. The addition of female voices and perspectives contends with institutional biases, patriarchy, cultural norms and beliefs which perpetuate male bias and domination. Instead of repeating the old narratives which repeatedly categorize political leadership as male and advance reasons why women fail as political leaders, reciting stories of women as successful cases of political leadership presents a better alternative. Non-governmental organizations, Universities, and international organizations can collaborate to support and promote the creation of women's stories through the media, television documentaries, biographies and research. This is critical as it would create counter narratives, new narratives and recreate women's histories, building knowledge which can empower women.

Memorialization policies

Representation of women in public memorials is important as it gives women political legitimacy. Governments need policies to guide

memorialization activities, and to try to gender sensitize the process to reduce bias. Installation of female representative statues and other historic remembrances should be considered for an improved reflection of the history and contribution of women to nationalism and development. Female statues and artistic representations should be created to create an impression of women as the leaders they have been in the past and can be, role modelling for younger generations and reinstating women in history. More monuments and statues should be dedicated to heroic women as efforts to equalize visual representation of men and women, this is likely to have a positive effect on the representation of women in political leadership.

Education system reforms

Considering the biases of textbooks in the representation of men and women it would be helpful for governments to conduct curriculum audits and consequently curriculum reviews to address biases and promote gender equality. The curriculum and course content and pedagogical practices can perpetuate gender stereotypes. Curriculum can reinforce the status quo in terms of gender inequality or be used to support transformations in gender relations and promote gender equality (UNESCO, 2019). Curriculum can be used to enhance gender equality by ensuring that there is gender sensitiveness and consideration for both genders. A gender sensitive curriculum with teaching techniques and pedagogies that are gender sensitive can promote gender equality. Teacher training becomes a strategic priority for gender equality practices. Teachers should be encouraged to promote gender equality in their teaching practices. Similarly, a policy reform on the education system to ensure gender equality in the language, teaching materials and curriculum to avoid further perpetuation of gender inequalities and patriarchy would be helpful.

Conclusion

Women have held leadership roles in history, they are not new to leadership. However, they are conspicuously missing in history and documentation indicating what their role has been. Although women in history enjoyed reigning as queens, fought wars alongside men, led movements, and played other social roles their experiences were not recorded, they were erased, omitted, and misrepresented. Omitting women's historical contributions perpetuates gender inequality. The missing experiences and narratives of women indicate incomplete histories, biased

representation, incomplete perspectives and a need to rewrite history for comprehensive stories. There is thus an apparent need to give visibility to women's history and memory. To tell women's stories and demonstrate their legitimacy as political leaders. Women's experiences and stories are not only important historical sources, but also a missing puzzle piece in a holistic understanding of society and the political economy. The exclusion of women from history has negative implications on modern day governance such as marginalization of women in political leadership. As nations strive for gender equality and empowerment of women and girls, new strategies are required to reinvigorate prospects to attain equality and accelerate progress. A greater part of attaining the right strategy and building sustainable solutions lies in understanding the problem.

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Pandemic Risks Threaten Africa's Sustainable Development

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Abstract

Africa faces significant challenges in achieving the United Nations Sustainable Development Goals (SDGs) by 2030, compounded by a rapidly growing population, demographic shift, and a host of socioeconomic and environmental issues. The population of Africa is projected to increase from 1.3 billion in 2020 to 2.5 billion in 2050¹. The continent's economic growth has already been sluggish over the past decade due to factors such as conflicts, famine, and various endemic and epidemic diseases, including Ebola, Mpox, Lassa fever, malaria, HIV/AIDS, tuberculosis, pneumonia, and diarrheal diseases. This large population increase will only further strain economic growth in the region. Health crises are exacerbated by weak health systems, primarily due to insufficient financial resources and acute shortages of healthcare workers. Despite the Abuja Declaration of 2001, where African leaders committed to allocating at least 15% of their GDP to healthcare, few countries have met this target. The COVID-19 pandemic has underscored the vulnerability of African nations, revealing significant impacts on populations, economies, and social structures. The pandemic, coupled with existing challenges such as climate change, has further strained the continent's fragile health systems. Infectious diseases, particularly those thriving in severe climatic conditions, pose ongoing healthcare challenges. Addressing these issues through climate-resilient health systems, "One

¹ Sadigov R. Rapid Growth of the World Population and Its Socioeconomic Results. *Scientific World Journal*. 2022 Mar 23; 2022:8110229. doi: 10.1155/2022/8110229. PMID: 35370481; PMCID: PMC8967589.

Health” approach is essential for improving life expectancy and fostering sustainable development.

We advocate a "One Health" approach to addressing disease surveillance, pandemic preparedness, and response. One Health is “a collaborative, multi-sectoral strategy aimed at achieving optimal health outcomes by recognizing the interconnectedness of people, animals, plants, and their shared environment.”² This approach is particularly crucial for combating emerging infectious diseases. Emerging and endemic zoonotic diseases pose a threat not only to the health of animals and humans but also to global health security. An estimated 60% of known infectious diseases and up to 75% of new or emerging infectious diseases are zoonotic in origin.^{3,4} Because zoonotic diseases represent critical threats to global health security, implementing robust disease surveillance, early warning systems, and climate action plans are vital components for redefining Africa's future. By integrating these strategies, African nations can enhance their resilience, achieve some, if not all the SDGs by 2030, and meet the objectives of the Africa Agenda 2063. We reviewed official government reports, analyses, and peer-reviewed articles to inform our analyses.

Key Words: Pandemic risks, Epidemics, One Health, Global Health Security, Sustainable Development

Introduction

Africa’s population is growing at an exponential rate. By 2030, when countries are expected to achieve the United Nations Sustainable Development Goals (SDGs), the population of Africa is projected to

²CDC:<https://www.cdc.gov/one-health/about/index.html> Health collaborative, plants environment

³ Salyer SJ, Silver R, Simone K, Barton Behravesh C. Prioritizing Zoonoses for Global Health Capacity Building-Themes from One Health Zoonotic Disease Workshops in 7 Countries, 2014-2016. *Emerg Infect Dis.* 2017 Dec;23(13):S55-64. doi: 10.3201/eid2313.170418. PMID: 29155664; PMCID: PMC5711306.

⁴ Woolhouse ME, Gowtage-Sequeria S. Host range and emerging and reemerging pathogens. *Emerg Infect Dis.* 2005;11:1842-7. 10.3201/eid1112.050997

significantly increase from 1.3 billion in 2020 to 2.5 billion in 2050.⁵ This demographic surge presents both opportunities and challenges for sustainable development across the continent. Over the past decade, Africa's economic growth has been hindered by a combination of factors including wars, famine, and outbreaks of diseases such as Ebola, COVID-19, malaria, HIV/AIDS, tuberculosis, pneumonia, and diarrheal diseases.⁶ Consequently, beyond the pronounced health issues, these diseases should, and must globally be seen as a development concern, affecting education and knowledge acquisition, income and social status, productivity and economic growth and other direct and indirect components of human development such as gender equality and human rights.⁷

In 2001, African leaders met in Abuja, Nigeria, and pledged to allocate at least 15% of their GDP to healthcare.⁸ However, more than two decades later, fewer African countries have met this goal. The Member States of the African Region of the World Health Organization are on average still far from meeting key health financing goals.⁹ Out-of-pocket expenditure is still higher than 40% of the total health expenditure in 20 of the 55 countries, and in 22 countries the total health expenditure does not reach even the minimal level of \$44 U.S. Dollars per capita defined by the High Level Task Force on Innovative International Financing for Health Systems (HLTF).¹⁰ Only Botswana, Rwanda and Zambia have managed to meet both the Abuja and the HLTF targets so far.¹¹ The COVID-19 pandemic has highlighted the severe impacts of weak health systems, affecting populations, economies,

⁵Sadigov R. Rapid Growth of the World Population and Its Socioeconomic Results. *Scientific World Journal*. 2022 Mar 23;2022:8110229. doi: 10.1155/2022/8110229. PMID: 35370481; PMCID: PMC8967589.

⁶ Boutayeb A. (2020) The Impact of Infectious Diseases on the Development of Africa. *Handbook of Disease Burdens and Quality of Life Measures*. 2010:1171–88. doi: 10.1007/978-0-387-78665-0_66. PMCID: PMC7120372.

⁷ Boutayeb A. (2010) The Impact of Infectious Diseases on the Development of Africa. *Handbook of Disease Burdens and Quality of Life Measures*. 2010:1171–88. doi: 10.1007/978-0-387-78665-0_66. PMCID: PMC7120372.

⁸ Karamagi H.C. Njuguna D, Kidane S.N.et. al. (2023). Financing health system elements in Africa: A scoping review. *PLoS One*. 2023 Sep 13;18(9):e0291371. doi: 10.1371/journal.pone.0291371. PMID: 37703243; PMCID: PMC10499258.

⁹ World Health Organization African Region (2020) State of Health Financing in the African Region, state-of-health-financing-afro.pdf (who.int)

¹⁰ World Health Organization African Region (2020) State of Health Financing in the African Region, state-of-health-financing-afro.pdf (who.int), pg. 20

¹¹World Health Organization African Region (2020) State of Health Financing in the African Region, state-of-health-financing-afro.pdf (who.int), pg. 20

and social structures. As the world grapples with the aftermath of this pandemic, it is crucial for nations, international organizations, and the private sector to draw useful lessons and implement strategies to mitigate future health crises. In this commentary, we highlight which factors accelerated or hindered Africa's development in the 21st century and explore why pandemics and epidemics pose threats to Africa's sustainable development.

Population Growth, Economic and Health Challenges

As mentioned, the population growth, economic impact, and health challenges, are critical factors. High population growth rates strain resources and infrastructures, including healthcare systems. Despite notable progress in some areas, the continent's economic growth has been sluggish, hindered by various factors including political instability, conflicts, and public health crises.

These health challenges are exacerbated by weak health systems, primarily due to insufficient financial resources and health workforces. Africa is disproportionately affected by acute shortages of healthcare workers compared to other parts of the world. According to the World Health Organization (WHO), Africa has the lowest density of healthcare workers globally, with an average of 2.3 healthcare workers per 1,000 population, significantly lower than the global average of 7.2 healthcare workers per 1,000 population.¹² The shortage of healthcare workers in Africa can be attributed to various factors, including emigration of skilled healthcare professionals to other regions, inadequate training and retention of healthcare workers, and limited healthcare infrastructure and resources.¹³ These challenges are further compounded by the burden of diseases such as HIV/AIDS, malaria, Mpox and now COVID-19, which require a robust healthcare workforce for effective prevention, treatment, and management.¹⁴

¹²The state of the health workforce in the WHO African Region, 2021. Brazzaville: WHO Regional Office for Africa; 2021. Licence: CC BY-NC-SA 3.0 IGO.

¹³ WHO, (2022), <https://www.afro.who.int/news/chronic-staff-shortfalls-stifle-african-health-systems-who-study>.

¹⁴ Park, J., Kang, S., Seok, D. *et al.* Barriers against and strategies for malaria control during the COVID-19 pandemic in low- and middle-income countries: a systematic review. *Malar J* 22, 41 (2023). <https://doi.org/10.1186/s12936-023-04452-2>.

Demographic Shift

The demographic shift in Africa refers to as the significant changes in the continent's population structure, particularly the rapid growth and urbanization of its population. Africa is experiencing a demographic transition characterized by declining mortality rates, increasing life expectancy, and high fertility rates.¹⁵ This shift has several implications for development, including its impact on pandemic diseases, economic growth, and overall development: First, the demographic shift in Africa can impact the spread and management of pandemic diseases. With a growing population and increasing urbanization, there is a higher risk of disease transmission in densely populated areas. Additionally, healthcare systems may face challenges in providing adequate healthcare services to the growing population. Recently, the disruption of normal legislative activities in the Kenyan capital of Nairobi by mostly young people is a clear manifestation of the economic and social issues facing the continent.¹⁶ However, a young population can also have advantages in combating diseases, as younger individuals generally have stronger immune systems. The relatively young population in Africa has been associated with lower vulnerability to severe COVID-19 illness and mortality compared to older populations.¹⁷ Second, the demographic shift in Africa presents both opportunities and challenges for economic growth. With a large and young workforce, Africa has the potential for a demographic dividend, where a productive and skilled labor force can drive economic development. However, to harness this dividend, it is essential to invest in education, skills development, job creation, and entrepreneurship. Failure to do so may lead to high levels of unemployment, social unrest, and economic stagnation.¹⁸ Third, the demographic shift in Africa has implications for overall development ensure that the benefits of demographic changes are shared equitably among all segments of society.¹⁹

¹⁵Goldstone J.A, (2022), www.hoover.org/research/africa-2050-demographic-truth-and-consequences.

¹⁶World Bank (2023) <https://www.worldbank.org/en/country/kenya/overview>

¹⁷ World Health Organization. (2020). COVID-19 pandemic response. [Online] Available at: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.

¹⁸ UN.org, Department of Economic and Social Affairs (2023), Frontier Technology Issues: Harnessing the economic dividends from demographic change | Department of Economic and Social Affairs.

¹⁹ UN.org, Department of Economic and Social Affairs (2023), Frontier Technology Issues: Harnessing the economic dividends from demographic change | Department of Economic and Social Affairs.

The impact of the demographic shift can vary across different countries and regions within Africa. Each country faces unique circumstances and challenges that require tailored approaches to address the consequences and maximize the opportunities presented by the demographic shift. In addition to these demographic shifts, epidemic diseases pose even more threats to the continent's overall development.

Impact of Epidemics (Ebola, Mpox and COVID-19)

The 2014-2016 Ebola outbreak in West Africa and the 2020 COVID-19 pandemic and ongoing Mpox outbreaks have had significant economic and social impacts on the continent of Africa, thereby affecting the attainment of the Sustainable Development Goals (SDGs).²⁰ In terms of economic impact, these outbreaks have led to severe disruptions in various sectors. During the Ebola outbreak, the most affected countries such as Sierra Leone, Liberia, and Guinea experienced a decline in economic growth as trade, agriculture, and tourism were severely affected. More than 28,000 cases and 11,000 deaths were reported from these 3 most affected countries.^{21,22} The closure of borders, travel restrictions, and fear of infection led to a decline in foreign direct investment and a contraction in economic activities. Similarly, the COVID-19 pandemic has caused economic shocks across the continent, with countries like Liberia, Ghana, South Africa, Nigeria, and Kenya experiencing a contraction in GDP and rising unemployment rates.²³ Lockdown measures reduced international trade, and disruptions in supply chains have adversely affected sectors such as tourism, manufacturing, and agriculture.²⁴

²⁰ United Nations. (2021). Sustainable Development Goals. [Online] Available at: <https://sdgs.un.org/goals>.

²¹ Den Boon S, Marston BJ, Nyenswah TG, Jambai A, Barry M, Keita S, Durski K, Senesie SS, Perkins D, Shah A, Green HH, Hamblion EL, Lamunu M, Gasasira A, Mahmoud NO, Djingarey MH, Morgan O, Crozier I, Dye C. Ebola Virus Infection Associated with Transmission from Survivors. *Emerg Infect Dis*. 2019 Feb;25(2):249-255. doi: 10.3201/eid2502.181011. Epub 2019 Feb 17. PMID: 30500321; PMCID: PMC6346469.

²² World Health Organization. Ebola situations report 30 March 2016. [cited 2016 Apr 11] <http://apps.who.int/ebola/current-situation/ebola-situation-report-30-march-2016>.

²³ World Bank (2023) <https://www.worldbank.org/en/country/kenya/overview>.

²⁴ Guan, D., Wang, D., Hallegatte, S. *et al*. Global supply-chain effects of COVID-19 control measures. *Nat Hum Behav* 4, 577-587 (2020). <https://doi.org/10.1038/s41562-020-0896-8>.

On the social front, both outbreaks have exacerbated existing challenges and inequalities. During the Ebola outbreak, affected countries witnessed a significant loss of human lives and social economic activities were affected, leading to social disruptions and increased vulnerability. The outbreak strained healthcare systems, leading to a reduced capacity to address other health issues, such as maternal and child health, immunizations, malaria, HIV/AIDS, and TB. Similarly, the COVID-19 pandemic has highlighted the existing inequalities in access to healthcare and basic services. Vulnerable populations, including women, children, and those living in poverty, have been disproportionately affected. For example, in countries like Liberia, Guinea, Ghana, South Africa, and Nigeria, the pandemic has exacerbated social inequalities and increased food insecurity.²⁵

Significant lessons were learned from the Ebola epidemic. Governments in Africa have played a crucial role in responding to these outbreaks and mitigating their impacts. For instance, during the Ebola outbreak, the governments of Sierra Leone, Liberia, and Guinea, with international support, implemented emergency response measures, including the deployment of healthcare workers, establishment of treatment centers, and public awareness campaigns.²⁶ These efforts helped to contain the outbreak and restore economic stability. Similarly, during the COVID-19 pandemic, governments across the continent have implemented various measures, including lockdowns, testing and contact tracing, and economic stimulus packages, to mitigate the spread of the virus and support affected populations. For example, in Nigeria, Egypt, Senegal, South African government implemented a comprehensive social relief and economic support package to provide income support and address food insecurity.²⁷

However, the economic and social impacts of these outbreaks have posed significant challenges to the attainment of the SDGs in Africa. The disruptions in economic growth, healthcare systems, and social services have

²⁵ Khine MM, Langkulsen U. The Implications of Climate Change on Health among Vulnerable Populations in South Africa: A Systematic Review. *Int J Environ Res Public Health*. 2023 Feb 15;20(4):3425. doi: 10.3390/ijerph20043425. PMID: 36834118; PMCID: PMC9959885.

²⁶ WHO (2020) <https://www.who.int/news-room/feature-stories/detail/ebola-then-and-now>.

²⁷ Khine MM, Langkulsen U. (2023) The Implications of Climate Change on Health among Vulnerable Populations in South Africa: A Systematic Review. *Int J Environ Res Public Health*. 2023 Feb 15;20(4):3425. doi: 10.3390/ijerph20043425. PMID: 36834118; PMCID: PMC9959885.

hindered progress in areas such as poverty eradication, good health and well-being, and gender equality. For instance, the economic downturn caused by the COVID-19 pandemic has pushed millions of people into poverty, reversing progress made in poverty reduction effort. These outbreaks have also worsened gender inequalities, with women disproportionately affected by job losses, increased caregiving responsibilities, and limited access to healthcare services.²⁸ Infectious diseases and climate issues are interwoven. African climate is replete with complexity and marvels. The Sahara is the world's largest desert with the deepest layer of intense heating anywhere on Earth.²⁹

Climate Change and Health

Africa is particularly vulnerable to the impacts of climate change due to its geographical location, high dependence on agriculture, and limited adaptive capacity. According to the Intergovernmental Panel on Climate Change (IPCC),³⁰ Africa is projected to experience increased temperatures, changing rainfall patterns, more frequent and intense droughts, and rising sea levels. As previously discussed, infectious diseases pose a significant threat to public health in Africa, especially those that are influenced by severe climatic conditions. For instance, vector-borne diseases like malaria, dengue fever, and Zika virus are strongly influenced by temperature and precipitation patterns.³¹ Rising temperatures and changing rainfall patterns can expand the geographic range of disease vectors, such as mosquitoes, leading to increased transmission and higher disease burden. Thus, waterborne diseases like cholera and diarrheal diseases are closely linked to climate conditions. Extreme weather events, such as floods and storms, can contaminate water sources, leading to outbreaks of these diseases.

To address the health challenges posed by climate change, it is crucial to adopt climate-resilient health systems. This involves strengthening health infrastructure, improving surveillance and early warning systems, enhancing emergency preparedness and response capabilities, and

²⁸ United Nations Foundation (2023) <https://unfoundation.org/blog/post/the-shadow-pandemic-how-the-covid-19-crisis-is-exacerbating-gender-inequality/>.

²⁹ BBC: <https://www.bbc.com/news/world-africa-50726701>.

³⁰ Intergovernmental Panel on Climate Change. (IPCC). (2021). Sixth Assessment Report.

³¹ Rocklöv, J., Dubrow, R. (2020) Climate change: an enduring challenge for vector-borne disease prevention and control. *Nat Immunol* **21**, 479–483 (2020). <https://doi.org/10.1038/s41590-020-0648-y>.

promoting climate-sensitive healthcare practices. For example, integrating climate information into disease surveillance systems can help predict and respond to disease outbreaks. Implementing climate-resilient infrastructure, such as improved water and sanitation systems, can reduce the risk of waterborne diseases. Additionally, promoting sustainable agricultural practices and diversifying livelihoods can enhance resilience to climate-related health impacts, incorporating a One Health approach is a critical vehicle.

Table 1: Impact of Climate Change on Health

| Climate Factor | Health Impact | Diseases Affected |
|------------------------|--------------------------------------|-----------------------------|
| Rising Temperatures | Increase vector-borne diseases | Malaria, Dengue Fever |
| Extreme Weather Events | Displacement and waterborne diseases | Cholera, Diarrheal diseases |
| Air Pollution | Respiratory diseases | Asthma, COPD |

The One Health Approach

Implementing the One Health approach requires collaboration and coordination among multiple sectors, including human health, animal health, environmental health, agriculture, and wildlife management. By breaking down silos and fostering interdisciplinary collaboration, countries can effectively address the complex and interconnected nature of health challenges. For example, during the COVID-19 pandemic, collaboration between public health agencies, veterinary services, and environmental organizations has been crucial in understanding the zoonotic origins of the virus and implementing preventive measures. Similarly, addressing the health impacts of climate change requires collaboration between health authorities, meteorological services, and agricultural sectors to develop integrated strategies for climate adaptation and resilience. The “One Health” approach is a collaborative and multi-sectoral strategy that aims to achieve optimal health outcomes by recognizing the interconnectedness of people, animals, plants, and their shared environment.³² This approach is particularly crucial for combating emerging infectious diseases, as over 60% of these diseases are zoonotic in origin, meaning they can be transmitted

³² Centers for Disease Control and Prevention. (2021). One Health Basics. [Online] Available at: <https://www.cdc.gov/onehealth/basics/index.html>

between animals and humans.³³ Implementing robust disease surveillance systems, early warning mechanisms, and climate action plans are vital components of the One Health approach.³⁴

Robust disease surveillance systems and early warning mechanisms are essential components of the One Health approach. These systems enable the timely detection, reporting, and response to emerging infectious diseases and other health threats. By integrating data from human, animal, and environmental health sectors, countries can identify patterns and trends, assess risks, and implement preventive measures. For instance, during the Ebola outbreak in West Africa, early warning systems that involved community engagement, rapid diagnostic tests, and real-time data sharing helped in early detection and containment of the disease.³⁵ Similarly, in the context of climate change, monitoring and surveillance of vector-borne diseases, such as malaria and dengue fever, can help predict and respond to outbreaks in a timely manner.

Additionally, incorporating climate action plans into the One Health approach is crucial for addressing the health impacts of climate change. These plans should include measures to mitigate greenhouse gas emissions, promote climate-resilient healthcare systems, and enhance adaptive capacity. For example, countries can develop climate-resilient infrastructure, such as energy-efficient healthcare facilities and sustainable water and sanitation systems, to reduce vulnerability to climate-related health risks. Also, integrating climate information into public health planning and decision-making processes can help identify and address climate-sensitive health issues. By implementing climate action plans, countries can build resilience to climate change and protect the health and well-being of their populations.

Figure 1 below describes “One Health” approaches that are particularly relevant to emerging infectious diseases, of which greater than

³³ Centers for Disease Control and Prevention. (2021). One Health Basics. [Online] Available at: <https://www.cdc.gov/onehealth/basics/index.html>

³⁴ Centers for Disease Control and Prevention. (2021). One Health Basics. [Online] Available at: <https://www.cdc.gov/onehealth/basics/index.html>

³⁵ Buseh A.G, Stevens P.E, Bromberg M., Kelber S.T (2015). The Ebola epidemic in West Africa: challenges, opportunities, and policy priority areas. *Nurs Outlook*. 2015 Jan-Feb;63(1):30-40. doi: 10.1016/j.outlook.2014.12.013. Epub 2014 Dec 17. PMID: 25645480; PMCID: PMC7111626.

60 percent are zoonotic, and to diseases that have a strong link to environmental conditions (e.g., water- and vector-borne diseases).³⁶ Many of these diseases spill over to humans through a complex and multi-step process.³⁷

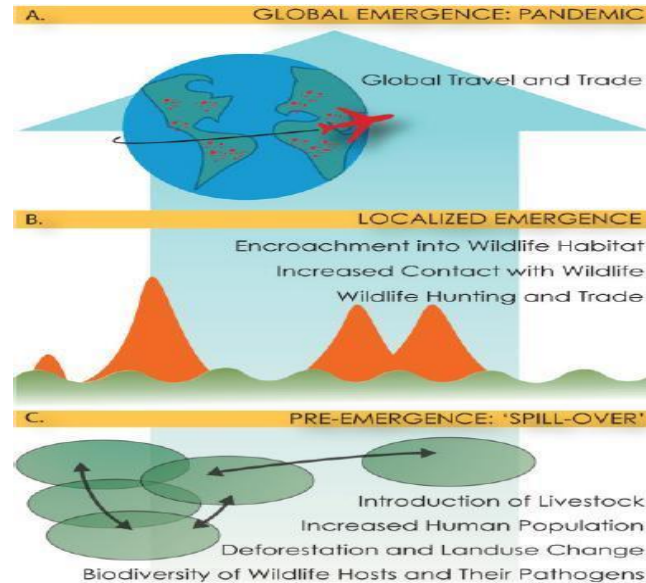


Figure 1:
Figurative description of the multi-scale, multi-step process of pandemic emergence³⁸

Source: Bogich et al., 2012

Conclusion

To achieve the Sustainable Development Goals (SDGs) by 2030, African governments must adopt a comprehensive strategy that addresses the complex challenges aggravated by epidemics. The COVID-19 pandemic

³⁶ National Academic of Sciences, Engineering, and Medicine (2022) *Public Health lessons for non-vaccine influenza interventions: Looking past COVID-19*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26283>, page 23

³⁷ National Academic of Sciences, Engineering, and Medicine (2022) *Public Health lessons for non-vaccine influenza interventions: Looking past COVID-19*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26283>, page 23.

³⁸ National Academic of Sciences, Engineering, and Medicine (2022) *Public Health lessons for non-vaccine influenza interventions: Looking past COVID-19*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/26283>, page 23.

has starkly revealed the vulnerabilities within Africa's healthcare systems and highlighted the urgent need for improvements. For example, the pandemic's strain on healthcare infrastructure in countries like South Africa and Nigeria underscores the necessity for increased investment in health facilities and technologies. Strengthening healthcare systems must go hand-in-hand with economic diversification and social protection. This involves not only improving healthcare infrastructure and access to quality education but also fostering gender equality and sustainable economic growth.

A practical approach to improving life expectancy in Africa involves addressing fundamental health determinants. For instance, investing in primary healthcare systems, as demonstrated by Rwanda's successful integration of community health workers, can significantly enhance healthcare delivery. Prioritizing the training and retention of healthcare professionals is crucial, as evidenced by Ethiopia's Health Extension Program, which has expanded healthcare access in rural areas. Additionally, improving access to essential medicines and vaccines, like the rollout of COVID-19 vaccines across the continent, was vital for better health outcomes.

Moreover, addressing social determinants of health such as poverty, gender inequality, and inadequate sanitation is essential. For example, Kenya's efforts in improving access to clean water through the "Water for Health" initiative highlight the importance of tackling these issues to enhance overall health. Economic policies should also focus on job creation and poverty reduction, as seen in the success of Ghana's industrialization and entrepreneurship programs.

To redefine Africa's future and achieve the SDGs by 2030 while meeting the goals of Africa Agenda 2063, nations must implement specific strategies. Strengthening healthcare systems involves increasing investments in infrastructure and workforce, as demonstrated by the expansion of healthcare facilities in Ethiopia. Enhancing disease surveillance and early warning systems is crucial; for example, the establishment of the Africa CDC's Regional Collaborative Platform improves early detection and response capabilities. Implementing the One Health approach, which integrates human, animal, and environmental health, is exemplified by the efforts of the African Union's InterAfrican Bureau for Animal Resources. Climate action must be a priority; developing climate-resilient health strategies, as seen in Kenya's climate-smart agriculture initiatives, can

mitigate the impact of climate change on public health. Lastly, promoting economic diversification and growth, as illustrated by Nigeria's push towards diversifying its economy away from oil dependency, is essential for long-term development.

In sum, overcoming Africa's development challenges requires a multi-faceted approach that integrates healthcare improvements, economic diversification, and social protection. By adopting targeted strategies and fostering collaboration among governments, international organizations, and the private sector, Africa can enhance resilience to health threats, improve life expectancy, and achieve sustainable development. Through a holistic and integrated approach, the continent can build a healthier, more resilient, and sustainable future for its people.

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Expanding Social Protection in Africa: A Menu of Early Policy Ideas

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Abstract

Since the turn of the century, Sub-Saharan Africa (SSA) has recorded high levels of economic growth. Between 2000 and 2022, economic growth averaged 4.0 percent per annum (World Bank, 2023)– leading to a systematic decline in both absolute and relative levels of household income poverty. Hence, data shows that the Headcount Index of poverty decreasing from 56.5% in 2000 to 34.9% in 2019 (World Bank, 2023). Despite this progress, however, the number of individuals in SSA who experienced extreme poverty rose from 379 million in 2000 to 391 million in 2019, due both to population expansion and the slowdown in economic growth (World Bank, 2023). Hence, the early period of inclusive growth had given way to more moderate growth and hence reduction in poverty levels, amidst continuing population expansion in the region. Furthermore, 23 (82.1%) of the 28 countries with extreme poverty rates of above 30.0 percent are located within SSA (Aikins & Mclachlan, 2022).

Given in part the dominance of SSA in any discussion around global poverty challenges – possibly the core aim contained within the SDGs – the expansion and integration of more comprehensive social protection systems in Africa must remain a high-level priority. Needless to say, a well-targeted social protection system lies at the heart of any anti-poverty, pro-growth agenda for the region. On this note, we hope to provide a brief overview of social protection spending and coverage in Africa. This is followed by a suggested set of policy options around what we have termed ‘traditional’ and new infrastructure for social protection. We then consider two social policy pivots that may be possible in the form of informal sector

coverage and also a post-Covid 19 set of interventions. We conclude with key observations of financing options in terms of both additional tax revenue options and redistribution within existing fiscal envelopes for African governments.

Keywords:

Introduction

Since the turn of the century, Sub-Saharan Africa (SSA) has recorded high levels of economic growth. Between 2000 and 2022, economic growth averaged 4.0 percent per annum (World Bank, 2023) – leading to a systematic decline in both absolute and relative levels of household income poverty. Hence, data shows that the Headcount Index of poverty¹ decreasing from 56.5% in 2000 to 34.9% in 2019 (World Bank, 2023). Despite this progress, however, the number of individuals in SSA who experienced extreme poverty² rose from 379 million in 2000 to 391 million in 2019, due both to population expansion and the slowdown in economic growth (World Bank, 2023). Hence, the early period of inclusive growth had given way to more moderate growth and hence reduction in poverty levels, amidst continuing population expansion in the region. Furthermore, 23 (82.1%) of the 28 countries with extreme poverty rates of above 30.0 percent are located within SSA (Aikins & Mclachlan, 2022).

Given in part the dominance of SSA in any discussion around global poverty challenges – possibly the core aim contained within the SDGs – the expansion and integration of more comprehensive social protection systems in Africa must remain a high-level priority. Needless to say, a well-targeted social protection system lies at the heart of any anti-poverty, pro-growth agenda for the region. In this note, we hope to provide a brief overview of social protection spending and coverage in Africa. This is followed by a suggested set of policy options around what we have termed ‘traditional’ and new infrastructure for social protection. We then consider two social policy pivots that may be possible in the form of informal sector coverage and also a post-Covid 19 set of interventions. We conclude with key observations of financing options in terms of both additional tax revenue options and redistribution within existing fiscal envelopes for African governments.

¹ \$2.15 a day (2017 PPP).

² At a poverty line defined at \$2.15 a day (2017 PPP) by the World Bank.

Social Protection Spending in Africa³

The expansion of the social protection⁴ system in SSA has both strong broad political support and awareness in terms of being key to the region's socio-economic development aspirations. In this respect, the African Union's Agenda 2063 framework calls for countries to raise their spending on social protection to 5.0% of GDP by 2063, from the current 2.0% (OECD, 2017) and to extend social protection coverage into informal and rural areas. In addition, the Abidjan Declaration, which was signed by ILO constituents at the African Regional Meeting in 2019, called for SSA countries to progressively extend social protection coverage (ILO, 2020). However, despite the political will to extend social protection, SSA countries continue to lag the rest of the world. In Figure 1, spending on social protection as a share of GDP in SSA stands at 2.1% - which is almost three times below that of the MENA region - the next lowest social protection spending region in the world. On average, the world spends about 12.9% of GDP on social protection, with only two regions: Americas and Europe and Central Asia exceeding this average. Overall, a clear pattern emerges from Figure 1: Richer countries spend a greater proportion of their revenue on social protection programs than poorer countries.

³Whilst the paper covers formal, government mandated social protection - there is a recognition that traditional, informal social protection forms a part of livelihood strategies for African households in urban and rural areas. The latter is not covered here but deserves a particular mention in the African social protection context.

⁴Social protection can be defined according to the ILO here as those set of interventions providing benefits to individuals on the basis of risks faced across the life cycle (e.g., unemployment, disability, maternity, etc.) and to those suffering general poverty and social exclusion. Social protection schemes can be financed through contributions from wages (social insurance) or through general taxation (social assistance).

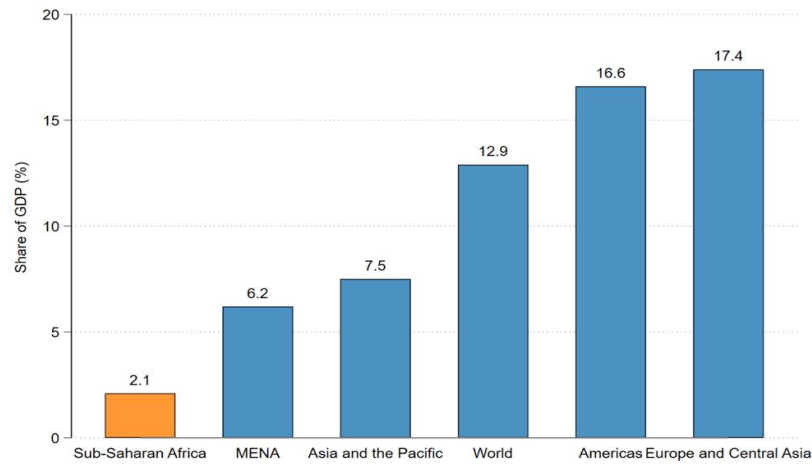
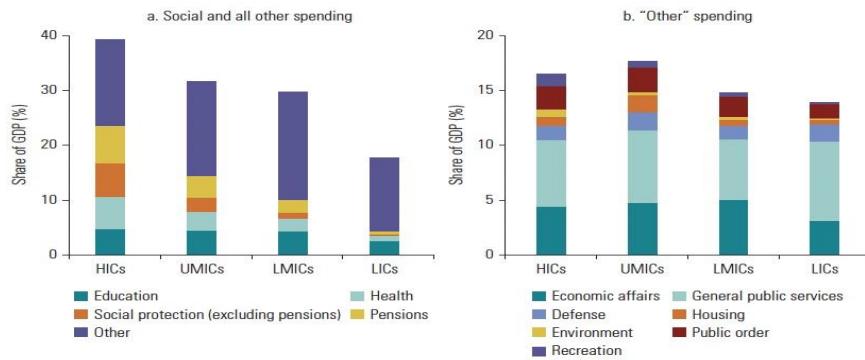


Figure 1: Public Expenditure on Social Protection (excl. healthcare) as a share of GDP in 2020

Notes: The Comoros, Eritrea, Gabon, Somalia and South Sudan were excluded from the ‘Sub-Saharan Africa’ category due to data unavailability.

Source: ILO World Social Protection Database, own calculations.

However, it is also true that poorer countries in general tend to prioritize away from social spending relative to other fiscal allocations. The data in Figure 2 for example shows that Social protection (excluding pensions) averages 1%, 4%, 8% and 15% in LICs, LMICs, UMICs and HICs respectively – whilst pensions average 3%, 8%, 13% and 17%, respectively.



Sources: Sesa and Wai-Poi, forthcoming, based on data from World Bank, BOOST Open Budget Portal, <https://www.worldbank.org/en/programs/boost-portal>; International Monetary Fund, Government Finance Statistics database, <https://data.imf.org/gfs>.
 Note: The figure shows each category of public expenditure as a percentage of GDP, aggregated by income group. ‘Other’ in panel a is defined residually as the difference between total spending and social spending. Panel b shows ‘Other’ categories. For LMICs, there is a gap between the sum of explicit ‘Other’ categories and the implied ‘Other’ in panel a. GDP = gross domestic product; HICs = high-income countries; LICs = low-income countries; LMICs = lower-middle-income countries; UMICs = upper-middle-income countries.

Figure 2: Social and ‘Other’ Spending, By Income Classification

Health spending averages 6% of total spending in LICs, 8% in LMICs, 11% in UMICs, and 15% in HICs. Put differently, whilst LICs spend 40% of the average HIC on health, they only spend 6% of what the average rich country spends on social protection. At one level this gap could reflect either a stage of development preference (hence education and health spending taking precedence over social protection) for LICs or indeed it could reflect a real priority of other spending (such as product subsidies as we show below) over social protection allocations.

Further analysis shows that SSA countries spend a lower proportion of their GDP on social protection than other countries within the same income group. The median spend on social protection programmes in Lower Middle Income (LMI) SSA countries amounts to only 1.7% of GDP, which is 1.2 % lower than their LMI counterparts.

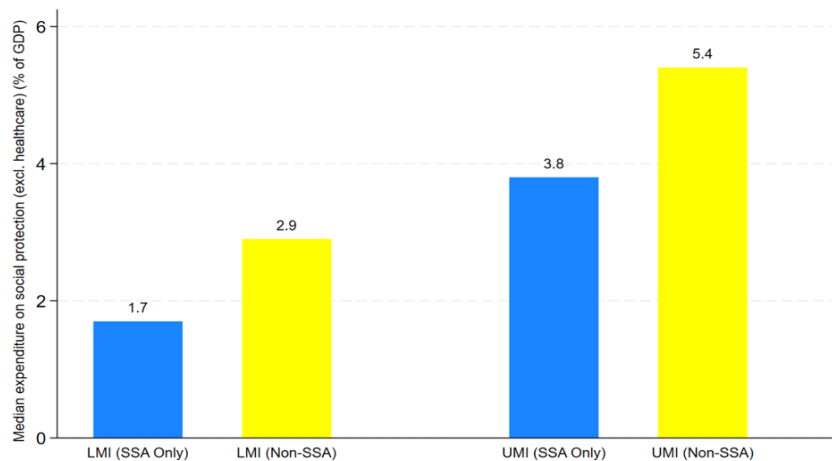


Figure 3: Median Social Protection Spending (as a Proportion of GDP) by Income and Regional Classification, 2020

Note: LMI = Lower Middle Income; UMI = Upper Middle Income.

Source: ILO World Social Protection Database, own calculations.

The gap between SSA and non-SSA Upper Middle Income (UMI) countries is wider, at 1.6 percentage points. This evidence suggests that it is not only the lack of wealth which constrains social protection expenditure in SSA, but also SSA-specific factors.

Ultimately the above suggests firstly that the SSA region spends less than other regions of the world on social protection – and secondly that we cannot ascribe this purely to the disproportionate share of low income

countries in the region. Other low and middle income countries not in SSA, spend more at the median on social protection. Secondly though, it does seem that within the envelope of social policy spending – social protection is least valued by low income country governments. As a relative ratio, low income country governments are spending much more on health and education than they are on social protection.

Building The Baseline: Traditional and New Infrastructure for SP

A crucial lever in the development of a comprehensive social protection system is the infrastructure which supports it. Without the required infrastructure, the purpose and goals of a social protection system will not be achieved, even if the programs have been fully funded. The basic tenets - what we term “traditional infrastructure” - of a fully-fledged social protection program are the following: First, a social protection program requires a political figurehead to provide political support: This could be through either the creation of a ministry dedicated to social protection or by creating social protection programmes within various departments, such as education or health (Beegle et al., 2018). Along with a political figurehead, there needs to be an agency - such as for example the case of South Africa’s ‘South Africa Social Security Agency’ (SASSA)- which can carry out the complex administration required to run a social protection system. In addition to setting up the various institutions, it is important that suitably qualified staff are hired. Typically, key features of a social protection system involve program targeting, registration, payments, case management and grievance mechanisms. This requires staff who can operate the relevant IT systems, understand and tweak certain programs (such as changing the threshold for social grant payments), respond to queries from citizens and manage inter-departmental relationships, especially those with the Ministry of Finance, which maintains the ultimately fiscal responsibility for annual social protection allocations. In many African and low-income country settings, such basic traditional infrastructure does not exist or indeed is very weak. Hence, any policy programme designed to expand or set up social protection systems must ensure that such standard infrastructure – particularly in operational areas such as registrations, payments and case management – is in place and appropriately staffed in tandem with a fiscal allocation for disbursement.

Table 1 indicates very clearly that many African governments fail the test of ‘traditional’ infrastructure. Hence, of the 17 economies in the sample

only two for example, have an existing social register. Notably the sample includes a fair number of middle income countries such as Zambia, Namibia, Botswana and Morocco. Only two economies even have a dedicated national population register.

Table 1: Existing Institutional Readiness for National Identification System: Selected African Economies

| | Autonomous NID Agency | Same Agency for CR/NID | NPR | Social Register | NID/Voter Register Link |
|---------------|-----------------------|------------------------|--------------|------------------|---|
| Botswana | no | Yes | implementing | planned | VR generated from NID |
| Cameroon | no | no | planned | no | separate (VR requires NID) |
| Chad | no | no | no | no | separate |
| Côte d'Ivoire | no | Yes | no | no | separate (VR requires NID or cert. of nat'l) |
| DRC | n/a* | n/a | no | no | n/a |
| Ethiopia | n/a* | no | no | no | n/a |
| Guinea | n/a* | n/a | no | no | n/a |
| Kenya | no | no | implementing | no | separate (VR requires NID) |
| Liberia | planned | no | no | no | n/a |
| Madagascar | no | no | no | no | separate |
| Morocco | no | no | no | no | separate |
| Namibia | no | Yes | Yes | no | MHAL provides info on deceased voters (VR requires NID, SWA card, or birth cert.) |
| Nigeria | Yes | no | no | planned (NSSNP) | separate |
| Rwanda | Yes | no | Yes | Yes (Ubudehe) | VR generated from NID |
| Sierra Leone | semi, planned full | planned | planned | planned (NASSIT) | planned integration |
| Tanzania | no | no | no | Yes (TASAF) | separate (VR will be used to extend NID) |
| Zambia | no | Yes | no | no | separate (VR requires NID) |

Notes: CR = civil registration; NID = national ID; NPR = national population register. *The DRC, Ethiopia, Guinea, and Liberia do not currently have national ID cards. In Ethiopia, *kebele* (neighborhood or ward) cards are issued locally rather than by a centralized agency; however, a centralized NID is planned. The DRC technically has a national ID agency (ONIP), however it is non-functional. In Madagascar, both civil registration and national ID cards are technically under the purview of the Ministry of Interior, however they are managed and executed separately by municipal (CR) and district (NID) staff. Source: Summarized from IMSA reports.

Source: World Bank (2017)

What is also important about the above data is that such national identification systems are both a fundamental pre-requisite for any national system of social protection – and indeed social policy in general. Their dearth in many African economies cannot be ascribed to high levels of cost – given their relatively modest fiscal outlays compared with other forms of social policy and other expenditure items. In many ways then they could reflect a lack of appreciation of the importance to optimal and equitable social policy of building traditional infrastructure contained in a national register or identification system.

While traditional infrastructure is the bedrock of a functional social protection system, the effectiveness of such a system could be substantially

improved through the innovative use of technology. If one takes the example above of producing a representative social registry - technology through the use principally of mobile cellular phones - can of course be exploited to more rapidly and cost effectively update and maintain a national register. Essentially, the cell phone acts as a unique ID for everyone. As such, this type of registration can be used as the critical first-step developing biometrics infrastructure for social protection. Such systems have already been set-up in parts of SSA - albeit at a very small scale. We provide below two such examples, one from the Democratic Republic of Congo (DRC) and the other from Togo. For the DRC, during the covid-19 pandemic, the government designed a large-scale, emergency social protection programme for Kinsasha's poor (Zeufack et al, 2022). The lack of administrative data on identifying poor people, combined with a lack of pre-existing social protection programs meant that the government needed to create an innovative program. Using geo-spatial analysis as well as obtaining anonymised data from cellphone operators, the program paid 100 000 subscribers within 3 months of the initiation of the program. In Togo, the *Novissia* program was also designed as a response to the covid-19 pandemic. Individuals registered through dialling a number and then providing key information through an Unstructured Supplementary Service Data (USSD) form (Zeufack et al., 2022). Using a combination of machine learning techniques, geographical areas and individuals residing within those areas were ranked according to their estimated level of relative wealth. Once the beneficiaries had been identified, they were paid through mobile money accounts.

While these two examples illustrate the power of innovation and technology in providing a rapid response to an economic shock, it is important to note that the greater use of technology may be exclusionary. For example, in the West Africa Economic and Monetary Union, 38.1% of urban residents have a mobile broadband connection, while the corresponding figure for rural residents is only 7.1% (Rodriguez-Castelan et al., 2021). If these constraints are not considered when making policy choices, then expanding social protection could prove to be more exclusionary than before the implementation of a technological solution.

Ultimately though it is critical to note that even prior to discussing the financial implications of a national upscaling of social protection systems - the simple prior task of setting up traditional infrastructure aided by the use of appropriate technology remains essential as a precondition for optimal

social protection in low income country settings. At present, far too many Sub-Saharan African economies remain in deficit when considering such baseline infrastructure.

Two Social Policy Pivots: The Informal Sector and Post-Covid Support

A key facet of a more broad-based social protection system is extending coverage to a greater proportion of the population through the traction ensured via focusing on groups of individuals – such as pensioners, children and so on. In SSA, the current albeit limited social protection systems tend to focus on the chronically poor in rural areas (Zeufack et al., 2022). In turn, contributory-based social protection schemes are limited to public and private sector formal employees in SSA (Güven, 2019). Yet, data shows that the majority of the employed in Africa tend to those workers in Agriculture (covered by rural safety nets and/or rural subsidy schemes should they exist) or in urban informal employment. For example, over the period 1990-2018 close to 20% of all jobs created in Africa emanated from the informal sector (Bhorat *et al*, 2017).

However, extending social protection programs to the urban and rural informal sector would require several creative policies, which demonstrate the understanding of the precariousness nature of urban informal employment. For example, a product could be designed which allows flexible contributions and access to a portion of savings on a short-term basis, in order to provide a degree of income smoothing in times of economic shocks (Zeufack et al., 2022). Access to short-term savings is key to building trust between urban informal sector workers and the government, as demonstrated in Ghana. When Ghana set up their informal sector scheme, it allowed workers to access up to 50% of their savings after 6 months (Güven, 2019). When the 6 months had passed, many of the workers decided to access their savings. However interestingly, many returned their savings back to the bank the next day, suggesting that the six-month threshold was simply a test for many workers - to determine whether they could access their savings (Güven, 2019). Short-term savings in the Ghana intervention, was also able to be used as collateral to access business loans (Güven, 2019).

Ultimately though, the Ghanaian example provides an early pilot for how a contributory based system of social protection could be built for a large cohort of African workers – who are in urban informal employment. There are a number of additional design features which could be bolted onto such

a social protection scheme for the informal sector. These included for example the government partially subsidises the scheme, by for example, matching the level of contributions made by the individual or bundling other services such as health insurance, life insurance or crop insurance (Zeufack et al., 2022). The bundling of services in this manner could be potentially beneficial for the government, which may experience efficiency gains if individuals are enrolled in more than one scheme, as the collection of contributions would be received on the same day (Güven, 2019). Finally, governments could increase take up of multiple services through automatic enrolment using mobile phone data with the easy option of opting out, for those who do not wish to contribute to multiple schemes.

Covid-19 Social Policy as a Model for the Future

The Covid-19 pandemic represented a substantial economic shock for countries across the world. The forced closure of businesses meant that many people lost their jobs. In addition, individuals who were unemployed before the pandemic had little chance of obtaining a job when the restrictions were in place, as many businesses were not hiring additional employees. As a result, there was a substantial increase in the number of individuals who required financial assistance from the government. Furthermore, governments needed to respond rapidly, as the negative economic effects were immediately felt. We briefly discuss two initiatives - the expansion of Ghana's Livelihood Empowerment Against Poverty (LEAP) program and the introduction of South Africa's Covid-19 Special Relief of Distress (SRD) grant to examine whether such models could serve as a basis for expanding social protection in the future.

The LEAP program began in 2008 and was set up as an unconditional cash transfer program for the poorest families in Ghana (UNICEF, 2021). The primary aim of this program was to increase consumption and access to key services. With the onset of the Covid-19 pandemic, the Ghanaian government realised that in addition to the unfolding health crisis, an economic crisis was also occurring. In response, with the help of the World Bank and UNICEF, the Ghanaian government aided 332 000 vulnerable households, which amounted to 1.45 million people (UNICEF, 2021). The extraordinary payments made to vulnerable households amounted to four months' worth of social protection payments (UNICEF, 2021). The rapid expansion was possible by the use of Ghana National Household Registry data combined with the Management Information System (MIS) from the LEAP programme.

Furthermore, although initial payments made to recipients were made at bank branches, from December 2020, payments were made through a mobile money platform, which also allowed the government to communicate with recipients and monitor payments (UNICEF, 2021).

Two major lessons were learnt from this experience (UNICEF, 2021): Firstly, the degree of functionality of social protection systems affected the response. The LEAP programme had a well-developed MIS, identified the most vulnerable people well and the staff were suitably qualified at district and national level. Despite these strong operational systems, the speed at which legislative changes could be made to the LEAP were slow, and some politicians did not have a good understanding of the role of social protection in responding to the covid-19 response. The second lesson learnt is the need for more dynamic data to be made available (UNICEF, 2021). While the available data used to identify vulnerable households is good, it was unable to swiftly identify additional households who become vulnerable as a result of a crisis, as the available data is based off household surveys. The implication of this is that some vulnerable households are likely to be excluded from receiving social protection payments - which occurred with the initial emergency payment.

In April 2020, a special Social Relief of Distress (SRD) grant was launched in South Africa - worth R350 per month - which targeted unemployed adults and who were not receiving money from other social protection programs in South Africa (Bhorat, Kohler & De Villiers, 2023). As figure 4 below illustrates, although the SRD was initially set to run for 6 months, it has been extended multiple times, and is now set to run until March 2024 (South African Government News Agency, 2022). Due to the strict lockdown at the time, the government was forced to come up with innovative technological solutions with regards to the application process. Three channels were designed for potential applicants: a USSD-based system from Vodacom, a WhatsApp channel run by the government and a special website run by an external services provider (Gronbach, Seekings & Megannon, 2022). Successful applicants could be paid by electronic transfer to a bank account, through a mobile number registered in the applicant's name or at a Post office facility. The SRD was highly successful, with over 6 million new recipients being brought into the social protection system (Bhorat, Kohler & De Villiers, 2023). Importantly, it was well-targeted, with 60% of the recipients being unemployed and the majority of the remainder being informally employed (Bhorat, Kohler & De Villiers, 2023).

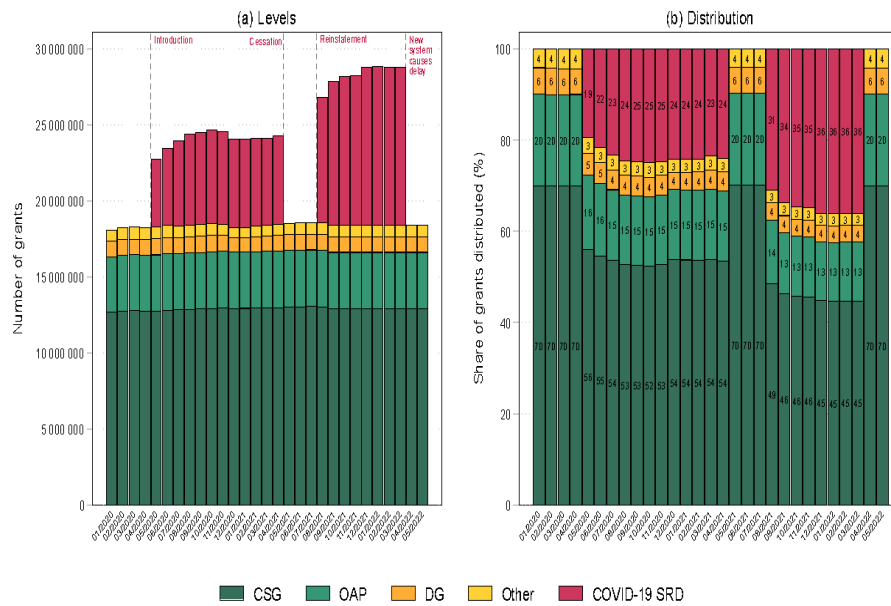


Figure 4: Distribution of Cash transfers by Grant type, South Africa: January 2020 – May 2022

Source: Borhat, Kohler & De Villiers (2023)

The introduction of the SRD grant highlighted a number of successes and challenges in the social protection system (Gronbach, Seekings & Megannon, 2022). In terms of successes, the program highlighted the relative ease with which a social protection could be scaled up efficiently. In addition, the comprehensive databases that the government kept for other social programs (such as UIF) meant that beneficiaries did not have to undergo an exhaustive registration process. Furthermore, the creation of the SRD grant was supported by a coalition of civil society and influential political actors, which created the right political environment to provide measures. Lastly, the digital registration process was a departure from the paper-based system used by the relevant ministry to register new applicants.

Ultimately though on the basis of both a consideration of a new large, accessible group of workers (such as the informal sector) – and through the response forced on governments by a pandemic – social policy pivots are possible. In these two examples for Ghana and South Africa, governments in Africa have potentially laid the groundwork to both deepen existing social

protection systems or potentially to use these pivot experiences as a basis for enhanced social protection elsewhere in their economies.

Financing Social Protection in Low-Income Settings: Brief Observations

One of the primary challenges that SSA countries face in expanding and self-funding their current social protection systems is a lack of government revenue. Some SSA countries are unable to finance any of their social protection requirements through domestic revenue, as is evident in Figure 5. For example, the data shows that at least five SSA countries are entirely dependent on donor funding to finance their social protection programs. The average proportion of donor financing in SSA is 55.0% (Beegle et al., 2018). Going forward, this dependency on foreign donors needs to be reduced if a comprehensive social protection system is going to be realised in SSA countries. Not only is foreign donor financial support likely to be capped – thereby preventing further expansion – but also, foreign donors are likely to have their own biases in terms of their preferred programs that they would like to implement, which may not be the optimal solution for that country.

An alternative to relying on donor financing is to create an enabling environment which generates a high level of economic growth for an extended period. Associated with high levels of economic growth is higher levels of business activity, more individuals are employed and higher incomes. All these effects combined will lead to an increase in tax revenue because there is a greater amount of company revenue and personal income to tax. The additional tax revenue could potentially be used to initiate the creation of a self-funding social protection system. We turn later on below to alternative tax revenue options not contingent on rising GDP levels.

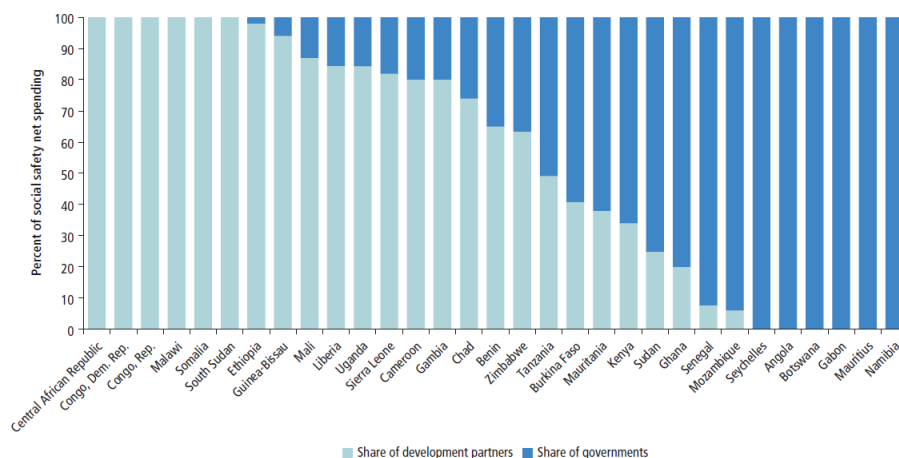


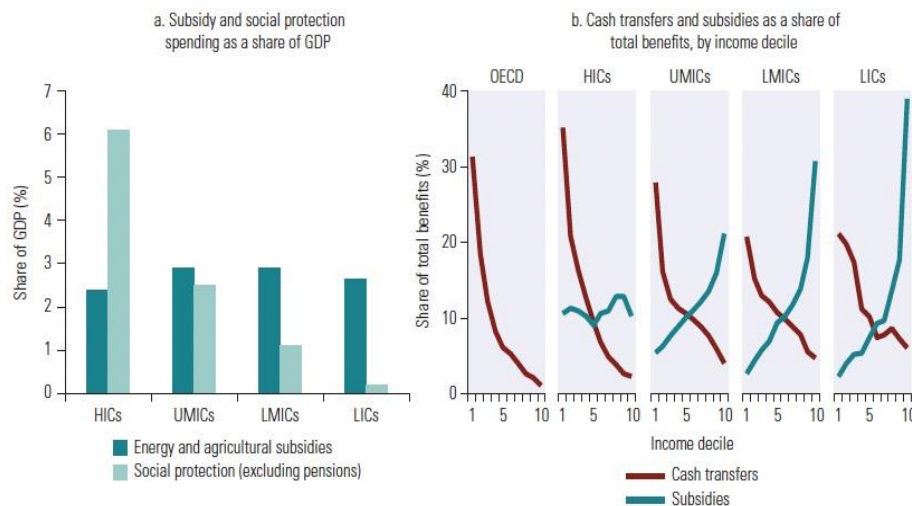
Figure 5: Social Protection Program Financing, SSA: Latest Year
Source: Beegle et al. (2018)

In resource-rich SSA countries, there is a further alternative: paying residents a dividend in times when there is a large increase in commodity prices. This approach has been pioneered by the US state of Alaska, which created the Alaska Permanent Fund (APF). The APF invests revenue garnered from the sale of oil and pays out residents a yearly dividend - effectively a form of universal basic income. Resource rich SSA countries could implement a similar program. However, given the volatility of commodity prices, such an approach should not form the basis of a social protection program, as revenues from commodities would be too unpredictable. Rather, the revenue from high commodity prices could potentially be used to reduce temporary deficits emanating from existing social protection program; to provide financial support to residents harmed by extreme events, such as a natural disaster or pandemic or indeed to even provide for once-off payments back to the population as a form of 'shared income' from commodity booms.

From Subsidies and Taxation to Cash Transfers: Redistribution Within the Budget?

Given that richer economies have a larger tax revenue base, the ability to finance social protection and other forms of social policy is much easier. We have though notably shown that there is a hierarchy of social policy categories for low income economies - with social protection often being the most marginalised of spending items for the fiscus. Be that as it may, the need to broaden revenue is in essence a discussion about long-term

economic growth, greater wage employment and thus improved revenue outcomes for country governments. Is there however, an option within-budget that governments could look to, in order to improve allocations for social protection? We consider below one such idea – recently raised by the World Bank in its report *Poverty and Shared Prosperity* (World Bank, 2022). The simple notion here is that developing country governments, those in Africa included, spend more on energy and agricultural subsidies than they do on social protection. Hence, Figure 6 below shows that whilst in upper middle-income countries subsidy spending as a share of GDP is similar (at about 3% of GDP) – this is not the case for low income countries.



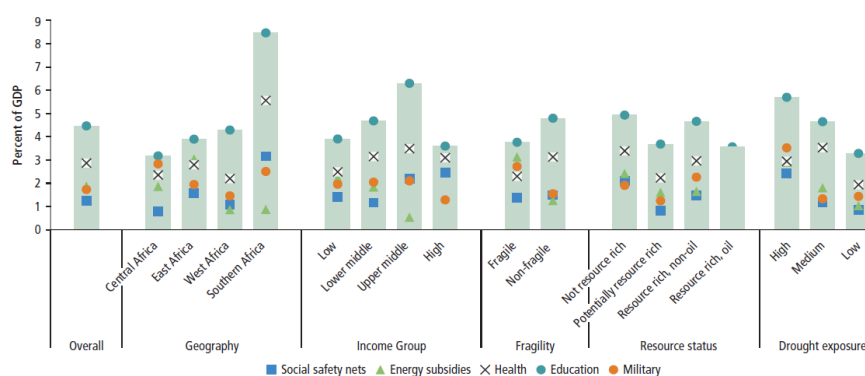
Sources: Agricultural subsidies: International Organisations Consortium for Measuring the Policy Environment for Agriculture database, <http://www.ag-incentives.org/>; energy subsidies: International Institute for Sustainable Development, <https://www.iisd.org/>; social protection: World Bank, BOOST Open Budget Portal, <https://www.worldbank.org/en/programs/boost-portal>, and International Monetary Fund, Government Finance Statistics database, <https://data.imf.org/gfs>; cash transfers and subsidies as a share of total benefits: CEQ Institute, CEQ Data Center on Fiscal Redistribution, <https://commitmenttoequity.org/datacenter>; OECD data; World Bank data.
 Note: Panel a compares spending on energy and agricultural subsidies with spending on social protection (excluding pensions) as a share of gross domestic product (GDP), aggregated by income group. Panel b shows transfers and subsidies as a share of total benefits by market income decile, aggregated by income group. Subsidy incidence is not available for OECD countries. GDP = gross domestic product; HICs = high-income countries; LICs = low-income countries; LMICs = lower-middle-income countries; OECD = Organisation for Economic Co-operation and Development; UMICs = upper-middle-income countries.

Figure 6: Energy & Agriculture Subsidies and Social Protection Spending, % of GDP and Incidence: By Country Income Classification

Instead for LICs and LMICs, spending on social protection is less than 10% and less than 50% of their spending on subsidies. In turn though, as the right hand panel of Figure 6 shows: Subsidy expenditure is much more

regressive than social protection spending: Only 20% of subsidy spending reaches the bottom 40 percent of households in any of the countries in the sample. Spending on subsidies are in many cases present for governments to serve local interest groups or to ensure the necessary political support to remain in power (Beegle et al, 2018).

It is also particularly true though that in Africa, social transfers are deeply under-utilised even within the suite of available interventions beyond subsidies.



Sources: Spending data: ASPRE (Atlas of Social Protection Indicators of Resilience and Equity) (database), Administrative data, World Bank, Washington, DC, <http://www.worldbank.org/aspire>. Energy subsidies: Coady et al. 2015. Other data: WDI (World Development Indicators) (database), World Bank, Washington, DC, <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>. Note: Methodology presented in appendix B.4 and more details in appendix G, table G1. Data do not reflect reductions in subsidies which have taken place since 2015. Social safety net spending estimates are moderately different from those in World Bank (2018) due to data updates in this report and different treatment of outlier data points.

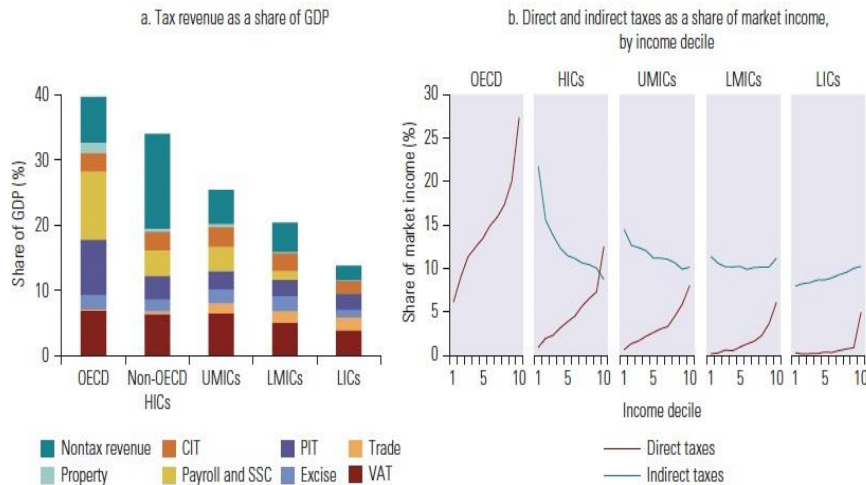
Figure 7: Proportion of GDP Spent on Various Sectors

Source: Beegle et al. (2018)

Hence as Figure 7 shows, irrespective of the category of African economy utilised (by income group, sub-region and so on), social safety net expenditure as a share of GDP remains the lowest for almost all categories, when compared against spending on education, health, subsidies and worryingly – military spending.

It is also true however that improvements in taxation policy, tax collection and enforcement can also act as the impetus for enhanced funding available to developing country governments to allocate resources to social protection. Data shows for example, that the income level of countries is on average positively associated with tax revenue as a share of GDP. Simply put: Richer countries collect more tax as a share of GDP relative to middle and low income economies. As the figure below illustrates then, for example whilst LICs collect 11% of GDP in taxes – this estimate is 32% of GDP for the sample of OECD high-income countries. Studies suggest that differences in

tax revenue may in part be a function of state capacity to collect taxes and enforce collection (Besley and Persson 2013).



Sources: International Centre for Tax and Development, <https://www.ictd.ac/>; CEQ Institute, CEQ Data Center on Fiscal Redistribution, <https://commitmenttoequity.org/datacenter/>; OECD data; World Bank data.

Note: Panel a shows each type of government revenue as a percentage of gross domestic product (GDP), aggregated by income group. Panel b shows direct and indirect taxes as a percentage of total market income by market income decile, aggregated by income group. Indirect tax incidence is not available for OECD countries. CIT = corporate income tax; GDP = gross domestic product; HICs = high-income countries; LICs = low-income countries; LMICs = lower-middle-income countries; OECD = Organisation for Economic Co-operation and Development; PIT = personal income tax; SSC = social security contribution; UMICs = upper-middle-income countries; VAT = value added tax.

Ultimately then, improved tax collection systems and tax levels could potentially be a key enhancer of social protection spending in SSA and other low income country settings. Research suggests that policy improvements could focus on three core areas: First, for countries to introduce property taxation since in many countries these do not exist. They will also tend to be progressive given the distribution of property ownership in many low income countries. Second, indirect health taxes such as on tobacco, alcohol and sugar are easy to implement and adjust and are progressive in a lifecycle sense. Finally, carbon taxes could be considered for developing countries. Evidence shows, the latter can simultaneously raise revenue without undermining inequality and employment in a domestic economy.

Conclusion

The above has attempted an analytical whistle-stop tour of some of the key issues and concerns in analysing the prevalence and financing of social protection in Africa. It is abundantly clear that social protection reach

and spending in Africa is wholly inadequate. As a share of GDP social protection spending in SSA, lags all other regions of the world. In addition, though, the evidence shows that low income countries in general seem to value social protection less than other forms of social policy. The need for baseline traditional and innovative infrastructure in order to build the foundations for social protection remain essential, but again under-valued in the region. We show crucially that a focus on groups – such as the informally employed – or the response to a crisis can allow for a foothold in widening social protection access within a country. Ultimately though, perhaps the one key financing solution offered here is that governments in developing regions of the world under-spend on progressive poverty-reducing social transfers and over-spend on regressive, inequality-inducing energy and agricultural subsidies. In addition, more attention to improvements in tax collection and tax policy – with a view to increasing revenue from companies and individuals – could potentially be a key instrument to increasing social policy spending. Ultimately though, the need to reallocate greater shares of the national budget of African economies towards social protection would seem to be a core policy action required in pursuit of the war on poverty in the region.

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Indigenous Social Protection in Africa: Pathways to Resilience and Sustainable Development

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Abstract

Resilience as a concept has increasingly become a central theme in the discourse on and sustainable development. In Africa, this concept has found in expression in various regional, subregional and national commitments, initiatives and other blueprints aimed at enhancing socioeconomic development and progress towards the achievement of the goals of the United Nations Agenda 2030. This paper argues that while indigenous social protection systems such as the family has the potential to contribute to the individual and societal resistance, these systems have been largely ignored in the sustainable development discourse. To this end, the paper, draws on existing literature to demonstrate how the extended family – one of the long standing indigenous social protection systems in Africa – has the potential, through its instrumental and affective roles, to enhance the resilience of its members and ultimately contribute to sustainable development. The paper uses the evidence from the literature to underscore the critical importance of recognising the role of the family, and African indigenous social protection systems in general, in enhancing individual and social resilience for the greater goal of achieving the goals of the current 2030 Agenda as well in future efforts aimed at achieving sustainable development in the continent.

Keywords: Informal social protection; family capital, family resilience

Introduction

The concept of resilience has increasingly become a recurring theme in the discourse on sustainable development. In Africa, this interest is

propelled by the longstanding notion that Africans are inherently 'resilient' (see, for example, Signé, 2020; Hudson, 2023). As Angela Lusigi, the UNDP Resident Representative in Ghana recently stated, "History is filled with examples of Africans' experience with adversities and the use of sheer ingenuity to navigate harsh living circumstances occasioned by political instability, economic challenges, and natural disasters" (Lusigi, 2023). This notion also finds its expression in several regional and sub-regional initiatives aimed at further building this attribute, such as the piloting of the Roots of African Resilience Framework (Sitoe, 2023), Strategic Framework to Support Resilient Development in Africa (UNDG, no date) as well as the COMESA Regional Resilience Framework (see COMESA, 2019) and the SADC Regional Resilience Framework 2020-2030 (SADC, 2020).

Although there are no exact variables that define resilience (Heiman, 2002:160), at the core of its conceptualisation in different fields is the ability to withstand and rebound from crisis and distress and/or disruptive life challenges (Heiman, 2002; Walsh, 2003; Ferguson & Wollersheim, 2022; Park, 2024). Essentially, as Mitamura *et al*, (2014: 5529) assert, resilience alludes to one's ability to successfully adapt and endure under adverse circumstances and efficiently recover from subsequent harmful effects". For Africans, this is a critical attribute given the scale, complexity and interconnectedness of risks facing the continent's population that threaten the progress towards achieving the Sustainable Development Goals (SDGs) and the regional aspirations such as the African Union Agenda 2063 (Sitoe, 2023:1). As Sitoe posits, [further] building resilience, will not only ensure that Africa has the capacity to address the risks it faces, but that it also reaps the benefits of ongoing transformations, rather than falling victim to them.

It is noteworthy that building resilience goes beyond the approaches of government and regional organisations; it is also embedded in protective resources in African culture and society such as indigenous social protection systems. Also known as informal social protection, these systems are mechanisms founded on African traditional values and norms of solidarity and reciprocity and based on kinship or self-organised mutual aid to protect against risks or to combat shocks in the absence or presence of public or market-based arrangements (Balgah & Buchenrieder, 2010; UNOSAA, 2024). Despite being a central element of the African social welfare system for years, (Patel *et al*, 2012; Dafuleya 2018; Mokomane 2018; Noyoo and Boon 2018), indigenous social protection systems are not a visible aspect of social protection and sustainable development programming and discourse in

contemporary Africa. Dafuleya (2018) asserts that this can be largely attributed to a perspective that these systems are fragile, rapidly declining, or not as effective as before. Other arguments, according to Balgah and Buchenrieder (2010) are that the systems only provide short-term solutions and fail to build communities' resilience to future shocks. Mokomane *et al* (2021:77) argue that a "plausible source of the foregoing criticisms is the paucity of research and evidence on the dynamic processes of indigenous social protection systems and the extent to which they can be used to effectively manage shocks".

To contribute to closing the foregoing research gap, this paper uses the extended family -- a network of connections among multiple generations of close relatives extending through varying degrees of relationship (Foster, 2000); Mokomane, 2013) - as an example of how, contrary to popular belief, indigenous social protection systems can indeed, enhance individual and societal resilience. In doing this, the paper recognises the caution against "transplanting" to Africa of Eurocentric systems as they may not be easily adaptable due to the differences in political, socioeconomic contexts, and the traditional values (UNOSSA, 2024). The paper is also relevant against notions that "the quest for sustainable grassroots' development by [African] governments calls for the need to look inwards and re-examine and evaluate our indigenous cultural practices in an attempt to attain the desired development goals" (Ugiagbe & Ugiagbe, 2015: 366).

The focus on the extended family hinges on the fact that this institution has for years, and almost without limits, guaranteed social security and support for family members during times of need and crisis, making it one of the most admired values in the traditional African social arrangement (Foster, 2000; Mokomane, 2013; Mafumbate, 2019). Despite this, it has as other indigenous social protection systems in African, not received much consideration in debates on sustainable development. As Mhizha (2023:1) posits,

At the international level, the family is appreciated but not prioritized in development efforts. The very contribution of families to the achievement of development goals continues to be largely overlooked, while there seems to be a consensus on the fact that, so far, the stability and cohesiveness of communities and societies largely rest on the strength of the family.

This oversight was also noted by the former United Nations Secretary-General, Kofi Annan, more than a decade ago when he commented that while stable, functional families have a major “potential to contribute to national development and the achievement of major objectives of every society ... including the eradication of poverty and the creation of just, stable and secure societies”, this potential is often left untapped (Clark, 2012:20). In Africa, one plausible explanatory factor is that while it is widely recognised as the basic unit of society and one of the essential sectors without which no society can function (Ziehl, 2003), much of the extant literature on the family presents it as a problem-laden, pathological institution that is ravaged by patriarchal evils, dysfunctionality, and extreme material deprivation. Notwithstanding evidence showing how the institutional power of the family can foster the oppression of certain family members and/or perpetuate inequalities in individual opportunities to achieve (Stoop and Masteller, 1997; Hill, 2003), the consistent use of deficiency-based lenses to study families can blur its inner strengths and ability to build the resilience of its members and ensure that they prosper in the face of the most extreme adversity (Badabdah *et al*, 2018:11).

To achieve its objective, this paper begins with a broad-brush overview of existing literature on the potential of the extended family in Africa to enhance the resilience of its members and ultimately contribute to sustainable development. In the following section, this is discussed with a particular focus placed on the instrumental and affective roles of the basic familial functions of procreation, socialisation and nurturance. A reflection on the extent to which these roles and the resilience they build should be embraced as one of the main pathways to Africa’s achievement of sustainable and ‘redefining African futures’ is presented in the second and concluding section.

The extended family as a pathway to resilience

Contrary to the global trend where there is a notable decline in the prevalence of extended families (Reher, 2014), in Africa, this remains the most prevalent family form and it continues to contribute to the smooth functioning of society through the execution of instrumental and affective roles (Mafumbate, 2019; Mhizha, 2023; Nwanmuoh *et al*, 2024). The former entails the provision of financial support and physical resources such as food, clothing and shelter while affective roles promote emotional support and physical care of family members (Patterson, 2002). As essentially a

collaboration of strong kinship bonds, the extended family fulfils these roles by drawing on the multiple resources of its members and cultural values of reciprocal obligations. In this way, it sustains itself and also serves as a buffer against stressful transitions experienced by its members (Engstrom, 2012; Waites, 2009). As Solo (2021:596) points out,

The resources of the extended family system ... are mobilised to support members who are exposed to life cycle crises that they cannot manage on their own. Membership of an extended family system guarantees social protection, as well as engendering a sense of belonging and togetherness, and it ultimately promotes human well-being. The problems experienced by an individual ...are taken as a burden on the entire extended family system.

The foregoing underscores the extent to which the instrumental and affective roles of the extended family contribute to the resilience of its individual members through the basic familial functions of procreation, socialisation; and nurturance (see, for example, Benokraitis, 2004; Horwitz, 2005; Chesson, 2023).

Procreation

In much of the Western world, the motive for procreation or biological reproduction is often linked to aspirations of happiness and personal well-being (Dyer *et al*, 2008) and thus plays more of an affective role. In Africa, on the other hand, the motives tend to be more socio-cultural with children seen as important resources for, among other things, securing conjugal ties, social security, household labour, social status, rights of property and inheritance as well as for maintaining family lineage and community heritage (Chimbatata & Malimba, 2016; Tagwai, 2018; Mokomane, 2021). It is partly for this reason that fertility rates in Africa have been consistently higher than the global average, despite a general decline. Between 1990 and 2021, the total fertility rate in Sub-Saharan Africa (SSA) decreased from 6.3 to 4.6 children per woman; the corresponding global figures were 3.3 and 2.3. North Africa also lies in a region where, while the fertility rate has not been as in SSA, they are higher than the global: 4.4 and 2.8 (United Nations, 2022). A long-standing explanatory proposition for the persistently high levels of high fertility in Africa is the old-age security hypothesis – where parents view their children as a source of income and personal support in old age. It has been argued that this tends to take

precedence where there is inadequate or no social security for the long-term care of older people, as is the case in contemporary Africa. According to the International Labour Organisation (2020), only 27.1 per cent of Africans above statutory retirement age are receiving an old-age pension, with the proportion being lower in SSA (19.8 per cent) compared to in North Africa (43.8 per cent) and the global average of 77.5 per cent. Thus, as De Vos (1985:1) posits, “at the least, an individual minimizes the chance of ending up without care by having as many children as possible. At most, if all children contribute to their parents' upkeep, having many children results in a large pool of resources available to support parents”.

The old-age security value attributed to high fertility partly reflects social norms and practices that build the resilience of older people by ensuring their receipt of long-term care: material assistance, help with daily activities, and emotional support from their children and other younger kin, over a protracted period (Brodsky *et al*, 2002). One way through which is executed is through the co-residence of family members in multigenerational households, the prevalence of which is increasing in many parts of Africa (UNDESA, 2019; Jecker, 2022). The benefits of living in these households tend to be bi-directional. For older people, who often face hardships such as abuse, food and financial insecurity, lack of access to health care and growing infirmity (Law, 2019) –aggravated by limited or no social protection – living in multigenerational households facilitates the receipt of material and affective support from younger family members and has been consistently associated with high levels of positive subjective well-being and improved health outcomes among older people. For younger family members, on the other hand, the benefits of multigenerational co-residence often come to the fore when older members “step into the role of champion and mentor, either complementing family relationships or providing important support where family structures are weak.” (Bronfenbrenner; 2016:9). All in all, these living arrangements enhance intergenerational relationships, defined as any type of relationship between individuals and groups of different generations, often with a certain reciprocity of benefits between the generations (Sánchez & Díaz, 2020).

Socialisation

The familial function of socialisation, which is typically the next after procreation, entails a process through which children learn formal and informal norms of social and interpersonal interaction; and absorb

knowledge, attitudes, beliefs as well as moral and social values of their culture and society (Perrino *et al*, 2000; Horwits, 2005; Swartz, 2008; Peterson, 2009). This function is often executed by a network of people extending beyond the family to include members of the child's community and this underlies the popular African idiom, 'It takes a village to raise a child' (Ntarangwi, 2012). The rich interactions and networks created in this process increase access to an array of resources and social relationships through which children can acquire a sense of belonging, personal and social identity, as well as the capacity for love and intimacy (Peterson, 2009; Barker, 2012). Taken together, these qualities develop children's self-esteem, build their resilience towards the unknown, and enable them, later on in life, to engage positively with others and in society in general (Centre for Social Justice, 2010). Indeed, a cross-cultural study of child socialisation processes in 104 societies found that African societies place greater emphasis on the inculcation of independence, self-reliance, and nurturance than do non-African societies (Welch, 1978). This has been affirmed by more recent studies that have consistently demonstrated the extent to which African child socialisation processes typically have embedded "institutional defence mechanisms," that "traditionally served to provide individuals with the ability to adapt normally to psychological, social and physical environments and protect the society from disruption" (Akuma, 2015:80). Among these are norms that, for example, discourage risk-taking behaviours, foster values of cooperation and nurturing support of others, and overall contributing to peaceful coexistence in society (Serpell & Adamson-Holley, 2017; Munarini & Khadoma, 2023).

Nurturance

This function entails family members providing each other with physical, psychosocial and spiritual support and collectively assisting in the socio-economic sustenance of the family (Zimmer *et al*, 2010; Caparas, 2011; Stuijbergen *et al*, 2011). As is the case in many societies both in developed (Stuijbergen, *et al*, 2011; Isengard & Szydluk, 2012) and in developing regions (Carapas, 2011; Fuligni *et al*, 1999), Africans execute this function largely through a strong traditional culture of intergenerational support and caregiving. In addition to multigenerational co-residence discussed earlier, another central element of the nurturance function in Africa is the traditional childcare support provided by female relatives such as mothers, sisters, and aunts, from both a new mother's birth and in-law family. These relatives often avail themselves to assist a new mother in caring for a baby right from

birth and throughout the early period of childrearing (Wusu and Isiugo-Abanihe, 2006), a practice that often lessens the emotional and physical burden that nursing mothers typically go through. This kinship support for childcare generally continues throughout the childrearing years and has also been shown to enhance, in some contexts, mothers' participation in income-generating and socially enhancing activities, that directly and indirectly build their resilience. In essence, similar to what was found in some European countries, (European Commission, 2009:18), it can be argued that "without the help of grandparents, many women in [Africa] would be unable to go back to work, especially in those countries where childcare structures are still inadequate".

The family's nurturance function has also been widely illustrated in the traditional custom of child fostering where children live outside their natal home. According to Odimegwu *et al.* (2017) there are two types of child fostering in Africa: crisis fostering (used by families to cope with unexpected and ongoing adversities and crises such as the death or illness of either parent) and non-crisis fostering used to strengthen families and/or to spread the costs of childrearing among kin. Despite variations across the region, available evidence shows that child fostering, particularly crisis fostering, remains an enduring institution in family life throughout sub-Saharan Africa (Cotton, 2021). For example, a large body of research evidence (see for example, UNICEF, 2007; Save the Children, 2007; Burkholder, 2019) shows that at the peak of the HIV and AIDS pandemic in East and Southern Africa in the late 1990s and early 2000s, foster families provided "much care to, and enabled the resilience of, children living with HIV in their homes" (Gomo *et al.*, 2017:186) as extended families, cared for over 90 per cent of children orphaned and/or made vulnerable by the pandemic. Although in some cases fostering can marginalize a subset of children (Serra, 2009), the kinship care inherent in this type of fostering is an important source of permanency, stability, and continuity in children's lives as it minimises potential disruptions such as multiple placements (Mokomane, 2012). A major advantage in this regard is that, for the most part, "children placed in kinship care already know their carers, have a shared culture and may be more likely to remain in the same communities" (EveryChild and HelpAge International, 2012:13). This is essential to maintain a sense of identity and belonging which, as discussed earlier, is critical for social empowerment.

Discussion

The foregoing section has succinctly demonstrated that as the “natural and fundamental group unit of society” (United Nations, 1948) and “the setting for demographic reproduction, the seat of the first integration of individuals into social life, and the source of emotional, material and instrumental support for its members” which influences the way society is structured, organized, and functions (Belsey, 2005), the extended family in Africa is essentially the “insurer of last resort, providing aid and solace when all else fails and preventing temporary setbacks from becoming permanent” (Canning *et al*, undated:4). Overall, as Canning and colleagues further assert,

The family plays a key role in preventing social alienation because it is the one structure individuals are part of by birth rather than by choice. Even if all other institutions fail individuals, they can always turn to their family in times of difficulty if the institution of the family is functioning. Without the family to fall back on in times of stress, the likelihood that individuals leave society and enter the underclass when for example, they face unemployment, increases (Canning, *et al*. undated: 7).

Thus, instead of being left largely unexplored in academic and policy debates related to sustainable development, it is critical to consider the family as an integral component of this agenda and, indeed, of all efforts regional and national policies and programmes directed at achieving sustainable development. This should also guide Africa’s inputs into global ideals as shall be agreed at the 2024 Summit of the Future and the World Social Development Summit planned for 2025. The concept of family capital – the human, social, and financial resources that a family provides its members (Dyer, 2021:7) – is particularly worthy of consideration in this regard. It borrows from the literature on social capital – “networks, norms and social trust that facilitate coordination and cooperation for mutual benefit” (Putnam, 1995: 67) – to emphasise the importance of non-material resources which, while not necessarily measurable, can provide enabling resources and strengthen the capacity and resilience of individual family members. Family capital, therefore, implicitly draws on the family strengths perspective, an orientation that seeks to understand and develop the strengths and capacities of individuals and the extent to which these can be used to positively transform lives (Hammond & Zimmerman, 2012). What is

noteworthy is that it does not ignore family problems, difficulties, and challenges. Instead, rather than adopting a problem-oriented focus on 'what is wrong', it asks questions about 'what is right' and then uses the answers to develop interventions that further build the resilience and strengths that families and their members can draw on to respond to crises and challenges, to recover and grow from those experiences, and to generally enhance the attainment of sustainable development.

Previous studies (e.g., Richardson *et al*, 2020; Mokomane, 2022) have demonstrated how recognising and embracing the instrumental and affective roles of the family as discussed in this paper can help achieve the ideals of an array of SDGs including SDG 1 (Poverty eradication); SDG 3 (Good health and well-being); SDG 4 (Quality education); SDG 5 (Gender equality); and SDG 8 (Decent work and economic growth). This is also particularly relevant against the background of prevailing megatrends – demographic changes, technological change, urbanization, migration and the effects of climate change – that United Nations General Assembly Resolution 77/191 urged Member States to focus on as part of the observance of the thirtieth anniversary of the International Year of the Family in 2024 (United Nations, 2022:26). As per its objective, this paper only *illuminated* the potential pathways through which the family can build the resilience of its members, address the impact of the prevailing megatrends and create a pathway for sustainable development. The precise pathways to this, however, remain outstanding and await further research that will enhance implementation as part of the agenda to refine African futures and to take forward the aspirations of the Summit of the Future.

Conclusion

In conclusion, Muna Abdi, the internationally renowned Somali education and racial equity consultant, profoundly commented thus, "*Instead of praising people for being "resilient", change the systems that are making them vulnerable.* Drawing on, and applying the strengths of, localised perspectives and norms embedded in indigenous systems such as the African extended family, rather than on Western systems, will be doing exactly that.

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Africa Pathway to Food Systems Transformation: Challenges and Opportunities

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Abstract

This paper explores the pathways to transforming food systems in Africa, focusing on the challenges and opportunities that lie ahead. It examines the current state of food systems, highlighting issues such as food and nutrition security, environmental degradation, low agricultural productivity, limited availability and adoption of yield-increasing technologies, high malnutrition rates, violent conflicts and threats to peace and security, and inadequate governance. The paper emphasizes the need for policy reform, technological innovation, and capacity building to drive sustainable and inclusive food systems. Key drivers of change include policies promoting sustainable practices, increased funding for agricultural research, and improved market access through infrastructure development and trade policies. Good governance practices, including transparency, accountability, and inclusive decision-making, are crucial for effective policy implementation and stakeholder collaboration. Recommendations include empowering women and youth, supporting community-led initiatives, and leveraging the African Continental Free Trade Area (AfCFTA) to enhance intra-African trade. By adopting these strategies, Africa can build resilient, equitable, and sustainable food systems.

Keywords: Food, System, Transformation, Agriculture, Nutrition, Productivity

Introduction

Africa's food systems, which encompasses the entire range of activities and processes involved in the production, processing, distribution, consumption, and disposal of food within the continent are at a critical

juncture, requiring transformative change to achieve sustainable development and address persistent food and nutrition insecurity. The 2021 UN Food Systems Summit underscored the necessity of restructuring food systems globally, with a particular focus on Africa due to its unique challenges and vast potential. This paper explores the pathways for transforming food systems in Africa, identifying the key challenges and opportunities that lie ahead. Africa is home to some of the world's fastest-growing populations, and its food systems are under increasing pressure to meet the demands of this demographic surge. As Sibanda and Mwamakamba (2021) emphasize, sustainable and inclusive food systems are essential for achieving the Sustainable Development Goals (SDGs). The SDGs, particularly Goal 2, which aims to end hunger, achieve food security, and promote sustainable agriculture, are closely linked to the health and efficiency of food systems. In Africa, achieving these goals is contingent upon overcoming significant challenges, such as climate change, resource scarcity, and socio-economic inequalities, while leveraging opportunities for innovation and growth.

The 2021 UN Food Systems Summit provided valuable insights and recommendations that are crucial for guiding Africa's food systems transformation. One of the key lessons from the Summit is the importance of adopting a holistic approach that integrates environmental sustainability, economic viability, and social inclusivity. The Summit highlighted the need for comprehensive strategies that address the entire food value chain, from production to consumption, and promote the resilience and adaptability of food systems in the face of changing climatic conditions and other external shocks.

Another critical recommendation from the Summit is the enhancement of local capacities and the empowerment of smallholder farmers, who form the backbone of Africa's agricultural sector. Smallholder farmers, often marginalized and resource-constrained, play a pivotal role in ensuring food security. Supporting these farmers through access to technology, finance, and markets is essential for driving productivity and sustainability. The Summit also stressed the importance of gender equity and the inclusion of women and youth in the food systems transformation process. Women, who constitute a significant portion of the agricultural workforce, must be given equal opportunities and resources to contribute effectively to food production and innovation.

The objective of this paper is to examine the challenges and opportunities associated with the transformation of food systems in Africa. It aims to provide a comprehensive analysis of the current state of food systems, identify the key barriers to sustainable development, and explore innovative solutions that can drive change. By focusing on both challenges and opportunities, the paper seeks to offer actionable recommendations for policymakers, development practitioners, and other stakeholders involved in shaping the future of food systems in Africa. Food systems transformation in Africa involves addressing multiple interconnected challenges. Climate change poses a significant threat to agricultural productivity and food security, with increasing temperatures, erratic rainfall patterns, and extreme weather events affecting crop yields and livestock production. Additionally, land degradation and water scarcity exacerbates the vulnerability of food systems. Socio-economic factors, such as poverty, inequality, and inadequate infrastructure, further complicate the situation, limiting access to food and agricultural resources for many communities.

Africa indeed has immense potential for transforming its food systems, driven by its rich natural resources, demographic advantages, and innovative agricultural practices. The continent possesses about 60% of the world's uncultivated arable land, representing a significant opportunity for expanding agricultural production (FAO 2019). Africa's young and dynamic population represents a significant opportunity for transforming its food systems. As of 2023, Africa's population is estimated to be over 1.4 billion, with about 70% of the population under the age of 30 (World Economic Forum 2023). This youthful demographic presents a substantial labor force that can drive agricultural innovation and entrepreneurship, crucial for enhancing food security and economic development across the continent.

Innovations in agriculture are increasingly being adopted across Africa to enhance productivity and resilience. Climate-smart farming practices, such as conservation agriculture, agroforestry, and integrated pest management, are being implemented to mitigate the impacts of climate change while improving yields (World Bank 2020). The use of digital technologies, such as mobile apps for market information, precision farming tools, and blockchain for supply chain transparency, is also on the rise, providing farmers with better access to markets and resources (IFAD 2019).

Sustainable land management practices, including soil fertility enhancement, water conservation, and sustainable irrigation, are critical for maintaining the productivity of Africa's vast arable land. These practices

help combat land degradation and promote the sustainable use of natural resources, which is vital for long-term food security (UNCCD 2018). Moreover, regional cooperation and integration play a crucial role in transforming Africa's food systems. The African Continental Free Trade Area (AfCFTA), which came into effect in 2021, aims to create a single market for goods and services, facilitating market access and promoting the sharing of knowledge, resources, and best practices among African countries. This collaborative approach can significantly boost agricultural productivity, improve food security, and foster economic growth across the continent.

The increasing violent conflicts and encroachment of farming lands by nomads and herders have critically impacted Africa's food systems, particularly in Nigeria. These conflicts disrupt agricultural productivity, displace farming communities, and exacerbate food insecurity. Violent clashes between herders and farmers, often stemming from the encroachment of herding routes onto farmlands, have intensified in Nigeria over the past decade, reducing agricultural output as farmers fear returning to their lands (International Crisis Group, 2017).

Nomadic pastoralism, characterized by the movement of herders and livestock in search of grazing lands, further complicates the agricultural landscape in West Africa. This migration frequently leads to the destruction of crops and increased tensions between farmers and herders, disrupting food production (Ekpemerechi 2020). The cycle of conflict and retaliation, as outlined by Idris and Najmudeen (2020), creates an environment of fear and instability that hinders effective farming and resource management.

The political ecology perspective, as discussed by Okoli and Atelhe (2014), reveals deeper structural issues, including competition over resources and weak governance, which exacerbate these conflicts. These disputes often result in violent confrontations and displacement of farming communities, further worsening food insecurity. In Ghana, similar dynamics are observed, with farmer-herder conflicts leading to displacement and abandonment of fertile lands (Olaniyan and Okeke-Uzodike 2015).

Benjaminsen and Alinon (2011) emphasize that climate change and resource scarcity in the Sahel region continues to exacerbate tensions between farmers and pastoralists, significantly affecting food security. Addressing these challenges requires integrated strategies that promote sustainable agricultural practices, secure land tenure, and enhance community resilience to ensure long-term food security in Africa.

Transforming food systems in Africa is a complex but essential endeavor for achieving sustainable development and addressing food insecurity. By building on the lessons and recommendations from the 2021 UN Food Systems Summit, and leveraging the continent's unique strengths and opportunities, stakeholders can work together to create sustainable, inclusive, and resilient food systems. This paper aims to contribute to this ongoing effort by providing a detailed examination of the challenges and opportunities that define Africa's pathways to food systems transformation.

Current state of food systems in Africa

Food systems in Africa are characterized by a complex interplay of challenges that span environmental, economic, social, and political dimensions. Despite notable progress in some areas, the continent continues to face significant hurdles that impede the achievement of food and nutrition security, food safety, and sustainability. This section explores the current state of food systems in Africa, examining the multifaceted challenges that must be addressed to transform these systems effectively.

Food and nutrition security remain critical concerns across Africa. High levels of malnutrition and food insecurity affect millions of people, particularly in sub-Saharan Africa. According to Gashu *et al.* (2019), malnutrition is prevalent, with a significant portion of the population experiencing stunting, wasting, and micronutrient deficiencies. These issues are exacerbated by poverty, limited access to nutritious foods, inadequate land governance, lack of knowledge on nutritional benefits and combinations, and inadequate health services. Ensuring food security requires a concerted effort to improve agricultural productivity, enhance food distribution networks, and provide better nutrition education to communities. Food safety and sustainability are also pressing issues in African food systems. Unsafe food practices and inadequate food safety standards pose serious health risks. Contaminated food can lead to foodborne illnesses, which are a major public health concern.

The environmental challenges facing Africa's food systems are profound. Unsustainable agricultural practices have led to severe land degradation and a decline in soil fertility. Kalibata (2022) notes that these practices not only degrade the environment but also reduce the resilience of food systems to climate change. Climate change further exacerbates these issues by causing erratic weather patterns, prolonged droughts, and extreme weather events, which negatively impact crop yields and livestock

production. Climate change has significantly impacted Africa's agricultural sector, contributing to reduced crop yields, increased pests and diseases, and more frequent extreme weather events. The Intergovernmental Panel on Climate Change (IPCC) reports that climate change could reduce crop yields in sub-Saharan Africa by up to 50% by 2050, exacerbating food insecurity (IPCC 2019). Droughts, which have become more frequent and severe due to climate change, currently affect about 40% of the continent's population, particularly impacting rain-fed agriculture that accounts for over 95% of the farmland in sub-Saharan Africa (FAO 2020). Additionally, climate-induced changes in rainfall patterns have led to soil erosion and nutrient depletion, further diminishing agricultural productivity and threatening the livelihoods of millions of smallholder farmers across the region.

Economically, Africa's food systems are hindered by low agricultural productivity and insufficient investment. Opara (2013) points out that many farmers lack access to modern farming technologies, quality inputs, and financial services, which limits their productivity. Additionally, inadequate infrastructure, such as poor road networks, especially feeder roads, and lack of storage facilities, hampers the efficient distribution of food. Investment in agriculture is crucial for improving productivity, enhancing value chains, and fostering economic growth. Policymakers must prioritize investments in agricultural research and development, rural infrastructure, and access to credit for farmers.

Social challenges, including high levels of malnutrition and food insecurity, are pervasive in Africa. Gashu *et al.* (2019) emphasize that these issues are intertwined with poverty, inequality, and inadequate social protection systems. Vulnerable populations, such as women and children, are disproportionately affected. Addressing these social challenges requires a multifaceted approach that includes improving social safety nets, enhancing education and awareness programs, and promoting gender equality in agriculture.

Political challenges, such as policy inadequacies and poor governance, further complicate the state of food systems in Africa. Jordaan (2017) argues that weak institutional frameworks, corruption, and lack of political will hinder effective policy implementation. Policy incoherence and inadequate support for agricultural development undermine efforts to achieve food security and sustainability. Strengthening governance, improving policy coherence, and enhancing institutional capacities are

essential for creating an enabling environment for food systems transformation.

The current state of food systems in Africa is marked by a range of challenges that require urgent attention and coordinated action. Addressing food and nutrition security, ensuring food safety and sustainability, tackling environmental degradation, boosting economic productivity, overcoming social inequities, and improving political governance are critical steps towards transforming Africa's food systems. By addressing these interconnected challenges, stakeholders can pave the way for a more resilient, sustainable, and equitable food system in Africa. The COVID-19 pandemic has severely disrupted food supply chains across Africa, leading to reduced household incomes, increased food prices, and exacerbated food insecurity and malnutrition. According to the International Food Policy Research Institute (IFPRI) (2021), the pandemic caused widespread disruptions in transportation, labor availability, and market access, which significantly affected food production and distribution. As a result, many households experienced reduced purchasing power, further straining their ability to access adequate and nutritious food. The economic fallout from the pandemic exposed and amplified existing vulnerabilities within Africa's food systems, highlighting the need for more resilient and inclusive food policies that can withstand future shocks and ensure food security for all.

The need for transformation

Africa's food systems are at a critical point where transformation is not just necessary but imperative for sustainable development and food security. The complexity of challenges facing these systems—ranging from environmental degradation to socio-economic disparities—requires a multifaceted approach driven by policy reform, technological innovation, and capacity building. This section explores the drivers of change essential for transforming Africa's food systems and underscores the urgent need for a comprehensive overhaul to ensure a resilient and sustainable future.

Drivers of change

One of the primary drivers of food systems transformation in Africa is the reform of agricultural policies. Chukwuemeka *et al.* (2023) emphasize the necessity for policies that support sustainable agricultural practices and stimulate investment in agricultural research and development (R&D). Effective policies can create an enabling environment that encourages

innovation, improves access to resources, and promotes sustainable land management practices. Moreover, policies should focus on enhancing infrastructure, providing financial incentives for sustainable farming practices, and ensuring that smallholder farmers have access to markets. Without robust policy frameworks, efforts to transform food systems will likely fall short of achieving significant and lasting impact.

Technological innovation is another critical driver of change in Africa's food systems. The adoption of climate-smart agriculture and digital technologies can significantly enhance productivity and resilience. Abbott *et al.* (2021) highlight the importance of integrating climate-smart practices such as the use of drought-resistant crops and sustainable water management techniques. These practices not only mitigate the adverse effects of climate change but also improve agricultural yields and sustainability. Additionally, the integration of digital technologies, including mobile applications and blockchain, can revolutionize market access and supply chain transparency and traceability. Checco *et al.* (2021) demonstrate how mobile technology can facilitate better market linkages for farmers, providing them with real-time information on prices and demand, thereby improving their bargaining power and income.

Empowering local communities, particularly women and youth, is crucial for the successful transformation of food systems. Pretorius and Schönfeldt (2023) argue that capacity building initiatives that focus on enhancing the skills and knowledge of local populations are vital. Women and youth, who play significant roles in agriculture, must be provided with opportunities to participate in decision-making processes and access resources. Training programs, educational initiatives, and financial support can help these groups adopt innovative farming practices and contribute to the overall resilience of food systems. By building local capacity, communities become more self-reliant and better equipped to face future challenges.

The private sector plays a crucial role in driving innovation and investment in food systems, yet its potential is often underappreciated. Developing meaningful partnerships between governments, NGOs, and private companies is essential for fostering sustainable growth and development in agriculture. These partnerships leverage the strengths of each stakeholder: governments provide regulatory frameworks and support, NGOs facilitate community engagement and promote equitable practices,

and private companies bring resources, expertise, and technological innovation to enhance productivity and supply chain efficiency. Such collaboration can transform food systems to become more resilient, inclusive, and sustainable, addressing the growing challenges of food security. By working together, these entities can create a dynamic food ecosystem that encourages investment, advances technology, and supports sustainable agricultural practices, ultimately contributing to economic growth and improved livelihoods.

Sustainable practices and innovations

Climate-smart agriculture (CSA) encompasses a range of practices designed to increase agricultural productivity, enhance resilience to climate change, and reduce greenhouse gas emissions. Garrity *et al.* (2010) outline several CSA practices, including the use of drought-resistant crops, efficient water management techniques, and agroforestry. These practices help farmers adapt to changing climatic conditions while maintaining or improving productivity. Pretty (1999) highlights the impact of CSA on agricultural outputs, noting that sustainable farming practices lead to enhanced resilience and productivity. By adopting CSA, farmers can mitigate the risks associated with climate variability and contribute to environmental sustainability. Integrating artificial intelligence (AI) into CSA can further enhance these practices by providing advanced data analytics, predictive modeling, and real-time monitoring. AI technologies can optimize water usage, predict weather patterns, and manage pest and disease outbreaks more efficiently, thus improving decision-making processes for farmers. By adopting CSA combined with AI tools, farmers can better mitigate the risks associated with climate variability, enhance productivity, and contribute to environmental sustainability.

The integration of technology into agriculture offers promising solutions for improving efficiency and productivity. Mobile technology, for instance, plays a pivotal role in enhancing market access and supply chain transparency. Checco *et al.* (2021) discuss how mobile applications can provide farmers with crucial market information, enabling them to make informed decisions and secure better prices for their products. Blockchain technology further enhances supply chain transparency by providing a tamper-proof record of transactions, which builds trust among stakeholders and ensures fair trade practices. For instance, in Nigeria, the digital platform **Farmcrowdy** has revolutionized agriculture by enabling smallholder farmers

to gain access to finance, high-quality inputs, and a broader market reach, resulting in a 50% increase in yields and income (Agyemang, 2022). Similarly, in East Africa, the mobile application **Digifarm** by Safaricom has reached over 1.3 million farmers, providing them with access to market prices, weather information, and digital financial services, leading to improved productivity and better market prices (World Bank, 2023). In Ghana, the use of blockchain technology by the startup **AgroCenta** has enhanced supply chain transparency, reduced transaction costs, and ensured fair trade practices, which helped reduce post-harvest losses by 20% (FAO, 2023).

Biotechnology is another area where technological innovation can drive food systems transformation. Chan *et al.* (2021) emphasize the role of biotechnology in crop improvement, including the development of genetically modified crops that are resistant to pests, diseases, and environmental stresses. These advancements can lead to increased yields and reduced reliance on chemical inputs, promoting both productivity and sustainability. By harnessing the potential of biotechnology, Africa can address food security challenges more effectively and sustainably.

The transformation of food systems in Africa is an urgent necessity driven by the need for policy reform, technological innovation, and capacity building. Effective policies that support sustainable practices and investment in R&D, coupled with the adoption of climate-smart agriculture and digital technologies, can significantly enhance the resilience and productivity of Africa's food systems. Empowering local communities, particularly women and youth, is crucial for ensuring that these transformations are inclusive and sustainable. By embracing these drivers of change, Africa can pave the way for a more secure and sustainable food future, addressing the myriad challenges that currently hinder its food systems.

Toward inclusive and equitable food systems

Transforming Africa's food systems necessitates a focus on inclusivity and equity to ensure that all segments of the population benefit from agricultural advancements and food security initiatives. Empowerment strategies, fair trade practices, and leveraging regional agreements such as the African Continental Free Trade Area (AfCFTA) are pivotal in fostering inclusive and equitable food systems. This section delves into the strategies and policies needed to achieve these goals and examines how the AfCFTA

can be a catalyst for broader food systems transformation across the continent.

Empowerment strategies

Empowering women and youth is essential for creating inclusive food systems. Women and youth constitute a significant portion of the agricultural workforce in Africa, yet they often face barriers to participation and decision-making. Ripoll et al. (2017) emphasize the importance of including women and youth in agricultural activities and decision-making processes. Providing these groups with access to resources, training, and leadership opportunities can enhance their contributions to food systems. Empowerment strategies should include gender-sensitive policies that address the unique challenges faced by women, such as access to land, credit, and education. Similarly, youth empowerment programs should focus on skill development, entrepreneurship, and technological literacy to enable young people to drive innovation in agriculture. Large-scale farmers can play a vital role in supporting smallholder farmers through the implementation of local content policies and national supplier programs. These initiatives encourage large-scale agricultural enterprises to source inputs and services locally, thereby promoting the inclusion of smallholder farmers in value chains. For example, in Nigeria, the *Anchor Borrowers' Programme* has successfully linked large-scale agribusinesses with smallholder farmers, providing them with credit, high-quality seeds, and technical assistance, resulting in a 30% increase in productivity among participating smallholders (CBN, 2022). Similarly, in Kenya, the *National Agriculture and Rural Inclusive Growth Project* (NARIGP) has facilitated partnerships between large commercial farmers and smallholder groups to improve access to markets, enhance technical skills, and increase income (World Bank, 2023). These collaborative efforts help build the capacities of smallholder farmers, ensuring they have the tools, knowledge, and market access needed to thrive in competitive agricultural markets.

Community-led initiatives play a crucial role in promoting inclusive and equitable food systems. Mabhaudhi *et al.* (2018) highlight the significance of training and supporting local agribusinesses to build resilient food systems. These initiatives often involve capacity building, providing technical assistance, and fostering cooperative models that allow smallholder farmers to pool resources and market their products collectively. By empowering communities to take ownership of their agricultural

development, these initiatives can create sustainable livelihoods and improve food security at the local level. Additionally, community-led approaches ensure that interventions are culturally relevant and responsive to the specific needs of the community.

Fair trade practices

Developing and implementing policies that support fair trade practices is essential for ensuring that African farmers benefit from global agricultural markets. Saghir (2014) argues that fair trade policies should focus on equitable pricing, transparency, and ethical trade standards. Governments and policymakers need to establish frameworks that protect farmers from exploitative practices and ensure that they receive a fair share of the value generated from their produce. These policies should also promote sustainable farming practices and encourage certification schemes that recognize and reward ethical production methods. By supporting fair trade, Africa can improve the livelihoods of its farmers and foster more equitable food systems.

The African Continental Free Trade Area (AfCFTA) presents a significant opportunity to enhance inclusivity and equity in Africa's food systems. AfCFTA aims to create a single continental market for goods and services, promoting intra-African trade and economic integration. By leveraging AfCFTA, Africa can overcome many of the barriers that currently hinder the development of equitable food systems.

First, AfCFTA can facilitate the reduction of trade barriers, such as tariffs and non-tariff measures, which often disproportionately affect smallholder farmers and agribusinesses. By creating a more accessible and integrated market, AfCFTA can help these stakeholders reach new markets, increase their income, and improve food security. Additionally, regional trade agreements under AfCFTA can harmonize food safety and quality standards, ensuring that agricultural products meet the requirements of multiple markets and enhancing the competitiveness of African produce.

Secondly, AfCFTA can promote investment in infrastructure and logistics, which are critical for efficient food distribution. Improved transportation networks, storage facilities, and market infrastructure can reduce post-harvest losses and ensure that food reaches consumers more

effectively. By addressing these logistical challenges, AfCFTA can enhance the resilience and efficiency of food systems across the continent.

Finally, AfCFTA can support the development of value chains that add value to agricultural products within Africa, rather than exporting raw commodities. This can create jobs, stimulate local economies, and ensure that a greater portion of the economic benefits of agriculture are retained within the continent. By fostering value addition and industrialization, AfCFTA can contribute to more inclusive economic growth and development.

Creating inclusive and equitable food systems in Africa requires a comprehensive approach that empowers women and youth, supports community-led initiatives, and promotes fair trade practices. The African Continental Free Trade Area (AfCFTA) offers a unique opportunity to drive these changes by facilitating trade, improving infrastructure, and enhancing value chains. By implementing these strategies and leveraging regional cooperation, Africa can build food systems that are not only productive and sustainable but also inclusive and equitable, ensuring that all segments of society benefit from agricultural development.

Building enabling environment

Creating an enabling environment is essential for the transformation of food systems in Africa. This environment encompasses policy and regulatory frameworks, infrastructure development, and trade policies that collectively support sustainable practices, enhance market access, and promote agricultural research and innovation. By fostering such an environment, Africa can address the myriad challenges facing its food systems and unlock significant opportunities for growth and development.

Policy frameworks

Policy frameworks that promote sustainable agricultural practices are critical for the long-term viability of Africa's food systems. Sustainable practices ensure that agricultural activities do not deplete natural resources or cause environmental degradation. Chukwuemeka *et al.* (2023) emphasize the necessity of policies that incentivize sustainable land use, conservation agriculture, and the adoption of climate-smart farming techniques. Such policies can include subsidies for sustainable inputs, tax breaks for environmentally friendly practices, and penalties for practices that harm the

environment. By aligning financial incentives with sustainable outcomes, governments can encourage farmers to adopt practices that enhance soil health, conserve water, and increase biodiversity.

Investing in agricultural research is another key component of an enabling environment. Increased funding and support for agricultural research can lead to the development of innovative solutions that address specific challenges faced by African farmers. Opara (2013) highlights the importance of research in improving crop yields, developing pest-resistant varieties, and enhancing resilience to climate change. Governments and international organizations should prioritize funding for agricultural research institutions, facilitate partnerships between researchers and farmers, and promote the dissemination of research findings. By bridging the gap between research and practice, policymakers can ensure that innovative solutions reach those who need them most.

Market access

Enhancing infrastructure is crucial for improving market access for smallholder farmers, who often face significant barriers in getting their products to market. Gashu *et al.* (2019) point out that poor road networks, inadequate storage facilities, and unreliable electricity supplies are major obstacles that limit farmers' ability to sell their produce at competitive prices. Infrastructure development should focus on building and maintaining rural roads, establishing cold storage and processing facilities, and ensuring reliable access to electricity and water. These improvements can reduce post-harvest losses, lower transportation costs, and enable farmers to access broader markets, thereby increasing their incomes and contributing to food security.

Implementing trade policies that facilitate intra-African trade and reduce barriers is essential for creating a more integrated and competitive agricultural market. Pasco (2019) argues that trade policies should aim to eliminate tariffs, reduce non-tariff barriers, and harmonize standards across countries. The African Continental Free Trade Area (AfCFTA) provides a framework for such policies, promoting the free movement of goods and services across the continent. By leveraging AfCFTA, African countries can create larger markets for their agricultural products, encourage regional value chains, and attract investment in the agricultural sector. Trade policies should also support smallholder farmers by providing them with

information on market opportunities and helping them comply with export standards.

The relationship between meteorology, agriculture, and food safety is crucial for the "farm to fork" model and the "Made in Africa" agenda. Accurate meteorological data is essential for farmers to optimize planting, protect crops from extreme weather, and reduce contamination risks, thereby ensuring high-quality produce (FAO, 2023). Understanding weather patterns helps predict pest and disease outbreaks, allowing timely interventions that uphold food safety (IPPC, 2022). Consumer needs are central, as there is a demand for safe, high-quality food that meets international standards. Phytosanitary measures, such as controlling pests and diseases, are vital for maintaining food quality and safety, especially for agricultural exports (WTO, 2022). By integrating meteorological insights, consumer demands, and phytosanitary standards, Africa can enhance its "farm to fork" approach, ensuring its agricultural products are safe, competitive, and aligned with the "Made in Africa" brand.

An enabling environment is fundamental for the transformation of Africa's food systems. By establishing supportive policy frameworks, investing in agricultural research, enhancing infrastructure, and implementing effective trade policies, African countries can create conditions that allow their food systems to thrive. Policies that promote sustainable practices and investments can ensure that agricultural activities are environmentally sound and economically viable. Increased funding for agricultural research can drive innovation and address specific challenges faced by farmers. Improved infrastructure can enhance market access, reduce costs, and increase the competitiveness of African agricultural products. Finally, trade policies that facilitate intra-African trade can create larger and more integrated markets, benefiting both producers and consumers. Together, these elements can help build resilient, inclusive, and sustainable food systems across the continent.

Governance for food systems transformation

Effective governance is a cornerstone for transforming food systems in Africa. It ensures that the policies and strategies designed to enhance food security, sustainability, and inclusivity are implemented efficiently and equitably. Good governance practices, including transparency, accountability, and inclusive decision-making, are critical for building trust

and fostering collaboration among stakeholders. This section explores the elements of good governance and the importance of policy implementation in driving food systems transformation.

Good governance practices

Transparency and accountability are fundamental principles of good governance that are essential for building trust within food systems. Transparent governance structures ensure that decisions and actions taken by authorities are open to scrutiny and that stakeholders can hold those in power accountable. Jordaan (2017) emphasizes that transparency in governance helps to prevent corruption, reduce inefficiencies, and promote the fair distribution of resources. For instance, making budget allocations and policy decisions publicly available allows stakeholders to understand how resources are being utilized and whether they align with the goals of food security and sustainability. Accountability mechanisms, such as regular audits and public reporting, ensure that policymakers and implementers are held responsible for their actions, fostering a culture of integrity and trust.

The continent must promote inclusive decision-making by engaging all stakeholders, particularly marginalized groups, in the governance processes of food systems. This approach ensures that the needs and perspectives of all community members are considered, leading to more equitable and effective outcomes. Pretorius and Schönfeldt (2023) argue that involving women, youth, smallholder farmers, and indigenous communities in decision-making processes can enhance the relevance and acceptance of policies and initiatives. Participatory governance models, such as community councils and stakeholder forums, provide platforms for diverse voices to be heard and for collaborative solutions to be developed. By fostering inclusivity, governance structures can address the unique challenges faced by different groups and promote more resilient and adaptive food systems.

Policy implementation

The development of effective policies is only the first step in food systems transformation; ensuring their implementation and monitoring is equally crucial. Kalibata (2022) highlights that policies must be designed with clear objectives, actionable steps, and measurable indicators to facilitate their execution and evaluation. Governments should establish robust

monitoring and evaluation frameworks to track policy implementation and assess their impact on food security, sustainability, and equity. Regular reviews and adjustments based on feedback and performance data can help refine policies and ensure they remain relevant and effective. Moreover, allocating adequate resources and building the capacity of implementing agencies are vital for translating policy goals into tangible outcomes.

Trade policies play a crucial role in advancing Africa's agricultural sector and overall economic growth. Policies promoting regional integration, such as those under the African Continental Free Trade Area (AfCFTA), aim to remove trade barriers, standardize tariffs, and create a single market for goods and services. By fostering intra-African trade, these policies enhance market access for African farmers and agribusinesses, enabling them to compete more effectively and increase export revenues (UNECA, 2023). Trade policies that support agricultural exports and safeguard domestic markets can stimulate local economies, drive investment in agriculture, and promote food security across the continent. Developing robust trade frameworks is essential for building resilient food systems that can withstand global market fluctuations.

Industrialization policies are vital for transforming Africa's agricultural sector by promoting value addition and diversifying economies. Agro-industrialization policies focus on developing processing facilities and value chains that convert raw agricultural produce into finished goods, thereby increasing the economic value of agricultural outputs. Policies supporting the establishment of agro-processing zones and special economic zones (SEZs) encourage investments in infrastructure, technology, and skills development (AfDB, 2022). These policies not only create employment opportunities but also reduce post-harvest losses and enhance food security. Encouraging industrial growth through targeted policies can help Africa reduce its dependency on raw commodity exports and build more sustainable, self-reliant economies.

Infrastructure policies are critical for improving agricultural productivity and market access. Policies that prioritize investment in transport networks, energy supply, water management, and digital infrastructure are essential for reducing the costs associated with moving goods to market and ensuring timely access to inputs and services (World Bank, 2022). Infrastructure policies should focus on building rural roads, irrigation systems, storage facilities, and electricity access to support

agricultural activities and reduce post-harvest losses. By developing robust infrastructure, African governments can facilitate better integration of smallholder farmers into local, regional, and global markets, thereby enhancing food security and economic growth.

STI policies are essential for driving agricultural transformation and enhancing food security in Africa. These policies promote research and development (R&D) and encourage the adoption of innovative agricultural practices, such as precision farming, biotechnology, and digital tools, to increase productivity and resilience (NEPAD, 2023). Effective STI policies facilitate the dissemination of technology and knowledge among smallholder farmers, enhancing their capacity to adapt to climate change and other challenges. Policies that support public-private partnerships in R&D and technology transfer can accelerate innovation and ensure that new technologies are accessible and affordable for all farmers. Integrating STI into agricultural policies is crucial for building a dynamic and sustainable agricultural sector in Africa.

There is a need for collaborative governance that involves the active cooperation of various stakeholders, including governments, the private sector, and civil society, in the management and transformation of food systems. Opara (2013) underscores the importance of multi-stakeholder collaboration in addressing the complex and interconnected challenges of food security and sustainability. Collaborative governance models facilitate the pooling of resources, knowledge, and expertise, leading to more comprehensive and innovative solutions. For example, public-private partnerships can leverage the strengths of both sectors to improve agricultural productivity, enhance market access, and drive technological innovation. Similarly, engaging civil society organizations can ensure that community needs are addressed, and that governance processes are transparent and accountable.

Governance for food systems transformation in Africa requires a multifaceted approach that emphasizes good governance practices and effective policy implementation. Transparency and accountability are essential for building trust and ensuring that resources are used efficiently and equitably. Inclusive decision-making processes can enhance the relevance and acceptance of policies by considering the diverse needs of all stakeholders. Ensuring that policies are effectively implemented and monitored is crucial for achieving desired outcomes in food security and

sustainability. Finally, collaborative governance models that involve governments, the private sector, and civil society can drive holistic and innovative solutions to the challenges facing Africa's food systems. By embracing these principles and practices, Africa can build resilient, inclusive, and sustainable food systems that meet the needs of its growing population.

Conclusion and recommendations

The transformation of Africa's food systems is critical for achieving sustainable development, food security, and inclusive economic growth across the continent. This paper has explored the various challenges and opportunities in Africa's food systems, emphasizing the need for comprehensive strategies that address environmental, economic, social, and political dimensions. By focusing on policy reform, technological innovation, capacity building, and good governance practices, Africa can overcome these challenges and harness its vast agricultural potential.

Africa's food systems are currently facing significant challenges that threaten food and nutrition security, environmental sustainability, and economic viability. Issues such as climate change, land degradation, low agricultural productivity, high levels of malnutrition, and inadequate governance frameworks are pervasive. However, the continent also has immense opportunities to transform its food systems through sustainable practices, technological advancements, and inclusive policies.

The drivers of change, including policy reform, technological innovation, and capacity building, are essential for fostering resilient and sustainable food systems. Policies that promote sustainable agricultural practices, increased funding for agricultural research, and enhanced market access are critical for driving productivity and resilience. Empowering women and youth, supporting community-led initiatives, and promoting fair trade practices are crucial for ensuring that food systems are inclusive and equitable. Additionally, leveraging the African Continental Free Trade Area (AfCFTA) can enhance intra-African trade, improve market integration, and stimulate economic growth.

Good governance practices, including transparency, accountability, and inclusive decision-making, are vital for building trust and fostering collaboration among stakeholders. Effective policy implementation and

collaborative governance can ensure that the benefits of food systems transformation are widely shared and sustained over the long term.

To achieve the transformation of Africa's food systems, it is essential to strengthen policy frameworks that support sustainable agricultural practices and investments. Governments should develop and implement policies that promote sustainable land use, conservation agriculture, and the adoption of climate-smart farming techniques. These policies should include financial incentives for sustainable practices, such as subsidies for environmentally friendly inputs and tax breaks, while imposing penalties for activities that cause environmental harm. By aligning financial incentives with sustainable outcomes, farmers will be encouraged to adopt practices that enhance soil health, conserve water, and increase biodiversity.

Investment in agricultural research is another critical recommendation. Increased funding and support for agricultural research can lead to the development of innovative solutions that address specific challenges faced by African farmers. Governments and international organizations should prioritize funding for agricultural research institutions, facilitate partnerships between researchers and farmers, and promote the dissemination of research findings. This investment will ensure that innovative solutions reach those who need them most and drive productivity and resilience in the agricultural sector.

Improving infrastructure is vital for enhancing market access for smallholder farmers. Infrastructure development should focus on building and maintaining rural roads, establishing cold storage and processing facilities, and ensuring reliable access to electricity and water. These improvements can reduce post-harvest losses, lower transportation costs, and enable farmers to access broader markets, thereby increasing their incomes and contributing to food security. Additionally, implementing trade policies that facilitate intra-African trade, reduce barriers, and harmonize standards across countries is essential for creating a more integrated and competitive agricultural market. The African Continental Free Trade Area (AfCFTA) provides a framework for such policies, promoting the free movement of goods and services across the continent.

Empowering women and youth is crucial for creating inclusive food systems. Gender-sensitive policies that address the unique challenges faced by women in agriculture, such as access to land, credit, and education,

should be implemented. Youth empowerment programs focusing on skill development, entrepreneurship, and technological literacy will enable young people to drive innovation in agriculture. Supporting community-led initiatives that provide training and technical assistance to local agribusinesses and promote cooperative models is also essential. These initiatives ensure that interventions are culturally relevant and responsive to the specific needs of the community, fostering sustainable livelihoods and improving food security at the local level.

Finally, fostering transparency and accountability in governance structures is essential for building trust and ensuring the fair distribution of resources. Governments should promote inclusive decision-making processes that engage all stakeholders, particularly marginalized groups, in the governance of food systems. Establishing robust monitoring and evaluation frameworks to track policy implementation and assess their impact on food security and sustainability is crucial. Encouraging collaborative governance models that involve governments, the private sector, and civil society in the management and transformation of food systems will drive holistic and innovative solutions to the challenges facing Africa's food systems.

By adopting these recommendations, African countries can create an enabling environment that supports sustainable, inclusive, and resilient food systems. The transformation of food systems is not only essential for addressing the immediate challenges of food security and environmental degradation but also for unlocking the long-term potential for inclusive economic growth and development across the continent.

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Traditional Institutions and Sustainability of African Cities and Communities

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Abstract

The future of Africa is widely said to be urban in extant studies, and by 2050, the continent's urban population will have doubled to about 2.5 billion. However, the Smart City Index Report for 2024, produced by the International Institute for Management Development (IMD), shows that only nine of these African cities are sustainable. The factors for the unsustainability of the other African cities and communities include disproportionate population growth rate, poor planning, inadequate infrastructure and resources, traffic congestion, poor waste management, limited access to essential services, youth bulge, crimes and criminality, gender inequities, and vulnerability of the environment to climate change. Addressing these challenges requires a sustainable urban development approach, prioritising inclusive growth, environmental resilience, and innovative solutions as recommended by the global Sustainable Development Goals (Agenda 2030), the African Union's Agenda 1963 ("The Africa We Want), and even the African Union's Charter on Values and Principles of Decentralisation, Local Governance and Local Development (2014). This paper focuses on the traditional institutions' roles in making these African cities and communities sustainable beyond the modern and predominantly Western methods of urban governance across the continent today. The paper problematises traditional institutions as those structures and knowledge systems that the African peoples depended upon before coming in contact with modernity but still find relevance today, having been transmitted across many generations. These institutions are increasingly brought to cities from rural communities by streams

of urban migrants. They help people to build resilience against the social, economic, political and environmental challenges of urban living. The paper advocates for African urban communities to more actionably integrate these traditional institutions into urban management regimes. Four critical areas of attention were identified to show how this could be done: (i) giving traditional title holders more official roles in urban governance, (ii) deploring the resources of traditional African institutions for dealing with emergent social, economic, political and environmental problems in cities and communities, (iii) injecting more African values into the urban management protocols, and (iv) mainstreaming gender in the application of African traditional institutions in urban governance. The paper argues that COVID-19 in 2020 left behind some lessons that could be built upon. Unable to get help outside their immediate communities, many turned to traditional institutions for support services and became counted among those who survived the pandemic. In the post-COVID years, life has become too expensive in many African cities. This has forced many urban dwellers to rely more on the indigenous African knowledge system for sustainability and to calm their ruffled urban constituencies. What is left now is for African urban managers to factor the lessons of Coronavirus disease (COVID-19) into their governance systems equally by injecting more ideas from traditional African institutions into their governance processes. However, urban managers and city dwellers need better education on integrating modern and traditional institutions to promote the sustainability of African cities and communities. Development agencies must support these capacity-building efforts to ensure that more African cities achieve sustainability.

Keywords: Traditional institutions, Urbanisation, African cities and communities, Sustainability, Smart city

Introduction

Africa is the most rapidly urbanising continent in the world. What is witnessed today is child's play compared to what is yet to come as it is projected that in the next 20 years or thereabouts, the urban population on the continent will double to an estimated 1.5 billion people. It is argued that

around half of the global population growth between now and 2050 will occur in nine countries, with four of them – Ethiopia, Nigeria, the Democratic Republic of Congo, and Tanzania – being in Africa. How sustainable are these cities likely to be? This question becomes necessary given the finding of the Smart City Index Report for 2024, produced by the International Institute for Management Development (IMD), that only nine African cities (out of the 142 so rated globally) are sustainable. These are Cairo, Egypt (ranked 114th globally); Algiers, Algeria (124th); Raba, Morocco (126th); Cape Town, South Africa (124th); Nairobi, Kenya (131st); Abuja, Nigeria (135th); Lagos, Nigeria (136th), Tunis, Tunisia, (137th), and Accra, Ghana (138th) (Michael 2024). The cities are considered sustainable because they provide their citizens a high quality of life while driving sustainable and socially inclusive economic growth. Their other qualities include technological innovativeness, a healthy physical environment, inclusiveness, social cohesiveness, and quality service delivery. The scores of these cities out of the 142 sustainable cities globally show that they rank too far behind the best.

The foregoing shows that cities' rating is based more on quality (sustainability) than quantity (density). To understand the challenges of urbanisation in Africa, two interesting books were produced in 2019 (Albert and Lawson 2019a, 2019b) in honour of one of the fathers of urban studies in the continent, Professor Akin Mabogunje. One of the objectives of the two publications was to gauge the extent to which the reasons for and impact of urbanisation in Africa had changed since some earlier studies done in the 1990s by the same set of academic networks (most especially Albert, Adisa, Agbola, and Hérault, 1994; Osaghae, Toure, Koumane, Albert, and Adisa 1994). The first volume of the 2019 publications covers issues of urbanisation across Africa, while the second focuses on Nigerian problems. The studies returned the damning submission that the majority of African cities are not sustainable and not much is being done to make them do better. They show that the population of African cities is still growing due to natural causes (such as uncontrolled birth rate) and migration from rural areas. More rural people are also forced to move to cities because of climate change, violent rural conflicts tied to competition for land resources, insurgency and terrorism. All these people flee to the city, thinking their sufferings will be alleviated. Edward Glaeser, a Professor of Economics at Harvard University, like several other scholars, endorsed the expectations of these rural/urban migrants when he said at a conference convened by the World Bank in June 2017 that “Cities are the best path we know out of poverty. They are the best

transformers of civilisations". However, it observed that "there are also demons that come with density¹." In other words, the more these migrants in African urban centres, the more problems the communities face. Many African cities and communities are at breaking point; they can no longer sustain healthy human living.

These problems of ill-coordinated urban growth make it necessary to take a more nuanced look at the nature of African cities and communities. Many of the skyscrapers in many of the cities overlook sprawling informal settlements and slums (Bradlow 2012:7). In other words, not all parts of the nine cities identified above are sustainable; only the small part housing the rich do. To explain this conjecture, it is necessary to observe, at the risk of oversimplification, that a typical African city (including the smart ones named above) has four interesting landscapes to be critically considered by students of sustainability studies. The first is often the "city centre", typified by glassy skyscrapers, Western type shopping malls, and bustling tree-lined streets. The novo rich in the society have their businesses and residences here. Closely following such well-policed and sometimes gated neighbourhoods are the areas where the rising or struggling middle class and those working for the novo rich are residents. They are often well provided with social amenities which the poor are often denied. Those who conducted the smart city surveys to identify the above-named nine sustainable African cities in Africa must have focused their attention on these high-brow areas. The surveys may not have captured the rather poorly planned or even unplanned overpopulated sections of the cities, with clusters of small buildings haphazardly concentrated along dusty roads and a poor sewage and refuse management system. It may not have covered the slums subordinated to some of these "commoners' settlements".

The marked distinction between the rich and poor people settlements in African cities negates the central aim of the global sustainable development goals which is to ensure that no one is left behind in enjoying the best of the world in the year 2030 and beyond. In this respect, Goal 11 of the Agenda targets "Sustainable cities and communities." The specific objectives of this particular goal include *making cities and human settlements inclusive, safe, resilient, and sustainable; ensuring access to adequate housing, transportation, and urban planning; protecting cultural heritage and natural habitats; supporting local economic development and innovation; and, reducing*

¹ <https://www.youtube.com/watch?v=37O58T4Jyx4&t=607s>

urban sprawl and environmental impact. The intention of Agenda 2030 is supported by Aspiration 14 of the Agenda 2063, the African Union's strategic framework for delivering inclusive and sustainable development in Africa by 2063. The Africa Agenda is otherwise known as "The Africa We Want". This particular Aspiration seeks to "Make cities and human settlement inclusive, safe, resilient and sustainable".

The foregoing poses several policy-relevant challenges to sustainability studies. How do the nine sustainable cities above get stronger by addressing the problems faced by their seemingly abandoned fringes denied quality of life? How do we ensure the sustainability of the cities not included in the nine above? How do we ensure the sustainability of what factors are now considered in giving the "sustainable cities" good marks? In other words, how do we ensure that sustainable cities do not become unsustainable in the future? How do we get more African cities to join the nine already said to be sustainable?

Answering these questions requires taking some cursory lessons from what was considered when tagging some African cities sustainable and the others not. The sustainable ones were so rated based on the evidence of modernity seen in them: public transportation, energy, economy, environmental impact and management. The paper argues that the traditional African institutions could as well be considered or appropriated for strengthening these sustainable cities and making those still struggling for sustainability to improve their status. This position is significant in an age when it is becoming increasingly expensive for Africans to consume external technologies. It is also increasingly realised that external solutions to African problems may not be sustainable as they may not align with local needs and priorities. Solutions from within are more likely to be culturally and contextually relevant, increasing their effectiveness. In all, it is increasingly realised that African states can unlock their potential by pursuing development alternatives from within, achieving sustainable development, and reducing their dependence on external actors.

Traditional institutions refer to social, economic, and political structures that have existed in a society since time immemorial and are often resistant to modernity on the account of being venerated by the people (see Neupert-Wentz and Müller-Crepon 2024, Ali, Ayoade, and Agbaje, 1989; Cohen and Middleton, 1967). In a postcolonial society, they refer to the institutions that existed before the society came in contact with foreign

traditions but are still held by the people because of their utilitarian values. In other words, they are transmitted across generations. As the name implies, the traditional institution is built upon or based on the history, ancestry, culture, custom, religion and values of the people, and the institution principally revolves around the traditional ruler who serves as the head and chief custodian of the culture of the people. They are based on native laws and customs.

Existing studies show that traditional institutions can be broken into different categories. Attention is called to seven types here. These are (i) the political - Kings, lesser traditional title holders, elders, etc. (ii) the social - family and kinship systems, age grade associations, social clubs and societies etc, (iii) the economic - most especially trade guilds, (iv) the religious and spiritual - traditional and modern, (v) the cultural and artistic - musical, dance and theatre groups, (vi) the educational - traditional apprenticeships, mentorship programs, oral history and storytelling, cultural and language schools, and (vii) the judicial - traditional courts and tribunals, councils of elders, mediation and arbitration bodies known to and respected by the people. Interestingly, the categories often overlap, and traditional institutions may serve multiple purposes and functions. Those committed to these institutions are often edged out of the modernised urban systems and have to make a living on the fringes of the society. This probably contributes to the unsustainability of many cities in Africa (see Neupert-Wentz and Müller-Crepon 2024, Mengisteab and Hagg, 2017; Ali, Ayoade, and Agbaje, 1989; Helmke and Levitsky, 2004).

To ensure that traditional institutions benefit from the sustainability of urban communities in Africa, the African Union in 2014 adopted the African Charter on the Values and Principles of Decentralisation, Local Governance and Local Development, which outlines some principles and values for ensuring the sustainability of local communities. The issues raised by the Charter include the need to transfer more power and resources to local governments for building a higher capacity of dealing with human development issues, including management of migrants, promoting economic growth and social welfare at the local level, involving citizens in local decision-making; respecting and protecting human rights at the local level; promoting gender equality in local governance and development; ensuring that local governments are accountable to their citizens; and, respecting and celebrating cultural, linguistic and geographic diversity (African Union 2014). The Charter came into force on 13 January 2019. But

not many African city managers are aware of them not to mention applying them to the ways they operate. The effective implementation of the Charter, along with the other existing instruments, would help to promote sustainable cities and communities.

Appropriating Traditional Institutions

The next step is to deal with the agency issues in appropriating the traditional institutions and then state how the work could be done. Three models for appropriating traditional institutions in urban management are proposed here given the general outlooks across Africa and building on the existing trajectories. These are (i) the political, (ii) the programmatic, (iii) and value-based. These are further explained below.

The Political: The political window has to do with political leaders, including holders of traditional authority, and city managers working together in managing the cities in a manner that would enable them to inject more indigenous knowledge into decision-making and problem-solving processes. This collaborative or “power-sharing model” model requires the government to give more actionable constitutionally recognised powers to those holding traditional political titles. This is the situation across Africa, but the system is not strong enough to ensure the sustainability of cities and communities on the continent. The colonial authority in various parts of Africa provided models that could be cited here. The administrators took off by recognising the traditional rulers as being the closest to the hearts and minds of the people. Working directly with them would make it easier for the people to comply with appropriate rules and regulations to ensure the sustainability of the colonial enterprise. It worked very well. There are some lessons to learn in this respect, especially from the practice of the “Indirect Rule” system of the British in Uganda, Ghana and Nigeria. Under the system, the British colonial administrators relied on traditional rulers to govern their subjects, using existing power structures to maintain order and collect taxes. The traditional rulers were appointed as Native Authorities, responsible for administering colonial policies at the local level. Traditional rulers were appointed as Urban Chiefs in urban areas, responsible for maintaining order and resolving community disputes. They also served as advisors to colonial administrators, providing insight into local customs and facilitating communication with the local population. They collected taxes and levies from their subjects, which were then passed on to the colonial authorities. These traditional rulers helped maintain law and order by settling disputes and punishing criminals according to customary law. They served as cultural

ambassadors, promoting African culture and traditions to the colonial powers (Crowder and Ikime 1970; Vaughan 2000).

Yet, the traditional rulers posed no threat to the colonial administrations as today's political leaders probably fear. They restricted themselves to what they were legally asked to do, and the system benefitted immensely. Calling attention to this fact of the close working relationship between the kings and the political administration in Ghana a colonial official commenting on what he saw of the political administration in Dagomba (Ghana) in 1902, "In reality, the administration is a direct one; the chiefs ... have tended to become mere sergeant-majors, through whom the administration can address the rank and file" (cited by Ferguson and Wilks 1970:332). The point he was trying to make here is that the partnership between the chiefs and the colonial administrators benefitted the latter more. The situation may not differ across Africa today if traditional rulers are given the right constitutional recognition for contributing to urban sustainability. There are too many "rank and file" that the managers of contemporary African cities and communities need to address through traditional rulers. Unfortunately, the resources are not used as they should be. In Nigeria, traditional rulers are not given any constitutional roles. Politicians come to them only when seeking the votes of their constituents.

The Programmatic: This relates to the occasional adaptation or adaptation of indigenous approaches for dealing with emergent social, economic, political and environmental problems. In this case, city managers merge modern and traditional knowledge systems to confront societal problems. It could also involve modern city managers calling for the assistance of those versed in indigenous knowledge systems when dealing with problems. A lot of this was seen during the COVID-19 outbreak in 2020. The third model on how to appropriate traditional institutions for ensuring the sustainability of African cities and communities is to identify and adopt some African value systems as the philosophical framework for decision-making, problem-solving, communication, relationship-building, personal and group growth, and organisational culture. Such values include those embedded in the Yoruba "omoluabi" principle which requires members of a lineage to invest heavily in preserving its good name; those encapsulate in South Africans' "ubuntu" often translated as "humanity towards others", or "Ujamaa", a Swahili tradition popularised by President Julius Nyerere in the 1960s meaning "familyhood" or "brotherhood". African communities are rich in these value systems that hold the people together.

One programmatic area in which traditional African institutions can promote the sustainability of cities and communities in Africa is tourism. African cities have all it takes to be big players in this sector, but there do not seem to be coordinated efforts to achieve this. Many of the rural migrants coming to African cities come with knowledge of different shades of cultural traditions and practices that could be harnessed for building big tourism industries – songs, dances, folktales, architectural practices, etc. The modern African states hardly see the need for weaving all these together to make the stakeholders that own them contribute meaningfully to making the cities more sustainable. In this way, it is argued that tourists can generate income and create jobs, reduce urban poverty and inequality, and incentivise the preservation of cultural heritage sites, traditions, and practices. Tourism can facilitate cultural exchange and understanding between visitors and locals. Ecotourism, especially systems built around the physical structures in cities and communities can promote conservation efforts and support protected areas. On a broader level, tourism can drive investment in infrastructure, such as hotels, roads, and utilities and catalyse urban renewal and regeneration efforts.

The Value-Based: The value-based model needs a more nuanced explanation, given that it could easily affect the two other models regarding urban sustainability. “Values” means the principles, beliefs, and standards that guide an individual's or organisation's behaviour, decision-making, and interactions. The core assumptions and convictions shape our attitudes, actions, and choices. These could be personal (related to individual beliefs and principles), organisational (defined by an organisation's mission and vision), cultural (shaped by cultural norms and traditions), or social (influenced by social norms and expectations). The values needed for ensuring the sustainability of any society, including urban communities, include moral principles (e.g., honesty, fairness), ethical standards (e.g., respect, responsibility), aesthetic judgments (e.g., beauty, creativity), spiritual beliefs (e.g., faith, compassion), life goals (e.g., health, happiness) and social norms (e.g., respect for authority, tradition).

Cross-cutting Lessons of COVID-19

In responding to COVID-19 in 2020, the urban environment in different parts of Africa witnessed how the three models of appropriating traditional African institutions in promoting sustainable cities and communities could be done. By leveraging traditional institutions, African cities responded to the pandemic in a culturally sensitive and effective

manner, promoting resilience and community cohesion. Unable to get help from outside, the continent's peoples fell back on their indigenous knowledge system. In this respect, traditional institutions support the African urban population in many ways. Traditional leaders and institutions played a crucial role in mobilising communities to adhere to public health measures, provided emotional and financial support to vulnerable members of the communities, facilitated community engagement and participation in public health initiatives, and helped monitor and report COVID-19 cases, facilitating contact tracing and testing.

Traditional healers and herbalists offered alternative healthcare options, often more accessible and affordable than conventional healthcare. Traditional religious leaders provided spiritual guidance and comfort, helping mitigate the pandemic's psychological impact. Traditional practices and beliefs were leveraged to promote hygiene and prevention, such as using traditional clothing and textiles as face masks. Traditional funeral practices were adapted to ensure safe burial practices, reducing the risk of transmission (Maseland 2020; Africa Center for Strategic Studies 2020, Dullah Omar Institute 2020).

Many urban dwellers in Africa still carry through some of the lessons learned during COVID-19 on the kind of support that traditional African institutions can provide them. What more? The economy of many of the African cities and communities in which they live collapsed in the aftermath of the pandemic. A major manifestation of this is the rising cost of food, housing, health care and other means of sustenance in many of these communities. This makes many to increasingly turn in the direction of traditional institutions for building personal and group resilience (Mareia 2022).

Conclusion

Making African cities sustainable involves both modern and traditional strategies. Existing studies only emphasise the role of modernity: world-class roads, economic centres, recreational facilities, and the like. The point made by this paper is that the role of traditional institutions has not been properly factored into the discourse. Consequently, many urban dwellers in Africa today are not only deprived of access to the benefit of city life but also discourses on how to make the cities sustainable. The issues are well dealt with in this paper, and some recommendations are made on what

to do. These include the need for policymakers to properly acknowledge traditional leaders' and institutions' legitimacy and influence; involve traditional institutions in decision-making processes to ensure inclusive and representative governance; collaborate with traditional institutions to leverage their expertise and community trust; incorporate indigenous knowledge and practices into modern decision-making processes; preserve and promote cultural traditions, customs, and values; and, encourage local communities to take ownership of development projects and programs. These issues have both academic and policy relevance on the future of Africa.

It is necessary to mainstream gender in all of the issues raised above. How traditional gender roles and thoughts can contribute to sustainable cities and communities include taking into cognisance the complementary strengths of men and women, which can foster collaborative approaches to sustainability, particularly women's caregiving roles that promote community cohesion and social support networks. These traditional gender roles can inform urban planning, prioritising safety, accessibility, inclusivity, and better-informed management of children and youth. In other words, African cities and communities can harness men's and women's strengths to achieve sustainability and development goals by recognising and valuing traditional gender roles and thoughts.

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Governance and the Resilience of Cities in Africa

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Abstract

The essay examines resilience in the face of rapid urbanization and heightened vulnerability to climate change and other shocks such as pandemics, disasters, conflict and socio-economic uncertainties in African cities. It emphasizes the significance of resilience in mitigating shocks and stresses, facilitating recovery, and advancing economic and social development. The discussion centres on the vital link between governance and resilience, stressing the need to address social inequalities and vulnerabilities. It explores how effective city governance can stimulate urban resilience, advocating for adaptive governance structures that prioritize community well-being. Additionally, it explores the role of state governance, and strategies for reinforcing frameworks to build resilient urban systems capable of mitigating shocks while withstanding their challenges, converting them into opportunities for growth in the African context.

Keywords: Smart city governance, mitigation and adaptation, Shocks and sustainable Development in Africa

Introduction

The resilience of cities in Africa is intricately linked to governance structures, policies, and practices that shape the ability of cities to respond to challenges and promote sustainable development. City resilience is crucial for addressing the complex challenges of an increasingly complex, interconnected and uncertain world of rapid change, characterised by increasing risks and challenges posed by climate change, natural disasters, health pandemics and socio-economic uncertainties. The Sustainable

Development Goal No. 11 calls on the world to “Make cities inclusive, safe, resilient and sustainable.” COP 21 highlighted the key role that urban areas play, not only in mitigating emissions but also in adapting to a changing climate. While governance is often listed as an aspect or component of resilience, how this can be achieved in low income countries with several constraints is still a subject of debate. The discourse on smart cities holds prospects for clarifying and addressing some of the issues. Perhaps it might hold the possibility of leap frogging into efficient governance in the future for low-income countries.

African nations are currently experiencing rapid urbanization (OECD/UN ECA/AfDB 2022), with the urban population growing significantly from 33 million individuals in 1950 to 548 million in 2018. Projections indicated a further 50% increase to 824 million by 2030 and a tripling to 1,489 million by 2050 (Gunalp et al. 2017). Despite this urban growth, African cities face persistent challenges stemming from technical and financial constraints. The prevalence of expansive informal settlements and marginalized communities heightens their vulnerability to shocks and stresses, underscoring the critical need to address social disparities and enhance resilience planning. According to the United Nations Economic Commission for Africa (ECA), Africa bears a higher risk level (ECA, 2023: 2) with a median score of 4.33, surpassing the global average risk of 4.11, due to high vulnerability and susceptibility indices coupled with limited coping and adaptive capacities. These challenges have been compounded by climate change, the Covid-19 pandemic, the conflict in Ukraine, and political turmoil, hampering progress towards the Sustainable Development Goals (SDGs) and casting uncertainty on the continent's future (ECA, 2023:112).

While the impacts of climate change, economic shocks, and health crises are increasingly prevalent globally, their severity is particularly pronounced in Africa. The impacts of events such as the global financial crisis of 2008–09, the commodity price collapse in 2013, the onset of the Covid-19 pandemic in early 2020, and the ongoing war in Ukraine have had profound effects on the continent. Recovery trajectories have varied across countries, with investments, domestic savings, government revenues, and economic structures remaining largely unchanged. Concurrently, urbanization, population density, and unemployment rates are on the rise across virtually all African countries (ECA, 2023).

The paper focuses on exploring the governance aspect of fostering resilient cities as pivotal hubs for Africa's growing population. It addresses the role of governance in cultivating urban resilience and suggests leveraging adaptive governance to bolster city resilience against climate-related disasters. Adaptive or smart governance can contribute to long-term sustainability and environmental preservation in cities by mitigating the impact on infrastructure, livelihoods, and ecosystems, as a driver of city resilience. It explores ways to build stronger, more adaptive governance institutions for African cities that prioritize the well-being of residents and foster inclusive and sustainable growth, build resilient city systems that can withstand shocks and handle uncertainties in Africa.

From the Eco-crisis to Resilience and smart cities

The concept of resilience is closely intertwined with sustainable development in cities, because resilient cities are better equipped to address current challenges and prepare for future uncertainties. The ECA (2023:2) defines resilience as “the capacity to withstand recurrent adverse economic and other shocks and stressors— and to adjust to and learn to live with change and uncertainty, without jeopardizing long-term development prospects”. Resilience entails the capacity to reorganize in the aftermath of crises, persist in learning, evolve while maintaining core identity and functionality, and engage in innovation to lay the groundwork for transformation. This concept stands at the heart of adaptive governance of cities (Boyd and Folke 2012).

City resilience refers to the ability of urban systems to endure, adapt, and transform in the face of diverse challenges like natural disasters, climate change, and socio-economic disruptions. Resilient cities exhibit sturdy infrastructure, efficient governance, social cohesion, and sustainable practices, enabling them to recover from crises and prosper in the long run. These cities can withstand shocks, economic downturns, and social upheavals, ensuring the provision of vital services, promoting social inclusion, economic growth, and environmental preservation. They excel in risk management, crisis response, and innovation, crucial for attaining sustainable development objectives and enhancing the urban dweller's quality of life (OECD 2018).

The “smart city” has become the archetype of the resilient city. It denotes a city that incorporates intelligent management and administration

practices, employing novel approaches to citizen engagement and communication, such as “e-management” and “e-democracy”. Adaptive digital governance plays a vital role in fostering innovation in city resilience by employing digital technologies to streamline administrative processes, implement smart security measures to reduce security risks, protect valuable assets, sensitive data, and individuals, and enhance transparency and citizen engagement. Smart cities leverage Information and Communication Technology (ICT) and digital innovations to address urban challenges, enhance urban governance, improve infrastructure and services, increase efficiency, and minimize resource consumption. These initiatives lead to an enhanced quality of life for residents by fostering innovation and promoting environmental conservation. Smart cities utilize cutting-edge technologies like Big Data and the Internet of Things (IoT) to enhance governance efficiency and functionality. They rely on active citizen engagement, encouraging participation in policy-making and governance processes, supported by appropriate education and a resilient cultural mindset. These cities prioritize knowledge-based growth by continuously generating and disseminating information, fostering innovative planning practices. Smart cities are structured, interconnected, and intelligent entities that exhibit advanced features in economic activities, governance structures, environmental sustainability, community well-being, and transportation systems (Meyer and Auriacombe, 2019).

A smart city utilizes governance and technology to enhance the benefits of urbanization while addressing its challenges for residents. Giffinger *et al.* (2007) define a smart city as one that performs well in a forward-looking manner across six characteristics: smart economy, smart people, smart governance, smart mobility, smart environment, and smart living. Each characteristic has specific factors and indicators for implementation and evaluation. Various indexes have been created to rank cities globally. One recent index is the IMD Smart City Index 2024, developed by the International Institute for Management Development (IMD) in collaboration with the World Smart Sustainable Cities Organization (WeGO). This index evaluates 142 cities worldwide based on resident perceptions of city structures and technology applications over the past three years. It assesses two pillars: Structures which evaluate existing infrastructure, and Technology which describes technological provisions. Each pillar is examined across five key areas: health and safety, mobility, activities, opportunities, and governance. Key factors influencing the transition to smart city development include technological infrastructure, connectivity,

sustainability, citizen participation, and effective governance. Smart cities hold the promise of fostering economic growth, social cohesion, and environmental sustainability, which are key drivers of sustainable development. Cities can address interconnected challenges, such as housing affordability, transportation access, environmental quality, protection of vulnerable populations, enhancement of infrastructure and services by promoting long-term sustainability in the face of rapid urbanization and climate change impacts.

Building resilience in cities requires a governance process that addresses the root causes of vulnerability, strengthens administrative systems, and fosters community engagement. It also includes investing in resilient infrastructure, incorporating climate adaptation measures into land use planning, and enhancing disaster preparedness (UNDP, 2018). These can only happen with strong political commitment, visionary leadership, and clear policy guidelines that can provide the necessary direction and support for implementing resilience strategies.

The state, governance and city resilience

Given the state's pivotal role in managing significant changes related to natural disasters and emergencies, it is crucial to engage the government in these efforts. As Duit (2014: 127) points out, the state remains a fundamental unit for environmental decision-making, management, and policy formulation, even amidst the pressures of globalization. This environmental responsibility requires state institutions to adopt proactive measures to combat environmental degradation and promote conservation initiatives (Lundqvist 2001, Meadowcroft 2005). Such measures include implementing sustainable development practices, encouraging green technologies, and enforcing regulations to protect natural resources and biodiversity.

The concept of an Eco-State underscores the importance of community involvement and participatory decision-making processes to ensure that diverse perspectives are considered and environmental issues are collectively addressed (Duit *et al.* 2016). The Eco-State embodies a transformative governance approach that prioritizes environmental protection, social equity, and economic prosperity in the decision-making process.

Resilience emerges as a result of deliberate choices made by state actors, policymakers, and the populace to manage the impact of disruptions effectively and efficiently. The foundation for such resilience lies in robust institutions (such as governmental efficacy, adherence to the rule of law, and the quality of regulatory frameworks), adequate availability of both public and private resources, and equitable redistributive strategies. These encompass redistributive policies incorporating a social protection system aimed at safeguarding households during economic downturns resulting from unexpected shocks. (ECA 2023: 130).

Adaptive leadership is crucial for fostering a culture of innovation, flexibility, and continuous improvement in government operations, while public organisations take initiative, experiment with new approaches, and learn from failures, fostering a culture of resilience and adaptability. (Heifetz et al., 2009). Governance is required to operate by means of adaptive capabilities to monitor and assess changing environments, identify risks and vulnerabilities, innovate and experiment with new strategies, and collaborate with diverse stakeholders to enhance preparedness and response efforts (Folke et al., 2005). Urban planning and risk management are better done through frameworks that engage and empower communities, strengthen social networks, provide effective communication channels, and empower marginalized groups to respond to crises and support recovery efforts (World Bank, 2017; UN-Habitat, 2016).

Przebylovicz and Cunha (2022) provide three key organizational features essential for efficient and successful smart city governance. These include (a) enhancing citizen engagement through participation, collaboration, and co-creation to facilitate the delivery of services and information, (b) ensuring governmental backing in the form of financial support, technology provision, and the contribution of skilled civil servants, and (c) managing the legal framework along with defining the strategic direction and ensuring alignment at the local government level. Smart governance is characterised by cross-sectoral collaboration and coordination among government agencies, non-profit organizations, private sector partners, and community stakeholders to leverage diverse expertise, resources, and networks in responding to complex challenges (Galderisi and Colucci, 2018).

Thus, city governance for resilience has multiple dimensions: self-regulation, characterized by informal interactions within civil society; co-

regulation involving partnerships between public and private stakeholders; and formal regulation enforced by government institutions. It often includes decentralization to promote inclusive decision-making and service delivery, and entrepreneurship; and democratization that fosters transparent and accountable decision-making (Cities Alliance 2017, Slater and Crispin 2022). Therefore, the efficacy of governance plays a pivotal role in fostering resilience, enabling a city to swiftly recover from shocks and embark on a path towards improved development outcomes by leveraging lessons learned from experiences to enhance governance practices.

Implementing governance reforms is often a crucial step in strengthening cities' ability to withstand shocks, promote inclusive development, and cultivate sustainable and habitable urban spaces (World Bank, 2017). Empowering local residents, fostering social cohesion, and encouraging inclusive participation in decision-making processes are identified as primary catalysts for enhancing city resilience, enabling communities to better respond to crises and facilitate recovery initiatives (UN-Habitat, 2019). Effective governance frameworks should entail clearly defined mandates, coordinated mechanisms, and regulatory structures tailored to address the unique vulnerabilities and complexities inherent in urban settings. It is through such robust frameworks that cities can effectively steer urban planning, disaster risk mitigation, and climate adaptation efforts (UN-Habitat, 2020).

Governance challenges for City Resilience in Africa

In 2024, nine African cities were featured in the IMD index: Cairo ranked 114, Algiers at 124, Rabat at 126, Cape Town at 129, Nairobi at 131, Abuja at 135, Lagos at 136, Tunis at 137, and Accra at 138. These cities have made significant progress in areas such as renewable energy and digital inclusion, exemplified by Cape Town's initiatives. They have also leveraged technology to implement smart grid systems and digital healthcare platforms in Nairobi and Accra, enhanced infrastructure and digital connectivity in Abuja, and promoted smart transportation and digital entrepreneurship in Lagos. Additionally, Tunis and Accra have utilized digital governance platforms and smart energy management systems to tackle complex urban challenges.

Despite these advancements, these cities continue to face numerous challenges, including security concerns, high unemployment rates,

infrastructure deficits, a lack of affordable housing, and inadequate public services. Furthermore, the availability of managerial and technical personnel in nearly all African urban centres significantly falls short of the standards necessary to provide essential services, particularly when considering population density and area. Cities in Ghana, Ethiopia, Uganda, and Mozambique, similar to others in the region, struggle with critical shortages of personnel in vital technical fields such as water supply, public works, waste management, and essential areas like urban planning and financial management (Slater & Crispin, 2022).

In Africa, central governments wield significant influence in policy development, even within federations like Nigeria and Ethiopia, given the comparatively limited financial and political strength of local governments (Habtezion *et al.*, 2015). As adaptation efforts predominantly occur at the grassroots level, a deeper comprehension of the power dynamics between local and central authorities, as well as their interplay with the wider regional and global frameworks, is crucial for fostering resilience. Governance reform occurs in a context of interconnected policies, technologies, applications, and services across various levels - local, national, regional, and international. A resilient city governance model entails the capacity of both government officials and stakeholders to collaboratively adapt and respond efficiently to changing and unexpected threats, while maintaining essential services, ensuring public safety, and driving forward sustainable development goals. The core concept of governance reforms for enhancing city resilience in Africa is centered on mitigation and adaptation through stakeholder collaboration and institutional leadership. It integrates both institutional climate strategies and emerging community-led initiatives into the broader process of achieving sustainable development goals.

The World Cities Report 2022 highlighted that numerous African cities are failing to make substantial investments in climate-resilient infrastructure, resulting in environments that are overcrowded, disconnected, and expensive. These cities frequently suffer from unclear governance frameworks, unresponsive institutions, and opaque decision-making processes, all of which are crucial for effective urban planning, resource allocation, and service delivery. Weak institutional capacity, insufficient financial resources, corruption, political instability, and fragmented governance structures significantly hinder their ability to manage urban growth effectively, generate revenue, and provide essential services to residents.

African cities are notably more fragmented than their Asian and Latin American counterparts, with a fragmentation rate that is 23 percent higher (Grover, Lall, & Maloney, 2022). This fragmentation escalates infrastructure costs and reduces competitiveness, ultimately deterring both local and foreign investment. The institutional fragmentation, characterized by divided powers across various levels of government and the presence of informal governance systems, results in overlapping responsibilities and ambiguous lines of authority. Consequently, this situation leads to coordination challenges, redundant initiatives, complex decision-making processes, uneven urban development, infrastructure deficits, and social inequalities, particularly in informal settlements and marginalized areas within cities.

Meaningful citizen engagement and participation is often trounced by competing interests, patronage networks, and power dynamics, leading to suboptimal decisions, outcomes and inefficiencies in urban governance. Political considerations may override technical expertise and strategic planning, undermine transparency, accountability, and opportunities for public input in decision-making processes. These hinder the inclusivity and responsiveness of governance structures, impeding the effectiveness of urban management initiatives (Meyer and Ariacombe 2019).

Reorganising City governance for city resilience

The Sendai Framework for Disaster Risk Reduction 2015-2030 represents a significant milestone in global efforts to enhance resilience, reduce disaster risk, and promote sustainable development. It emphasizes the importance of understanding risk, strengthening governance, investing in resilience, and enhancing preparedness. The framework provides a comprehensive roadmap for building more resilient and sustainable societies. Strengthening governance underscores the need for effective multi-stakeholder governance mechanisms to coordinate disaster risk reduction efforts across sectors and scales. It calls for the integration of disaster risk considerations into policies, plans, and programs, as well as the engagement of local communities, civil society, and the private sector in decision-making processes (UNDRR 2015).

The African Union (AU) has embraced the Sendai Framework and committed to its implementation to address the unique challenges and vulnerabilities faced by the continent. It has advocated for the integration of

disaster risk considerations into development policies and plans to enhance resilience at both national and regional levels with specific targets. But the mid-term review of performance in the governance of Disaster Risk Reduction (DRR) shows that national authorities in the region have shown a strong commitment to enhancing disaster risk management structures by establishing national platforms for Disaster Risk Reduction (DRR) and improving resources for civil protection agencies. While national DRR strategies aligned with the Sendai Framework have been developed, there are shortcomings in inclusivity, coordination among DRR, environment, and climate programs, and support for decentralized DRR structures at the local level. The involvement of women, local communities, and vulnerable groups in their implementation has been poor (UNDRR 2023: 71).

Fragmented governance systems can be addressed by institutional reforms that foster multi-level governance arrangements, strengthen coordination frameworks and mechanism among government agencies, and streamlining decision-making processes can help address fragmentation and improve governance effectiveness over the long term considering the political processes involved in the establishment of local governments and the intricate nature of restructuring territorial boundaries (O'Farrell et al 2019). In the short term, states or middle level governments can establish cooperative frameworks among local governments to collectively address urban challenges, instead of the prevalent trend of encroaching upon the functions of local governments. Integrated governance frameworks can help overcome siloed approaches and foster holistic solutions to urban challenges (Aiyede, 2024). It is also important for African leaders to pursue greater economic and political integration in place of bilateralism. Recent global shocks offer an opportunity to accelerate global cooperation because they have shown that climate change risks are equally catastrophic, and pandemics do not discriminate poor and rich regions, regardless of where they begin (ECA 2023: 140).

Sharing best practices, building local capacity, and fostering knowledge exchange among cities can accelerate the adoption of resilience strategies and promote learning across diverse contexts. There is need to invest in training programmes, knowledge sharing initiatives, and technical assistance to build the skills and capabilities of local government officials, civil servants, and urban planners to effectively manage urban challenges and implement sustainable development strategies. Community engagement and empowerment are fundamental aspects of city governance

for resilience in Africa. African leaders have to encourage and promote multi-stakeholder engagement, participatory decision-making, and inclusive governance processes in cities to enhance their capacity to respond to shocks and stresses, adapt to climate change, and promote sustainable development (Berkes and Ross, 2013).

Incorporating traditional knowledge and practices like farming methods, terracing, agroforestry, weather forecasting, and early warning systems can help urban communities become stronger and more united. It encourages local people to take part in building resilience and helps use local knowledge for better, fitting solutions. Training and sharing knowledge are important for improving how cities are managed, including developing skills, building institutions, and learning how to adapt for city officials, disaster management teams, and other important groups. (Slater and Crispin, 2018).

Transparency and accountability should underpin effective city governance in Africa. Openness in decision-making, access to information, and mechanisms for public oversight are essential for ensuring that governance processes are fair, just, and responsive to the needs of city residents. Inclusivity, transparency, and citizen participation can make governance systems to be more responsive, accountable, and equitable (Pelling & Blackburn, 2014).

Conclusion

Africa's cities are increasingly exposed to natural disasters due to weak governance and inadequate management of rapid urban growth. As sub-Saharan Africa's socioeconomic systems become increasingly integrated into global systems, and in the absence of effective cross-border governance mechanisms, systemic risks is an increasing concern for the region.

Governance structures are crucial to the resilience of cities worldwide. Strengthening a country's ability to withstand shocks necessitates the enhancement of capacities to design development plans that anticipate potential challenges and devise proactive response measures (ECA 2023: 136). It is essential to strengthen and integrate governance frameworks at local, national, regional, and global levels, promote policy coherence, and invest in stakeholder engagement and capacity building to foster resilience in Africa.

Embracing adaptive, responsive, and innovative measures within urban governance is vital to unlocking the potential of African cities as centres of innovation, trade hubs, and drivers of productivity, science, and culture. These cities play pivotal roles in stimulating economic growth, promoting social well-being, and protecting the environment. The transformation of city governance should aim to empower urban areas to turn risks and shocks into opportunities for growth and development (Robert, Zongo, Ragan et al 2022).

Governance fragmentation has to be tackled through collaboration and communication. As such, effective dialogue among stakeholders is crucial. The dialogue could be multisectoral and targeted towards promoting the awareness of interdependence among stakeholders as a basis for collaboration. Financial support for organizing meetings that support exchanges between stakeholders and the joint drafting of policy documents are essential. Donors should provide funding for activities that generate knowledge, nurture exchange, enhance stakeholders' competencies and create mutual understanding.

Financial constraints can be mitigated by ensuring that the mandates of city governments are adequately funded. This can be achieved through tax reforms that provide municipalities with greater taxing authority, establishing public-private partnership arrangements, or facilitating transfers from higher levels of government to local authorities. In countries like South Korea and Japan, the redistribution of tax revenues to Seoul and Tokyo, aimed at compensating for the costs associated with urban sprawl, has proven to be a significant relief. However, such measures must be accompanied by transparency and a strong culture of accountability, with an emphasis on community participation and local ownership (Markovits, 2018). Additionally, it is essential to improve financial systems and revenue-generating capabilities that are necessary for the growth of African cities.

Considering the uneven development of various urban areas, it is essential to focus on disadvantaged regions that require targeted improvements in physical infrastructure and social policies, including health, education, job creation and housing. Evidence-based approaches are crucial to this process. Many cities struggle with insufficient staffing and financial resources, limited knowledge and expertise, a lack of trust in the data produced by existing city systems, and outdated or incompatible data collection and analysis methods (Bloomberg Philanthropies, n.d.). The

African Union (AU), the United Nations (UN), and other donors must acknowledge these issues as vital areas for intervention.

Incorporating traditional knowledge and practices—such as indigenous farming methods, terracing, agroforestry, weather forecasting, early warning systems, and the role of traditional institutions—can significantly enhance resilience in urban communities. By empowering residents to engage in resilience-building initiatives, Africa can strengthen social cohesion, foster trust, and improve resilience across various dimensions. This approach facilitates the integration of local knowledge, promotes community ownership, and leads to the development of culturally appropriate, context-specific, and sustainable resilience strategies.

Moreover, capacity building and knowledge sharing are essential for reinforcing governance structures. This includes enhancing technical expertise, institutional capacity, and adaptive learning capabilities among city authorities, disaster management agencies, and other stakeholders.

The African Union should enhance its urban resilience initiative by partnering with the African Development Bank to promote collaboration among stakeholders in urban areas and national governments. This partnership is vital for the development and enforcement of regulations, as well as for implementing effective strategies to manage informal sectors. The AU should embrace a whole-system approach that incorporates three essential components: eliminating siloed perspectives on risks, bridging geographical gaps in risk and hazard management, and cultivating the capacity to identify risks in areas that have previously gone unrecognized.

Governance frameworks should evolve from merely addressing specific hazards to conducting comprehensive assessments of all potential vulnerabilities and their underlying causes, supported by robust early warning systems. To achieve this, the World Bank, the UN system, and the AU must work together to build capacity by investing in individuals who are prepared to tackle the challenges associated with enhancing urban resilience.

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Evaluating the Realities of SDG11 in Africa: Achieving Urban Sustainability by 2030–Fact of Fiction?

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Abstract

This commentary critically examines the progress and challenges in achieving Sustainable Development Goal 11 (SDG 11) in Africa, which aims to make cities and human settlements inclusive, safe, resilient, and sustainable by 2030. Despite rapid urbanisation and economic growth, Africa's urban areas face significant challenges, including outdated colonial-era planning systems, high youth unemployment, and inadequate infrastructure. The persistence of informal settlements, environmental degradation, and governance issues further complicate urban development efforts. The commentary explores innovative strategies to advance SDG 11 within the remaining time frame, focusing on digital twin technology. Digital twins hold transformative potential by simulating urban scenarios, optimising resource allocation, and improving municipal operations. These computerised models replicate real-world systems, using logic, machine learning, simulation, and real-time data to support informed decision-making. These technologies can significantly improve urban planning, public safety, and service delivery, creating more resilient and sustainable urban environments on the continent. Critical components for successfully implementing sustainable cities are outlined, emphasising the importance of strategic planning, talent development, robust data infrastructure, and active collaboration between the public and private sectors. The SODPA model—Strategy and Talent, Operation and Business, Data and Infrastructure, Platform and Technology, and Application and Scenario—provides a comprehensive

framework for developing and managing digital twin cities. The commentary underscores the need for significant policy changes, increased investment in urban infrastructure, and innovative financing mechanisms to bridge the existing gaps. The conclusion calls for a concerted effort from all stakeholders to leverage technology and foster inclusive, resilient, and sustainable cities across Africa by 2030.

Keywords: SDG11; Sustainable urban development; Challenges of urbanisation; Resilient urban planning; Digital Twin Technology

Introduction

Africa faces significant economic difficulties developing livable towns and cities to attain SDG 11 (*'Make cities and human settlements inclusive, safe, resilient and sustainable'*) (Mangweta, Mokoel, & Monama, 2022; Nnenna, Mulegi, Mbabazi, & Esther, 2023). A major obstacle is the enduring influence of colonial-era planning systems, which many African countries still use, resulting in fragmented urban environments and urban sprawl (Monama, Mokoel, & Mokgotho, 2022).

Urbanism's complexity in Africa varies greatly and is context-dependent (Cobbinah, 2023). Despite growing research, urban planning and development challenges remain underexplored (Dodman, Leck, Rusca, & Colenbrander, 2017; Cardoso, 2016; Van Noorloos, 2018). Many African cities struggle with rapid urbanisation and inadequate planning (Cobbinah, 2023). The demand for urban services and affordable housing is overwhelming cities in the Global South (Gebregiorgis, Namangaya, Greiving, & Kombe, 2022). Slum or informal settlement dwellers comprise over half of the urban inhabitants in cities like Addis Ababa and Dar es Salaam (Gebregiorgis, Namangaya, Greiving, & Kombe, 2022). Cities must address environmental, mobility, and waste management issues while improving housing and sanitation for over half of their population (Alem & Namangaya, 2021).

In addition, global climate change and poor urban planning significantly increase cities' likelihood and severity of flooding (Cobbinah, Poku-Boansi, & Peprah, 2017; Addaney, Boshoff, & Olutola, 2017; Addaney & Cobbinah, 2019). The layout of urban settlements, the deterioration of green and blue infrastructure, and the limited urban management capacity all contribute to heightened flood risk (Gebregiorgis, Namangaya, Greiving,

& Kombe, 2022). Moreover, informal settlements in hazardous and environmentally sensitive areas are becoming increasingly common in African urban settings, as well as in Latin America and Asia (Greiving, Du, & Puntub, 2018).

Africa is the fastest-growing continent yet the least urbanised (UN-HABITAT, 2022). The urban population has quadrupled over the past three decades, with 44% now living in cities (Wang & Kintrea, 2021; Forget, Shimoni, Gilbert, & Linard, 2021; UN-HABITAT, 2022). By 2035, half of the region's population will be city dwellers, and by 2050, six out of ten will live in urban areas. Despite predictions of a slowdown, Africa will continue to have the highest urban growth rate globally (UN-HABITAT, 2022). Rapid population growth without improved infrastructure and services negatively affects Sub-Saharan Africa (SSA) (Saghir & Santoro, 2018). Low investment, declining productivity, and negative per capita income growth persist (Saghir & Santoro, 2018). Structural changes and building local capacity for managing urbanisation are essential for long-term economic success (Saghir & Santoro, 2018).

This study assesses the progress and obstacles to achieving SDG 11 in Africa and analyses urbanisation's impact on sustainable development. It identifies economic, governance, and environmental challenges and suggests actionable plans to address these hurdles. Additionally, the study outlines a roadmap for cities to progress towards SDG 11, emphasising stakeholder involvement, pilot projects, and feedback mechanisms for sustained improvement. These guidelines aim to assist decision-makers, urban planners, and stakeholders in achieving urban development in Africa by 2030.

Urbanisation in Africa: Challenges and Opportunities

Challenges

Urbanisation in Africa is rapidly increasing, making it the fastest-growing yet least urbanised continent (UN-HABITAT, 2022). Africa's urban population growth rates are the fastest globally, at 3.17% between 2015 and 2050 (UN-HABITAT, 2022) (see **Tables 1 and 2 below**). For example, Nigeria's urbanisation increased from 17% in 1960 to over 50% in 2020 and is projected to reach 68.4% by 2050 (Sakketa, 2023). This rapid urban expansion is often characterised by informal settlements, inadequate infrastructure,

high unemployment, insufficient local government funding, and poor governance (van Vliet, 2019; de Bruin, Dengerink, & van Vliet, 2021; UN-HABITAT, 2022). Rising inequality, poverty, and climate change's effects further exacerbate urban challenges in SSA (UN-HABITAT, 2022). For example, South Africa, Ghana, and Kenya also exhibit high urbanisation rates but face significant challenges such as inequality, unemployment, and environmental degradation (Sakketa, 2023).

Despite the potential economic benefits, urbanisation often occurs at lower income levels and fails to increase demand for agricultural products or improve general well-being in many regions (Cordes & Morrison, 2023; Li, Yu, & Hong, 2023). Over 70% of Africa's urban population lives in slum conditions, worsening socioeconomic disparities (Sakketa, 2023). Urbanisation also leads to increased solid waste, pollution, and environmental degradation, posing significant health risks (Hoorweg, Bhada-Tata, & Kennedy, 2013; Ghosh, *et al.*, 2022). Urbanisation is also linked to increased greenhouse gas emissions, straining natural resources (Lall, Henderson, & Venables, 2017).

In addition, the persistent influence of colonial-era planning systems has resulted in urban forms incompatible with contemporary African cities' diverse needs (van Oostrum, 2024). Colonial design systems have traditionally placed a higher priority on automobile mobility than pedestrian accessibility, creating urban landscapes that hinder walkability and livelihoods that are inhospitable to the requirements of the urban poor, who mainly depend on walking for everyday commuting and rely on accessible public spaces and services (van Oostrum, 2024; Cobbinah & Finn, 2024). These systems often perpetuate spatial segregation, as seen by the lack of consideration given to indigenous knowledge systems in design, which might improve community cohesion and well-being in low-income (Billawer & Nel, 2024). This situation leads to fragmented urban environments that fail to integrate new migrants, particularly those settling in informal settlements on the urban periphery (van Oostrum, 2024). This exclusion is physical but also social, economic, and political, contributing to a growing divide between established urban residents and those seen as "outsiders" (Yeboah, 2024).

The juxtaposition of contemporary and traditional urban districts exacerbates issues of equality and liveability as Western planning frameworks fail to accommodate the unique spatial, cultural, and socioeconomic demands of African inhabitants (Ola, 2023). The reliance on

these outdated frameworks has rendered cities less liveable, unable to keep pace with rapid urban expansion or provide sufficient services and amenities for all residents (Ola, 2023). Moreover, project-oriented and centralised planning methods fall short of addressing the needs of informal settlements, which are expected to house a significant portion of future urban population growth (Okyere, Frimpong, Diko, Mensah, & Pedrosa, 2023).

To tackle these challenges, urban planning in Africa must move beyond the constraints of colonial-era systems and adopt a more inclusive approach (Torabi Moghadam, 2024). This includes empowering local communities, involving them in the planning process, and developing policies that address the needs of all urban residents, particularly those who have historically been marginalised (Fadda, 2024; Okyere, Frimpong, Diko, Mensah, & Pedrosa, 2023). By doing so, cities may become more equitable, sustainable, and capable of fostering social cohesion among diverse populations (Kasusu & Chikweshe, 2024). Rethinking urban planning through this lens will enable African cities to serve the demands of their varied populations better and truly realise the goals of inclusivity as envisioned by SDG 11.

Opportunities

Nonetheless, urbanisation presents opportunities for economic growth and poverty reduction. It can create new jobs and diversify rural livelihoods, particularly in small and secondary towns (Ørtenblad, Birch-Thomsen, & Msese, 2019). For example, urbanisation has significantly reduced poverty in Tanzania, especially in the secondary cities (Christiaensen, De Weerd, & Todo, 2013). Effective urban planning and governance can harness urbanisation to enhance economic opportunities, improve infrastructure, and support climate change adaptation (Grafakos, *et al.*, 2020).

Financial connections between urban and rural areas, such as remittances, help rural communities by providing investments and overcoming cash flow problems, thus increasing agricultural production (Kapri & Ghimire, 2020). Furthermore, understanding urbanisation's impact on biodiversity and ecosystem services is crucial for achieving sustainable development and food security in urban and rural areas (Sakketa, 2023).

Table 1: Level of Urbanisation

| Region | Percentage urban | | | | | | | |
|---------------------------------|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | 2045 | 2050 |
| World | 53.9 | 56.2 | 58.3 | 60.4 | 62.5 | 64.5 | 66.4 | 68.4 |
| More developed regions | 78.1 | 79.1 | 80.2 | 81.4 | 82.7 | 84.0 | 85.4 | 86.6 |
| Less developed regions | 49.0 | 51.7 | 54.3 | 56.7 | 59.0 | 61.3 | 63.4 | 65.6 |
| Africa | 41.2 | 43.5 | 45.9 | 48.4 | 50.9 | 53.6 | 56.2 | 58.9 |
| Asia | 48.0 | 51.1 | 54.0 | 56.7 | 59.2 | 61.6 | 63.9 | 66.2 |
| Europe | 73.9 | 74.9 | 76.1 | 77.5 | 79.0 | 80.6 | 82.2 | 83.7 |
| Latin America and the Caribbean | 79.9 | 81.2 | 82.4 | 83.6 | 84.7 | 85.8 | 86.9 | 87.8 |
| North America | 81.6 | 82.6 | 83.6 | 84.7 | 85.8 | 86.9 | 88.0 | 89.0 |
| Oceania | 68.1 | 68.2 | 68.5 | 68.9 | 69.4 | 70.2 | 71.1 | 72.1 |

Source: (UN-HABITAT, 2022)

Table 2: Urban rate of change 2015–2050

| Region | Average Annual Rate of Change of the Urban Population (per cent) | | | | | | | Entire Period |
|---------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| | 2015-2020 | 2020-2025 | 2025-2030 | 2030-2035 | 2035-2040 | 2040-2045 | 2045-2050 | |
| World | 1.90 | 1.73 | 1.58 | 1.45 | 1.33 | 1.22 | 1.13 | 1.48 |
| More developed regions | 0.50 | 0.46 | 0.44 | 0.40 | 0.36 | 0.32 | 0.28 | 0.39 |
| Less developed regions | 2.34 | 2.09 | 1.88 | 1.71 | 1.56 | 1.42 | 1.31 | 2.09 |
| Africa | 3.58 | 3.44 | 3.32 | 3.19 | 3.04 | 2.89 | 2.71 | 3.17 |
| Asia | 2.16 | 1.84 | 1.58 | 1.35 | 1.15 | 0.98 | 0.84 | 1.41 |
| Europe | 0.35 | 0.30 | 0.28 | 0.26 | 0.25 | 0.22 | 0.17 | 0.26 |
| Latin America and the Caribbean | 1.30 | 1.15 | 1.00 | 0.85 | 0.72 | 0.59 | 0.47 | 0.87 |
| North America | 0.95 | 0.96 | 0.92 | 0.84 | 0.75 | 0.67 | 0.62 | 0.82 |
| Oceania | 1.42 | 1.30 | 1.24 | 1.18 | 1.15 | 1.12 | 1.07 | 0.89 |

Source: (UN-HABITAT, 2022)

From MDG 7 to SDG 11 and the New Urban Agenda

The Millennium Development Goals (MDGs) aimed to address global issues like poverty, hunger, and environmental degradation by 2015 (World Health Organisation, 2018). Adopted in 2000, the MDGs provided a framework for international development efforts but fell short on human rights, gender equality, environmental sustainability, and economic growth (Ford, 20215).

The Johannesburg Declaration (2002) and the "The Future We Want" document (2012) led to the development of the Sustainable Development Goals (SDGs), expanding the focus to a broader range of issues. The 2030 Agenda for Sustainable Development, approved in 2015, includes 17 SDGs (United Nations, 2024).

Target 11 of MDG 7 (*'Ensure environmental sustainability'*) aimed to improve the lives of 100 million slum dwellers by 2020, highlighting slums as a critical development issue (United Nations, 2022). However, little progress was made due to the rapid pace of urbanisation and the MDGs' limited view of urban sustainability (Mangweta, Mokoel, & Monama, 2022). The Habitat Agenda inspired efforts to create sustainable human settlements and eradicate slums (Croese, Cirolia, & Graham, 2016).

The SDGs, particularly SDG 11, focus on creating inclusive, safe, resilient, and sustainable cities (Metaxas & Metaxas, 2023). The City Prosperity Initiative (CPI), introduced by UN-Habitat in 2015, aims to help governments recognise and address urban challenges using regulated methodologies and statistical analysis (Obure, *et al.*, 2019).

Neighbourhood-level improvements, including public health, affordable housing, and climate action, are crucial for achieving SDG 11 (Sharifi & Murayama, 2013). Tools like CASBEE-UD (Japan), BREEAM (UK), and LEED-ND (USA)¹ help monitor and assess sustainability development, promoting innovation and transparency (Braulio-Gonzalo, Bovea, & Ruá,

¹ These there are three internationally applicable and widely used tools which include the Comprehensive Assessment System for Built Environment Efficiency Urban Development (CASBEE - UD, Japan), the Building Research Establishment Environmental Assessment Method (BREEAM - United Kingdom), and Leadership in Energy and Environmental Design Neighbourhood Development (LEED-ND, USA) (Braulio-Gonzalo, Bovea, & Ruá, 2015).

2015). However, these programs require thorough calculations and substantial effort (Arslan, Durak, & Aytac, 2016).

The New Urban Agenda (NUA), approved at the Habitat III conference in October 2016, is the first globally approved document outlining how the urban component of the SDGs, particularly SDG 11, would be implemented (Vaidya & Chatterji, 2020). It guides the UN system's urban interactions for the next 20 years, emphasising actions to ensure cities and human settlements serve as engines of growth (UN-Habitat, 2018).

Building on SDG 11, the NUA extends beyond Goal 11 to include a broad range of activities required to make cities spatially effective for sustainable development (UN-Habitat, 2018). It outlines strategic measures such as national urban policies, laws, spatial planning, and municipal budgets to support the realisation of SDGs (United Nations, 2017; UN-Habitat, 2018). These frameworks help integrate SDG 11 goals into local planning and governance (Vaidya & Chatterji, 2020).

The NUA represents a global effort to rethink urban systems and create a more equitable and sustainable future, recognising cities as potential solutions to global problems (United Nations, 2017). It presents a paradigm shift with five main implementation pillars: national urban policies, urban legislation and regulations, urban planning and design, local economy and municipal finance, and local implementation (United Nations, 2017). These pillars provide standards and principles for urban planning and development.

Special attention in implementing the NUA is given to the challenges faced by developing nations, least developed nations, landlocked nations, small island developing states, and middle-income nations (United Nations, 2017). Nations experiencing conflict or affected by disasters also require focused efforts (United Nations, 2017).

Assessing the Progress of SDG 11 in Africa

As mentioned in Section 2, Africa faces numerous obstacles to achieving SDG 11, including severe economic challenges and the persistent impact of colonial-era urban planning systems, which lead to fragmented urban landscapes and urban sprawl (Mangweta, Mokoel, & Monama, 2022; Nnenna, Mulegi, Mbabazi, & Esther, 2023). Rapid urbanisation and rising

urban unemployment further exacerbate these issues (Mangweta, Mokoel, & Monama, 2022). Africa's young and fast-growing population increases the need for sustainable urban infrastructure, yet high youth unemployment hinders progress (International Labour Organization, 2023).

Urban expansion often forces people to live on unplanned and unlawful land, straining local government's ability to provide services (Clark II, 2017). Low tax revenues limit local governments' capacity to fund infrastructure projects, necessitating innovative financing strategies like land-based financing (Sait, 2020; Cirolia, 2021). However, this can increase government expenditure and debt, highlighting the need for flexible financial instruments (Sakketa, 2023).

Furthermore, high poverty rates and inequality pose significant barriers to adopting sustainable practices (Nnenna, Mulegi, Mbabazi, & Esther, 2023). Despite efforts to address these issues, little progress has been made due to rapid urbanisation and inadequate planning (Mangweta, Mokoel, & Monama, 2022). The urban poor often live in hazardous conditions, exacerbating urban challenges (Saghir & Santoro, 2018; Cali & Menon, 2013).

Urban planners must address social exclusion, water shortages, environmental degradation, and climate change (Coulibaly & Li, 2020). Climate change increases risks like heatwaves, floods, and droughts, particularly affecting urban areas (UN-HABITAT, 2022). Urban heat islands and insufficient research on climate risks leave urban residents vulnerable (Cobbinah, 2023). Many urban policies are outdated and fail to address modern issues like urban sprawl (Vaidya & Chatterji, 2020). Rapid land use changes strain natural resources and increase greenhouse gas emissions (Mangweta, Mokoel, & Monama, 2022). Addressing these challenges is crucial for achieving sustainable urban development and improving human well-being.

Achieving the 2030 goals in Africa appears increasingly unlikely without substantial policy changes and investments (UN-Habitat, 2023). As illustrated in Figure 1, Africa is trailing behind regions like Australia, New Zealand, Northern America, and Europe in all SDG 11 indicators. While some countries have made progress in disaster risk reduction (SDG 11.5 '*Reduce the Adverse Effects of Natural Disasters*'), this progress remains uneven, highlighting the need for more effective urban planning to meet the 2030

deadline (AU/UNECA/AFDB/UNDP, 2023). Significant investments are also essential, particularly in the least developed countries, to enhance infrastructure, public transit, and resilience to natural disasters (United Nations, 2024).



Figure 1: SDG 11 Indicators Progress Chart
Source: (UN-Habitat, 2023)

SDG 11 provides quantitative measures for eradicating slum conditions, delivering accessible and affordable transit systems, curbing urban sprawl, and boosting civic engagement through its ten objectives and fifteen indicators by 2030 (UN-Habitat, 2023; UN-Habitat, 2018). The objectives of SDG 11 also include enhancing the protection of cultural and natural heritage, bolstering urban resilience, mitigating and adapting to climate change, improving urban air quality, establishing safe and secure public areas for all, promoting improved urban-rural connections, and assisting least developed countries with sustainable building practices (UN-Habitat, 2023).

Despite some progress in national urban planning and transportation, significant gaps remain in addressing slum growth, public space, and waste management (UN-Habitat, 2023). Urban poverty and inequality persist, worsened by climate change and conflicts (United Nations, 2024). The number of people living in slums has increased, with 1.12 billion slum inhabitants worldwide in 2022, up from 2015. Three regions accounted for more than 85% of the world's slum dwellers: sub-Saharan Africa (265 million), Eastern and South-Eastern Asia (362 million), and Central and Southern Asia (334 million) (United Nations, 2024). This

underscores the urgent need for a comprehensive strategy to address urban housing issues in Africa and Asia, ensuring a range of housing alternatives and equitable access to essential services. Furthermore, access to public transit and open public spaces remains low, with only 28% of African people having access to public transit and 30.81% of urban areas having adequate public space (AU/UNECA/AFDB/UNDP, 2023).

Advancing SDG 11: Innovative Strategies and Solutions for Sustainable Urban Development by 2030

Digital Twin Technology for Sustainable Cities

Digital twin technology enhances city innovation and reduces costs by simulating scenarios to optimise resource allocation and urban planning (WEF, 2022; dos Santos, Campos, Montevechi, de Carvalho Miranda, & Costa, 2024). These computerised models replicate real-world systems, using logic, machine learning, simulation, and real-time data to support informed decision-making (IBM, 2024). It improves life quality by providing customised services in healthcare, education, and municipal operations, enhancing safety and reliability (WEF, 2022; Khallaf, Khallaf, Anumba, & Madubiike, 2022). By lowering innovation costs and providing cloud-based services, digital twin cities help city planners simulate and analyse urban strategies, improving sustainability and efficiency (WEF, 2022).

This technology aids in real-time monitoring of urban congestion, environmental conditions, and infrastructure, supporting sustainable growth and resource optimisation (WEF, 2022). It enables remote inspection, reduces human labour in hazardous environments, and improves urban planning and management (WEF, 2022).

African cities stand to benefit greatly from this technology, which can support the development of inclusive and sustainable smart city infrastructures (University of Pretoria, 2021; Peldon, Banihashemi, LeNguyen, & Derrible, 2024). However, implementing this technology in African cities presents challenges, particularly concerning digital inclusion, digital rights, and the risk of exacerbating social and geographical inequalities (Jieutsa, Gbaguidi, Nadifi, & Koseki, 2024). To ensure a fair and rights-focused digital transformation, local governments must prioritise inclusive digital infrastructure and governance that safeguards residents' rights. This approach is crucial for creating resilient and sustainable smart

cities that address environmental, economic, and social sustainability by enabling proactive interventions and optimising resources (Ersan, Irmak, & Colak, 2024; Elsayed, Arain, & Sallam, 2024).

Urban management in Africa can be significantly enhanced by integrating digital twin technology with advanced systems like cloud computing, artificial intelligence (AI), and the Internet of Things (IoT) (Sharifi, *et al.*, 2024; Ersan, Irmak, & Colak, 2024; Boccardo, La Riccia, & Yadav, 2024). For example, the University of Pretoria (UP) in South Africa established the Hatfield Digital Twin City (HDTC), a 10-square-kilometre area around its main campus, to advance the industrial, social, health, and environmental objectives of the city. The HDTC aims to create a comprehensive smart grid that monitors all energy consumption within the area. By understanding the different energy usage patterns—such as office buildings consuming more power during the day and residential complexes at night—the municipality can efficiently manage energy distribution by reallocating capacity where and when it is needed most. Moreover, the digital twin city can be used to monitor and control various urban systems, including food supply chains, traffic flow, water quality and quantity, air quality, public health, disease detection, crime prevention, biodiversity conservation, homelessness, urban development, and the efficiency of water and energy use in buildings, as well as business and industry optimisation. In essence, it enables comprehensive management of all aspects of a city's operations (University of Pretoria, 2021; Sharifi, *et al.*, 2024; Boccardo, La Riccia, & Yadav, 2024).

Components for Successful Sustainable Cities and Settlement

The World Economic Forum (2023) guides the development of digital twin cities using the SODPA model.² The model comprises five fundamental components: strategy and talent, operation and business, data and infrastructure, technology and platform, and application and scenario (WEF, 2023).

We argue that these same components apply to the development of sustainable cities, leveraging scenarios from digital twin cities to inform their implementation.

² The SODPA model is a process that directs the ideation of a superior virtual twin city (WEF, 2022). It is focused on people (Centre for Digital Built Britain, 2022).

- **Strategy and Talent:** Urban planning is critical to successful urbanisation. Digital twin initiatives require a strategic approach and skilled talent to drive and manage the projects (WEF, 2023). Public and private sector collaboration can develop training programs and attract qualified professionals to support digital twin city development (WEF, 2023).
- **Operation and Business:** Businesses should actively participate in developing digital twin cities and promoting public-private partnerships and sustainable economic models. Risk assessment techniques can identify potential hazards early, and governments should regulate environmental impacts through policies and levies (WEF, 2023).
- **Data and Infrastructure:** A robust data and infrastructure framework is crucial for smart cities. Governments should coordinate the layout of sensing devices, network facilities, and computational equipment, ensuring data security and privacy (Liu & Yang, 2022; WEF, 2023). Businesses must comply with regulations and collaborate to develop urban digital infrastructure (WEF, 2023).
- **Technology and Platform:** Digital twin platforms integrate and analyse municipal data, creating 3D city models and improving planning and administration through AI and machine learning (Jeong, Kim, & Kim, 2020; Mukherjee, 2022). Cities should provide Application Programming Interfaces (API) and software development kits (SDKs) for developers to create customised applications (Santana, Chaves, Gerosa, Kon, & Milojicic, 2017).
- **Application and Scenario:** Digital twin cities enhance planning, traffic control, utility management, and public safety, using real-time data for emergency response and sustainable development (Wang, *et al.*, 2023). Engaging the public through digital platforms improves participation in decision-making, service delivery and urban living conditions (WEF, 2023; Fotheringham, 2023).

Implementation Steps

An organised, phased approach is essential for implementing the SODPA model in cities. By adopting the SODPA model and following the phased approach proposed below, African cities can leverage technology to create smarter, more resilient, and sustainable urban environments. This comprehensive and practical strategy enhances urban planning,

administration, and services and provides a cost-effective solution for significant progress towards achieving SDG 11 by 2030.

- **Stakeholder involvement:** engage from the outset national and local governments, private businesses, educational institutions, and community organisations to gather input and support (WEF, 2023).
- **Pilot initiatives:** test digital twin technology in specific areas like planning and traffic management to collect data and refine methods (WEF, 2023).
- **Expansion:** scale up projects based on pilot experiences, ensuring a sustainable and scalable approach (WEF, 2023).
- **Improvement mechanism:** establish a feedback loop to monitor, assess, and enhance digital twin systems, ensuring they adapt to evolving needs (WEF, 2023).

Conclusion

In conclusion, achieving SDG 11 in Africa requires addressing deeply entrenched challenges rooted in historical, economic, and social contexts. The persistence of colonial-era planning systems, rapid urbanisation, high youth unemployment, and insufficient infrastructure are formidable barriers that must be overcome. The significant proportion of the population living in informal settlements and environmental and governance issues exacerbate these challenges.

However, innovative solutions like digital twin technology offer a promising pathway forward. Digital twins can transform African cities into more sustainable, resilient, and inclusive spaces by enabling real-time simulation, optimised resource allocation, and enhanced urban management. The successful implementation of digital twin cities hinges on strategic planning, talent development, robust data infrastructure, and strong public-private partnerships.

The SODPA model provides a structured approach to developing and managing digital twin cities, emphasising the importance of comprehensive strategy, operational efficiency, and practical applications. Pilot initiatives and stakeholder engagement are essential for refining these strategies and ensuring their scalability and sustainability.

Substantial policy reforms and increased investments in urban infrastructure are imperative to meet the 2030 targets. Innovative financing

mechanisms, such as public-private partnerships and viability gap funding, are crucial to bridging the investment gap and supporting sustainable urban development.

The commentary highlights the urgency of coordinated efforts from governments, the private sector, civil society, and international organisations to drive progress towards SDG 11. By leveraging technology and fostering collaborative efforts, Africa can build cities that are not only economically vibrant but also socially inclusive and environmentally sustainable. Achieving these goals will not only fulfil the aspirations of SDG 11 but also contribute significantly to the broader 2030 Agenda for Sustainable Development.

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Operationalizing Comprehensive Data Governance in Africa

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Abstract

The increasing development of machine learning (ML) models and adoption of artificial intelligence (AI) tools, particularly generative AI, has dramatically shifted practices around data, spurring the development of new industries centered around data labeling and revealing new forms of exploitation, including illegal data scraping for AI training datasets. These new complexities around data production, refinement, and use have also impacted African countries, elevating a need for comprehensive regulation and enforcement measures. While 38/55 African Union (AU) Member States have existing data protection regulations, there is a wide disparity in the comprehensiveness and quality of these regulations and in the ability of individual countries to enact sufficient protections against data privacy violations. Thus, to enable effective data governance, AU Member States must enact comprehensive data protection regulations and reform existing data governance measures to cover aspects such as data quality, privacy, responsible data sharing, transparency, and data worker labor protections. This paper analyzes data governance measures in Africa, outlines data privacy violations across the continent, and examines regulatory gaps imposed by a lack of comprehensive data governance to outline the sociopolitical infrastructure required to bolster data governance capacity. This work introduces the RICE Data Governance Framework, which aims to operationalize comprehensive data governance in Africa by outlining best measures for data governance policy reform, integrating revamped policies, increasing continental-wide cooperation in AI governance, and improving enforcement actions against data privacy violations.

Keywords: Data privacy, data governance, policy reform, African development, artificial intelligence

Introduction

The advent of generative artificial intelligence (AI), increasing adoption of AI tools, and the widespread utilization of data workers have changed narratives around data production and use. While data protections exist in 38 out of 55 African Union (AU) Member States, intensifying algorithmization across Africa could impact users through digital platforms used to access education, healthcare, financial, and social services. Given these new complexities and the emerging AI regulatory environment within the continent, African governments must enact comprehensive data protection regulations and reform existing data governance measures to cover aspects such as data quality, privacy, responsible data sharing, transparency, and data worker labor protections. To address these issues, data workers in Kenya have pursued litigation against Facebook regarding subpar working conditions and unfair termination (Musanga, 2023), and data workers across the continent have established organizations such as Techworker Community Africa (TCA)¹, the African Content Moderators Union, the Nigerian Content Moderators and Tech Workers Union (NCMTW)², and the Kenyan Content Moderators' Union. Along with general subpar working conditions across the continent in fields such as oil production and garment manufacturing, the concerns imposed by data work underscore requirements for sectoral reform of existing labor protections in areas including agriculture, economics, education, and healthcare. African countries also have context-specific challenges that differ significantly from those within the West, highlighting a need to understand how to develop culturally aligned and feasible governance solutions (Okolo, 2023).

By balancing lessons from the recent ratification of the African Union Convention on Cyber Security and Personal Data Protection, maturing regulatory environments like the EU, and advancing research on regional and country-specific needs, African nations can work towards more robust regulation. This paper analyzes data governance measures in Africa, outlines data privacy violations across the continent, and examines

¹ <https://techworkercommunityafrica.org/>

² <https://www.linkedin.com/company/nigerian-content-moderators-acmu/>

regulatory gaps imposed by a lack of comprehensive data governance to outline the sociopolitical infrastructure required to bolster data governance capacity. Additionally, it proposes the RICE Data Governance Framework, which African national governments (NGs), Regional Economic Communities (RECs), and the African Union can leverage to reform and operationalize existing data protection measures. Ultimately, this framework could inform the development and implementation of context-specific AI regulation that centers data privacy rights.

Data Governance in Africa

The increasing development and adoption of AI have dramatically shifted practices around data, spurring the development of new industries and revealing new forms of exploitation. These new complexities around data production, refinement, and use have also impacted African countries, elevating a need for comprehensive governance and enforcement measures. Approximately 38 out of 55 African Union Member States have enacted formal data protection regulations. 15 out of 38 data protection laws passed by African countries were enacted in the last five years, and 26 were enacted in the last decade. The first data protection law in Africa was enacted by Cabo Verde in 2001, and data protection laws were recently enacted by Malawi in June 2024 and Ethiopia in July 2024. As of October 2024, Namibia, South Sudan, and The Gambia have drafted data protection laws yet to be enacted.

National Data Governance Efforts

Nigeria launched the National Data Protection Act (NDPA) in June 2023. This Act was preceded by the National Data Protection Regulation (NDPR) issued by the Nigerian National Information Technology Development Agency (NITDA) in January 2019. The primary objective of the NDPA is to “safeguard the fundamental rights and freedoms, and the interests of data subjects” in Nigeria by regulating personal data processing, protecting the rights of data subjects, and ensuring that data controllers and processors are in line with the Act. The Act restricts cross-border data transfers and gives data subjects the right to object to data collection, withdraw consent from data processing, and object to automated decision-making.

Senegal introduced data privacy regulation relatively early compared to other African countries, publishing Act No 2008-12 Concerning Personal Data Protection on January 25, 2008, and implementing Decree No 2008-721, the Personal Data Protection Act on 30 June 2008. This law requires data subjects to be notified about data processing and consent to data transfers. The Senegal Personal Data Protection Commission (CDP) is the governing body responsible for ensuring that all data processing within the country complies with the Data Protection Act.

Egypt introduced the Law on the Protection of Personal Data issued under Resolution No. 151 of 2020, published in July 2020, and took effect in October 2020. This law requires obtaining consent from data subjects before processing personal data. It also gives rights to data subjects, which include knowledge of what personal data is being processed and by whom, the ability to withdraw consent to data processing, the ability to correct, modify, delete, or update personal data, and be informed regarding personal data breaches. This law also prohibits the transfer of personal data outside of Egypt to countries with insufficient data protections unless direct consent is obtained from a data subject or their representatives.

Rwanda passed legislation covering data privacy and protection in 2021, which ratified Law No. 058/2021 of 13 October 2021, Relating to the Protection of Personal Data and Privacy. This law contains 70 articles that cover the processing and quality of personal data, the rights of data subjects, and the sharing, transfer, storage, and retention of personal data. All organizations that collect or process data were required to be in compliance with this law by October 15, 2023, two years after the law was initially enacted.

Continental and Regional Data Protection Efforts

Along with country-specific data governance regulations, regional entities such as the African Union (AU) and the Economic Community of West African States (ECOWAS) have introduced data protection acts. The AU Malabo Convention, also known as the African Union Convention on Cyber Security and Personal Data Protection, was ratified in June 2023, nine years after its adoption. It was drafted in 2011 at the 17th Ordinary African Union Summit in Malabo, Equatorial Guinea, adopted by the African Union in 2014, and entered into force on June 8, 2023, after being ratified by

Mauritania, the 15th country needed for ratification to officially “be in force.” It aims to establish comprehensive norms and regulations for cybersecurity and data privacy across the African continent. The Malabo Convention establishes criminal sanctions for various cybercrimes, including data breaches and attacks on computer systems. It requires data protection measures for the collection, storage, and processing of personal data, upholding individual privacy rights. It also aims to promote electronic commerce by fostering a secure and trustworthy online environment for transactions and encourages collaboration among AU Member States for information sharing, capacity building, and coordinated responses to cyber threats.

The Economic Community of West African States (ECOWAS) is a regional political and economic union of fifteen countries located in West Africa. It was established on May 28, 1975, with the signing of the Treaty of Lagos, and aims to promote economic integration across the region. The ECOWAS Supplementary Act on Personal Data Protection was signed by The Authority of Heads of State and Government of ECOWAS on 16 February 2010 in Abuja, Nigeria. The Act outlines requirements for Member States to establish their respective data protection authorities and the required content Member States should incorporate into their data privacy laws. Overall, it aims to establish coordinated legal frameworks for personal data processing. Out of the 15 Member States, 9 (Benin, Burkina Faso, Cape Verde, Ghana, Ivory Coast, Niger, Nigeria, Senegal, and Togo) have implemented data protection laws.

Other continental efforts towards data protection have been spearheaded by the Southern African Development Community (SADC), an intergovernmental organization that aims to achieve regional integration and promote socioeconomic development across its 16 Member States: Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia and Zimbabwe. In 2013, the SADC passed the Model Law on Data Protection to provide a guiding framework for Member States to establish data protection regulations (ITU Telecommunication Development Bureau, 2013). The East African Community (EAC) is a regional intergovernmental organization promoting economic, political, and social cooperation between Burundi, the Democratic Republic of Congo, Kenya, Rwanda, Somalia, South Sudan, Tanzania, and Uganda. In 2008, EAC drafted the Legal Framework for Cyberlaws, which outlined steps towards digital regulation

and data governance amongst EAC Member States (East African Community, 2008). At the moment, there have been no regional governance measures proposed or enacted by the Arab Maghreb Union (AMU), the Community of Sahel-Saharan States (CEN-SAD), and the Economic Community of Central African States (ECCAS).

Many regional efforts towards developing digital policies and frameworks across the continent were supported by the "Harmonization of the ICT Policies in Sub-Sahara Africa" (HIPSSA) Project (Bazzanella & Bihan, 2012). HIPSSA was launched in 2008 and supported by the International Telecommunication Union (ITU) and the European Commission, following previous regional harmonization efforts supported by the African Development Bank, European Union (EU), ITU, U.S. Agency for International Development (USAID), the Organisation Internationale de la Francophonie (OIF), and the United Nations Economic Commission for Africa (UNECA).

Data Regulatory Gaps in Africa

Prior research has examined the data regulatory environment in Africa, uncovering numerous systematic gaps hindering responsible and sustainable data governance throughout the continent (Eke *et al.*, 2022). Eke *et al.* specifically examine data governance approaches in five African countries, Kenya, Mauritius, Morocco, Nigeria, and South Africa, finding issues with compliance and enforcement of existing protections and a lack of data governance structures within the public and private sectors. The rising adoption of AI tools has also introduced gaps within existing data protection regulations that could be further exploited as AI development increases throughout the continent. While companies have traditionally leveraged consumer data to improve ad targeting and personalized recommendations, companies are now leveraging existing consumer data to train AI tools. Over the past few years, there has been a rise in the number of AI clauses introduced into terms of service (ToS) agreements, giving companies the right to incorporate consumer data into datasets to train proprietary AI models. Recent cases include Zoom changing their ToS to leverage "customer content" and "service generated data" to train and test AI tools in March 2023. After backlash on social media in August 2023, Zoom altered the new AI clauses to indicate that such data is not used to train models without customer consent (Rakova, 2023). Other companies like Meta have introduced AI clauses providing them with the ability to use

customer data for AI, but these changes are also complicated by the lack of opt-out choices from consumers in regions where there are insufficient data protection laws (Diaz, 2024).

To quell issues around intellectual property theft, prominent AI companies like OpenAI have announced a series of partnerships with social media companies like Reddit and media outlets such as TIME, The Atlantic, News Corp, the Associated Press, Vox Media, Financial Times, BuzzFeed, and others (Simmonds, 2024). However, these increasing partnerships are raising antitrust concerns from regulators within the EU and the United States (Federal Trade Commission, 2024; Chee, 2024). While no significant partnerships have been announced between OpenAI and African organizations, many of these media companies have offices in African countries. African users also access and actively use social media platforms that have forged partnerships with OpenAI. However, a recent partnership between Liquid Technologies, an African cloud service provider headquartered in Mauritius, Google Cloud, and Anthropic potentially indicates future diversification in big tech AI partnerships (Liquid Intelligent Technologies, 2024). With this in mind, African regulatory bodies must also examine the impact of foreign antitrust probes in local markets and bolster enforcement capacity.

Data Privacy Violations in Africa

Existing data regulatory gaps may also contribute to the growing number of data privacy violations experienced across Africa. In March 2023, the Angolan Agência de Protecção de Dados (APD) issued a fine to Africell, an electronic communications operator, who collected personal consumer data without requesting prior authorization from APD (Agência de Protecção de Dados, 2023). In November 2023, the Telecommunications/ICT Regulatory Authority of Côte d'Ivoire (ARTCI) issued a formal warning to YANGO, a local ridesharing application, for unlawfully recording passenger phone conversations (l'ARTCI, 2023). In July 2023, the South African Information Regulator issued a ZAR 5 million (~USD 273,000) fine against the Department of Justice and Constitutional Development for failure to implement adequate security measures to prevent a ransomware attack in 2021 and noncompliance with required consumer notifications regarding the subsequent data breach (Information Regulator South Africa, 2023). One of the continent's most recent data privacy violations involves a data breach of Nigeria's National Identity

Management Commission of Nigeria (NIMC) system, which has resulted in millions of data points being available for sale on illicit websites for NGN 100, which is about USD 6 cents (Paradigm Initiative, 2024). As of July 2024, it is unclear what action the Nigeria Data Protection Commission has taken against the offenders. Kenya Office of the Data Protection Commissioner (ODPC) issued multiple penalties to 4 companies in 2023, totaling over KES 14 million. These fines included noncompliance with a prior enforcement notice on spam calls, harassment from microlending apps, posting minor images, and using customer photos for marketing. ODPC has also made progress in an ongoing investigation regarding violations by Worldcoin, an American cryptocurrency provider that undertook biometric data collection without government notice (Communications Authority Kenya, 2023). While African data protection agencies have increasingly taken actions toward enforcing data protection laws, there is still little understanding of how effective these measures are, given frequent noncompliance with enforcement notices (Lawyers Hub, 2024) and little information on fine payments by offenders.

Operationalizing Data Governance in Africa

In order to ensure that African countries can effectively protect consumers against improper data practices and enforce corrective action against data privacy violations, African governments across every AU Member State must enact comprehensive data regulatory measures. While existing continental-wide efforts, such as the African Union Data Policy Framework, which was published in 2022 to guide AU Member States in designing and reviewing data regulations, and the Malabo Convention on Cyber Security and Personal Data Protection, offer valuable templates for African governments to adopt, these frameworks have unfortunately not seen wide adoption. To help address this lack of adoption and potential challenges from data regulatory gaps, a number of proposals have outlined alternative measures, including regional data governance approaches (Osakwe & Adeniran, 2021; Balogun & Adeniran, 2024), community-centered governance models (Olorunju & Adams, 2024), and data governance reformation (Okolo, 2024). This section introduces the RICE Data Governance Framework to provide a high-level overview of actions African Union Member States can leverage to operationalize data governance effectively.

Reformation, Integration, Cooperation, & Enforcement (RICE) Framework

In lieu of functional continental frameworks, countries, regional, and continental bodies should focus on (1) **reforming** existing data regulation and implementing sectoral policy reformation, (2) collaborating with Civil Society Organizations (CSOs) and Academic Research Institutions (ARIs) to improve **integration** of reformed policies, (3) increasing regional and continental **cooperation** in data regulation efforts, and (4) strengthening **enforcement** of reformed data regulation. The RICE Data Governance Framework recommendations apply at the national, regional, and continental levels.

To begin operationalizing the RICE Data Governance Framework, African governments should pursue regional data governance measures, given the lack of existing coordination with and insufficient protections within existing continental measures such as the Malabo Convention (Yilma, 2022; ALT Advisory, 2022; Balogun & Adedeji, 2024). Efforts to pursue regional data governance would ideally be led by existing RECs such as ECOWAS, EAC, SADC, AMU, CEN-SAD, and ECCAS. Such efforts can then enable the 19 African Union Member States without existing data protections to draft and enact comprehensive data governance measures in a reasonable timeframe. Additionally, enacting regional data governance policies can help address existing capacity constraints for AU Member States unable to individually draft and enact data legislation.

Reformation

To address concerns regarding a lack of comprehensive data governance measures, the AU, RECs, and individual African NGs must reform existing data governance measures and engage in sectoral policy reform.

- The AU, RECs, and NGs should review existing data protection measures, leveraging SWOT analysis methods to understand gaps. To meet data governance needs, they should subsequently reform sectoral policies in agriculture, economics, education, healthcare, and other areas.
- The AU must establish a convention specific to data protection by leveraging the AU Data Policy Framework and refining data protection clauses from the Malabo Convention.

- The AU, RECs, and NGs must harness the capabilities of their digital ministries (DMs) by establishing local expert groups and advisory bodies.
- DMs should leverage participatory policy development approaches by consulting local expert groups, collaborating with government agencies, and soliciting input from the general public to enhance policy reform.
- The AU, RECs, and NGs should periodically iterate and engage in policy reform to ensure that standards align with present-day practices.

Integration

To increase awareness and local integration of data protection regulation, RECs and NGs will need to improve outreach to organizations under their jurisdiction. RECs and NGs should also fund outreach and research efforts by CSOs and ARIs to improve public engagement with data protection measures.

- RECs and NGs should send accessible, comprehensive, and timely notices to organizations, informing them of data policy reforms.
- RECs and NGs should lead efforts to establish a Data Protection, Governance, and Compliance Officers database to improve institutional outreach.
- CSOs and ARIs should develop data literacy training for citizens to increase public understanding of data rights.
- CSOs should advocate for citizens with affected rights and leverage their capacity to inform RECs and NGs about data privacy violations.
- ARIs and CSOs should conduct in-depth research that advances understanding of regional and country-specific needs for data regulation and reduces reliance on standards such as the EU General Data Protection Regulation (GDPR).

Cooperation

To address issues regarding a lack of regional cooperation and inconsistencies in data protection regulation, the AU must lead harmonization efforts across AU Member States. To mitigate issues with prior harmonization efforts, the AU should actively consult RECs and NGs in harmonization efforts (Kenyanito & Chima, 2016).

- The AU must develop a Data Governance Harmonization Body, building upon prior efforts such as HIPSSA.
- When developing the Body, the AU should prioritize multistakeholder input from RECs and NGs and actively communicate with these stakeholders.
- The AU should establish a continental-wide network of National Data Protection Authorities and Offices (NDPAs/NDPOs), as previously recommended (Data Protection Africa, 2023).

Enforcement

To help address concerns regarding a lack of enforcement of data protection measures, the AU must establish a continental data supervisory body. African governments must also leverage data protection offices to enforce enacted regulations.

- The AU should inaugurate a Data Protection Supervisory Authority (DPSA) to increase regional enforcement for data privacy violations and help RECs and NGs enforce regulations.
- The AU and RECs should help NGs establish NDPAs and NDPOs to mitigate regulatory enforcement gaps.
- The AU DPSA should collaborate with RECs and NDPAs/NDPOs to develop standards to maintain best operating practices that will increase compliance with enforcement notices and fine payment.
- The AU should leverage the DPSA to continually monitor the activities of the continental NDPA/NDPO network and serve as an arbitrator for disputes.

Considerations

While this data governance operationalizing framework aims to ease the implementation of comprehensive data regulation within African countries, many considerations exist for the ability of all governments across the continent to leverage this framework. Existing issues with infrastructure, electricity access, education, digital skills literacy, skilled AI talent, climate change, armed conflict, social unrest, national security, and socioeconomic growth may deprioritize and sideline efforts toward data governance. In light of these existing challenges, however, governments must focus on developing culturally aligned and feasible data governance solutions to ensure that the data rights of African consumers are preserved and that there are adequate outlets for redress of data protection harms.

Regional data governance led by RECs would ideally take precedence over the AU until a formal continental-wide data protection law is passed. However, efforts will be needed to rectify duplicative membership within the RECs and integrate AU Member States without membership in RECs, like the Sahrawi Arab Democratic Republic, which controls the Western Sahara. Prioritizing regional-led data governance before continental reforms are enacted could help address capacity constraints and harmonization issues between AU Member States. Still, there is no guarantee that countries within RECs will reach alignment on data governance measures.

With the growing number of regional and national efforts toward AI regulation throughout the continent, African governments must also understand the fundamental role of data in training ML models, evaluating AI systems, refining predictive models, and improving AI-enabled services (GPAI Data Governance Working Group, 2020). Given these essential functions, efforts towards enacting effective data governance can also enable more comprehensive AI governance measures. Thus, African governments should consider comprehensive data governance as a viable pathway and complement to AI regulation. To bolster AI-related governance overall, it will also be crucial for African governments to invest in efforts to understand the diverse policy challenges associated with data, including privacy, transparency, labor, interoperability, discrimination, cross-border data flows, and intellectual property.

Conclusion

While the potential of AI is still nascent within Africa, African consumers hold valuable data that is subject to exploitation by both local and international firms alike. Companies are increasingly looking towards African countries to supply them with the necessary data to expand target markets for their AI services. With governments, companies, universities, and other institutions in African countries rapidly adopting AI technologies, there are also concerns that algorithmic harms primarily noted in Western contexts could be exacerbated in ways that disproportionately harm marginalized populations throughout the continent. The limited research examining concrete ethical concerns around data privacy and the lack of extensive efforts toward data protection in Africa is concerning. This work examines data governance measures in Africa, highlighting the regulatory gaps imposed by a lack of

comprehensive data governance across Africa that could be further exploited by rising AI adoption. This work presents the RICE Data Governance Framework to operationalize comprehensive data governance in African Union Member States to reform and optimize existing data protection measures while bolstering Africa's emerging AI regulatory environment.

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Public debt, social spending, and well-being in Africa

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Abstract

Despite extensive research on the effects of public debt on economic outcomes, there is a lack of studies on the channels through which it can impact well-being, especially in Africa. This study aims to fill this gap by examining the influence of public debt on well-being through education and health spending channels in 41 African countries from 2012-2021. We specify a panel equation with an interaction term between public debt and social spending and estimate it employing the Two Stage Least Squares method. Findings show a negative relationship between public debt and well-being which is mitigated by public spending on education and health. The analysis suggests that investing in education or health can counteract the negative effects of public debt on well-being, offering valuable insights for African nations to enhance well-being.

Introduction

Public debt refers to the money a government borrows to fund its activities and projects, which it must repay with interest. Theoretically, public debt is one key for financing sustainable development because it enables governments to invest in infrastructure, education, and other areas essential for long-term economic growth and poverty reduction (Barro, 1979). Based on this assumption, African countries continue to experience a rapid increase in public debt to finance their economies. The regional ratio of general government debt to GDP grew from 32.2% at the end of 2014 to an estimated 45% by the end of 2017 (Caselli and Wingender, 2018). The median public debt-to-GDP ratio has continued to increase, reaching 61.9% in 2023. Moreover, the median public debt almost doubled, from 25% to 46% between

2013 and 2023 (UNCTAD, 2024). However, the issue of the public debt's benefits for Africa arises insofar as well-being in this region lags all other regions of the world (UNECA, 2022). Hence, there is a need in the context of "Redefining African Futures" to ensure that public debt in Africa contributes to enhance well-being and build resilience, rather than strengthen vulnerabilities.

Well-being is a multidimensional concept, which can be defined subjectively or objectively¹. The study adopts the objective view, where well-being is achieved when society, forming the foundation of the state, creates conditions and opportunities for individuals to realize their potential as human beings, fulfill their potential, and attain the desirable aspects of life that people seek (Alatartseva and Barysheva, 2015). In this line, well-being includes income level, education, healthcare, societal options, and the development of subjective components (Stiglitz et al., 2009). One indicator which considers these dimensions of well-being is Inequality-adjusted Human Development Index scores (IHDI). Regarding this indicator, Africa has the highest contribution to the overall loss of well-being. The proportion increased from 33.3% in 2014 to 33.9% in 2022. In 2014, 41 out of 54 African countries had an IHDI score below 0.50, while in 2022, 40 out of 54 countries had scores below 0.50, indicating significant inequalities in health, education, and income among populations (UNDP, 2015; 2024).

The direct relationship between public debt and well-being is still controversial. Empirical studies have shown mixed evidence, with some indicating negative effects (Bjørnskov et al., 2007; Kang and Rhee, 2024) and others suggesting positive effects (Kose et al., 2020; Ostry et al., 2015). Moreover, recent African data show no correlation between public debt and well-being. For instance, in 2022, the Seychelles had the highest IHDI score (0.715) with a percentage of government debt (%GDP) at 58.34%, while the Central African Republic, Chad, Mali, and Niger had similar percentages of government debt (%GDP) but the lowest IHDI scores. On the other hand, Cabo Verde had the highest government debt (% of GDP) at 127.50% the

¹For a discussion on the subjective and objective approach, please see Alatartseva and Barysheva (2015) and McGillivray and Clarke (2006).

same year, with a medium IHDI score (0.471) (IMF historical debt database, 2024; UNDP, 2024).

Moreover, empirical studies since Musgrave (1972) have shown conflicting results on the effects of high public debt. Song et al. (2012) argue that increased public debt benefits citizens in the short term but can lead to economic vulnerability in the long term. Sanz and Velázquez (2007) and Seater (2013) link higher government debts to increased social expenditures. Conversely, Blanchard (2019), Fosu (2007), and Lora and Olivera (2007) suggest that high government debts result in austerity measures and cuts to social services.

Despite the expanding literature on the effects of public debt on economic development (Law et al., 2021; Panizza and Presbitero, 2014), there are few studies focused on the channels through which debt can impact well-being. This article fills this gap by contributing to the literature on the indirect effects of public debt. Specifically, this paper extends the existing literature on public debt, which interests economists and policymakers by examining the role of spending on education and health in the relationship between public debt and well-being. To the best of our knowledge, this study presents the initial international analysis on the indirect effect of public debt on well-being in Africa.

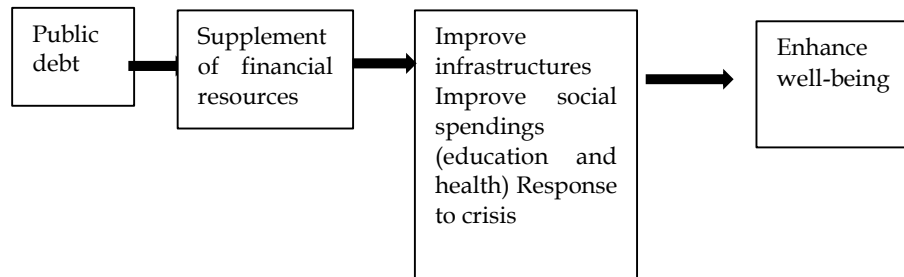
The rest of the paper is structured as follows: Section 2 presents the analytical framework. Section 3 presents the empirical design of the study. Section 4 shows the empirical findings, and Section 5 concludes the analysis.

Analytical framework of relationship between public debt and well-being

To achieve our objective, we use a framework based on Essama-Nssah and Moreno-Donson (2013) and Zhao et al. (2019) to explore how public debt affects well-being. We assume that public debt can influence well-being using borrowed funds, as governments borrow to finance various projects like education, health, infrastructure, and regulating economic operations. In this vein, the public provision of these various projects can create conditions and opportunities for individuals to realize their potential as human beings (optimistic scenario part a of Figure 2). However, if such debt continues to accumulate above the debt ceiling, there can be serious consequences for well-being. Indeed, a substantial portion of revenue is diverted from social services to debt repayment and crowding out private

investment (pessimist scenario part b of Figure 2). This negative impact is also recognized by Zhao et al. (2019). Figure 2 depicts the conceptual framework of the study on public debt's impact on well-being in Africa.

a. Optimist scenario



b. Pessimist scenario

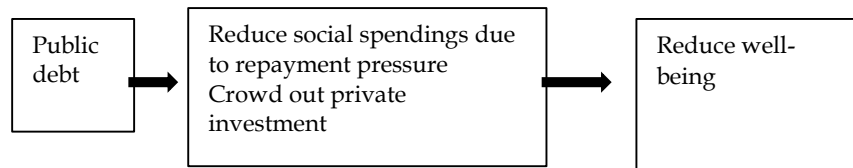


Figure 1: Mechanism of the effect of public debt on well-being

Source: Author, adapted from Essama-Nssah and Moreno-Donson (2013) and Zhao et al. (2019).

Empirical design

Data

In this study, unbalanced panel data from 41 African countries over 2012-2021 were used. The study period and sample size were based on data availability. Descriptive statistics for all variables are presented in Table 1, and the countries included in the study are listed in Appendix A1.

Table 1: Summary statistics of variables

| Variables | Observations | Mean | Standard deviation | Minimum | Maximum |
|--|--------------|-------|--------------------|---------|---------|
| IHDI | 407 | 0.35 | 0.09 | 0.18 | 0.58 |
| Central government debt (%GDP) | 410 | 51.35 | 30.22 | 7.09 | 275.04 |
| Domestic government health expenditures (%GDP) | 410 | 1.88 | 1.31 | 0.14 | 6.12 |
| Government expenditures on education (%GDP) | 361 | 4.36 | 1.92 | 1.57 | 10.32 |
| Individuals using the Internet (% of population) | 399 | 25.13 | 19.87 | 1.05 | 88.13 |
| Military expenditure (% of GDP) | 372 | 1.74 | 1.11 | 0.26 | 6.69 |
| Rule of law | 410 | -0.66 | 0.52 | -1.85 | 0.66 |
| Ethnic fractionalization index | 400 | 0.63 | 0.25 | 0 | 0.93 |
| Landlocked status dummy | 410 | 0.29 | 0.45 | 0 | 1 |

Source: Author, using IMF historical debt database, UNDP Center and World Development Indicators (WDI) databases

Dependent variable (IHDI)

The main outcome variable of this study is well-being, measured by the IHDI for two main reasons. Firstly, IHDI provides a more nuanced and realistic assessment of well-being in Africa. Unlike other indices like the Human Development Index and Human Poverty Index, the IHDI considers inequalities in access to healthcare, education quality, and income distribution, which are pronounced within African countries and among different demographic groups (Sachs et al., 2024). This adjustment ensures that the measure reflects not only average achievements but also the impact of inequality on income, education, and health outcomes. Secondly, the IHDI is comparable across countries and regions and widely used by international organizations, governments, and researchers. Data were obtained from the UNDP data center.

Interest variables

The first variable of interest is public debt, measured by central government debt (% GDP). This indicator includes both domestic and external debts, offering a comprehensive view of the government's financial commitments and reflecting the country's fiscal health and stability. In numerous African countries, the central government is chiefly accountable for borrowing and overseeing public debt, making its debt levels a direct reflection of national financial responsibilities (Reinhart and Rogoff, 2010). The data was sourced from the IMF historical database.

Figure 3 illustrates a comparison of central government debt (%) between 2010 and 2022. Lighter shades represent less indebted countries, slightly darker shades represent moderately indebted countries, and darker shades represent indebted countries. The debt levels in Africa increase over time. Some countries, like Cabo Verde, Congo, Eritrea, Gambia, Ghana, Mozambique, Senegal, Sierra Leone, Tunisia, and Zimbabwe, became more indebted or maintained high levels of debt in 2022 (exceeding 70% of GDP). However, countries like Cameroon and Nigeria managed to improve their debt levels and remain less indebted.

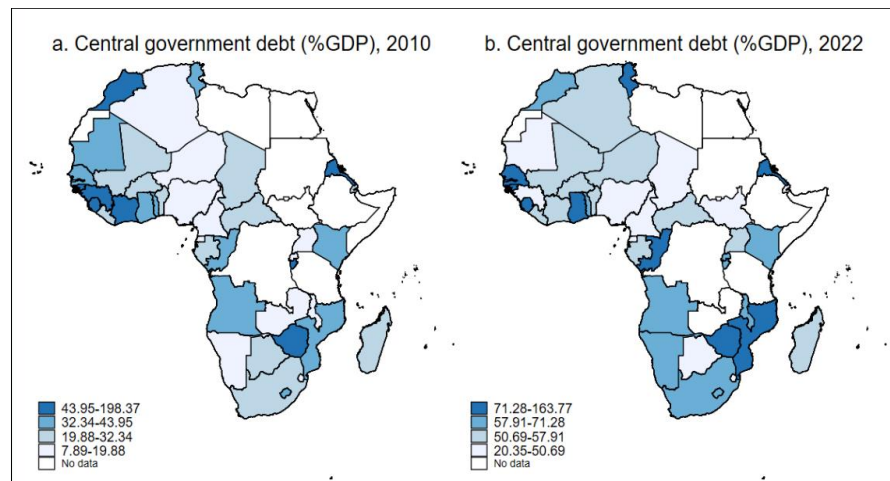


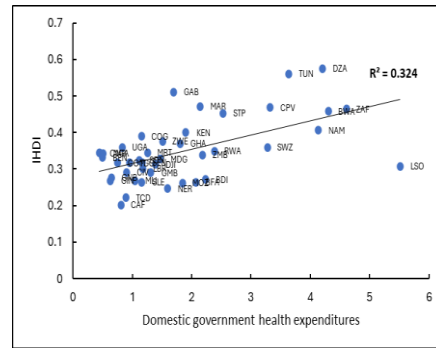
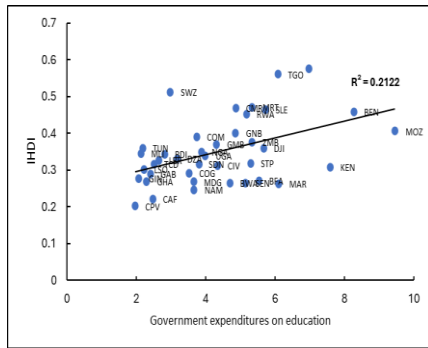
Figure 3: Spatial spread of debt in Africa

Source: Author, using IMF historical debt database

The second interest variable is social spending, measured by two indicators: domestic government health expenditures and government expenditures on education (% GDP). We selected these indicators because

public expenditures in these sectors is one instrument used by states to allocate and distribute resources to reduce social inequalities and ensure that all segments of the population can have access to education and health services (Dahl and van der Wel, 2013; Haile and Niño-Zarazúa, 2018). Figure 4 shows a weak positive correlation between public spending on education or health and IHDI (refer to parts A and B).

a. IHDI and government expenditures on education **b. IHDI and government health expenditures**



c. IHDI and central government debt

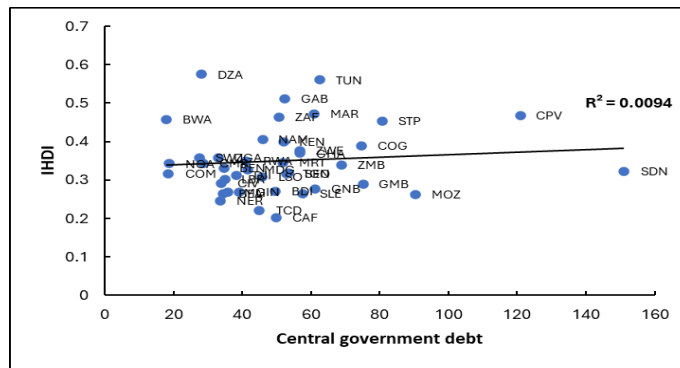


Figure 4: Correlation between well-being and interest variables
 Source: Author, using IMF historical debt database, UNDP Center and WDI databases

To substantiate the indirect relationship between IHDI and our variables of interest and to reduce variable omission bias, we control our model by including several variables that have been identified as relevant determinants of well-being. The first variable is the rule of law obtained from

the Worldwide Governance Indicators (WGI). It captures the quality of institutions according to the SDG 16.3 target. The effects of this variable on well-being have received attention in the literature (Nikolova, 2016). The second variable is military expenditures (% GDP). There is an ambiguous effect of military spending on well-being. Indeed, military expenditures increase security and stability, which are fundamental for well-being. However, excessive military spending can reduce funds available for social services (Fan et al., 2018). Another variable is the number of individuals using the internet (% population), which captures the utilization of ICT which in turn affects a country's well-being by helping citizens develop their social capital and achieve social equality (Ganju et al., 2016). These two variables were obtained from WDI. The fourth variable is ethnic fractionalization, obtained from Ashraf and Galor (2013). Ethnic fractionalization has been shown to be a determinant of well-being (Kwakwa and Peña-Vasquez, 2019). The last variable is landlocked status, which can affect well-being. Yitayaw et al. (2022) identified being landlocked as one of the primary factors driving poverty and reducing well-being because it generates high transaction costs that reduce economic opportunities in developing countries. The variable equals 1 if the country is landlocked and 0 otherwise.

Model specification and estimation strategy

As mentioned above, we tested the indirect link between public debt and well-being by using an interaction term between public debt and public spending on education or health. We drew a model as follows:

$$WB_{i,t} = \beta_0 + \beta_1 PD_{i,t} + \beta_2 \vartheta_{i,t} + \beta_3 (\vartheta * PD)_{i,t} + \beta_4 X_{i,t} + \lambda_i + \mu_t + \varepsilon_{i,t}$$

(1)

Where *WB* is the IHDI score, *i* is the country, and *t* is the year. *PD* is the central government debt (%GDP). $\vartheta_{i,t}$ is the mediating variable (education or health government expenditures as % of GDP) $(\vartheta * PD)_{i,t}$ is an interaction term to account for the effect exerted by the mediating variable

$\vartheta_{i,t}$. X is the vector of control variables. λ_i are the unobserved country-fixed effects, μ_t represent the time-fixed effects, and $\varepsilon_{i,t}$ is the error term.

The specification of equation (1) makes it possible to determine the marginal effects of public debt on well-being. Thus, the marginal effects are given by the equation (2) below:

$$\frac{\partial WB_{i,t}}{\partial PD_{i,t}} = \beta_2 + \beta_3 \vartheta_{i,t} \tag{2}$$

Equation (1) can be estimated using conventional ordinary least squares, but this method may lead to biased estimates in the presence of endogeneity issues. In our study, endogeneity biases may exist between IHDI and social spending due to simultaneity bias, where higher well-being levels could drive the demand for social services (Layard et al., 2013). To address these biases, we utilize two-stage least squares (TSLS) with one-period lag and two-period lags of each social spending type as instruments. The validity of TSLS relies on three tests: the identification test (significant Kleibergen-Paap rk LM statistic p-values), Cragg-Donald Wald F statistics exceeding Stock-Yogo critical values at 10%, and non-significant results from the Hansen test (Kleibergen and Paap, 2006).

Results and discussion

Table 2 presents the main results. Panel fixed effects (FE) are reported in columns (1) to (2), and the TSLS results are presented in columns (3) to (6).

Table 2: effect of public debt and social spending on well-being

| Variables | Fixed effects | | Two stage least squares | | | |
|-----------|---------------|-----|-------------------------|-----|-----|-----|
| | (1) | (2) | (3) | (4) | (5) | (6) |

| | | | | | | |
|---|-----------------------------|------------------------------|-----------------------------|----------------------------|----------------------------|----------------------------|
| Central Government Debt (Percent of GDP) | -0.003*** (0.001) | -0.002*** (0.0005) | -0.003*** (0.001) | -0.001** (0.001) | 0.014*** (0.005) | -0.003** (0.001) |
| Rule of Law | 0.155*** (0.046) | 0.155*** (0.044) | 0.07 (0.059) | 0.074 (0.05) | 0.359*** (0.087) | 0.14 (0.093) |
| Military expenditure (% of GDP) | 0.029** (0.012) | 0.025** (0.011) | 0.024* (0.014) | 0.024* (0.014) | 0.228*** (0.038) | 0.164*** (0.031) |
| Individuals using the Internet (% of population) | -0.111*** (0.018) | -0.080*** (0.017) | -0.095*** (0.025) | -0.063*** (0.024) | 0.356*** (0.07) | 0.410*** (0.057) |
| Landlocked status | - | - | -1.650*** (0.071) | -1.619*** (0.075) | -0.581*** (0.087) | -0.662*** (0.08) |
| Ethnic fractionalization | - | - | -1.437*** (0.187) | -1.452*** (0.148) | -0.913*** (0.166) | -0.694*** (0.18) |
| Government expenditure on education, total (% of GDP) | 0.004 (0.007) | - | 0.007 (0.012) | - | 0.105* (0.057) | - |
| Domestic general government health expenditure (% of GDP) | - | 0.024* (0.014) | - | 0.116*** (0.035) | - | 0.156* (0.09) |
| Central government debt*Government expenditure on education | - | - | - | - | -0.003*** (0.001) | |
| Central government debt*Domestic general government health expenditures | | | | | | 0.003** (0.001) |
| Constant | 3.609*** (0.06) | 3.530*** (0.055) | 6.342*** (0.195) | 6.105*** (0.14) | 2.582*** (0.371) | 2.888*** (0.259) |
| Marginal effect | - | - | - | - | 0.103* (0.057) | 0.160* (0.089) |
| Observations | 324 | 361 | 254 | 291 | 254 | 291 |
| Kleibergen-Paap rk LM statistic (p-value) | - | - | 12.46 (0.00) | 24.48 (0.00) | 67.89 (0.00) | 79.29 (0.00) |
| Cragg-Donald Wald F statistic | - | - | 44.11 | 43.76 | 237.09 | 224.83 |
| Stock and Yogo critical values at 10% | - | - | 19.93 | 19.93 | 19.93 | 19.93 |
| Hansen J statistic p-value | - | - | 0.70 | 0.72 | 0.92 | 0.14 |

The results show that central government debt reduces well-being. Indeed, its coefficients are weak, negative, and statistically significant at 1% level from columns (1) to (4). The signs of the coefficients align with theoretical expectations, but the small coefficients suggest that each additional debt results in a small decrease in IHDI scores. These results are consistent with Kang and Rhee (2024). One explanation could be the

utilization of borrowed funds. Even though African governments claim to prioritize the well-being of the people in their policies, the general tendency shows that government debt and social spending vary independently of each other (refer to Appendix A2). In other words, one reason for the policy debt failures to enhance well-being may lie in the sector where governments allocate borrowed resources. This misalignment points to broader governance challenges, where the lack of strategic planning and effective allocation of resources undermines the potential benefits of borrowed funds. Failing to align public debt with social spending can exacerbate the dual challenges of debt burdens and low well-being in Africa.

Since an increase in central government debt itself can be closely related to the composition of public expenditures such as spending on defense, security, and social sectors, we examine the model with the interaction term between central government debt and public spending on education and health from columns (5) to (6). Regarding public spending on education, the estimated coefficient (0.014) for debt in column (5) implies a positive effect of government debt on well-being. This effect is different from those observed in columns (1) and (3). Moreover, the interaction term (debt*education spending) was statistically significant at the 1% significance level, with a positive and significant marginal effect of 0.103. It suggests that central government debt enhances well-being as government expenditures on education rise. As in column (5), we find that the positive net effect of public debt on well-being depends on a country's public health. Despite the negative coefficient of central government debt, the interaction term (debt*health spending) is statistically significant with a positive coefficient of 0.160, confirming that increased indebtedness could enhance well-being with more public expenditures on health.

In the debt literature, increased public debt often carries a negative connotation due to concerns about fiscal sustainability. However, the results on interaction fit into the scope of studies claiming that with good utilization of borrowed funds, central government debt can enhance well-being, particularly through expenditures on education and health. Furthermore, these findings indicate that the impact on well-being in Africa is not solely determined by government debt but rather by how the debt is utilized. Countries that increase public expenditures on education and health may see an enhancement in well-being even with increased government debt.

Conversely, nations with low social spending may struggle to enhance well-being as government debt rises.

Regarding the control variables, the results indicate that being landlocked and having ethnic diversity tend to lower well-being, as indicated by their negative and statistically significant coefficients. This might be because these factors often lead to higher costs and difficulties, which can negatively affect people's well-being. Military spending is found to enhance well-being, aligning with earlier research. The Rule of Law has a weak positive effect on well-being, with some coefficients being both positive and significant.

Conclusion

This study investigates the effects of public debt on well-being in Africa through social spending. While research on public debt's effects on economic growth is abundant, its influence on well-being through public expenditures on education and health remains understudied. We used data from 41 African countries from 2012 to 2021. We found that an increase in central government debt is associated with a decline in well-being. We also found that the negative effects of debt on well-being can be alleviated when considering the interaction between government debt and spending on education or health. Indeed, strategic allocation of borrowed funds, particularly in education and health, mitigates the negative effects of public debt on well-being. The research underscores the need for strategic allocation of government debt to improve social outcomes, suggesting that debt, when managed correctly, can be leveraged to enhance well-being rather than diminish it. This insight is highly relevant to the Summit of the Future, as it emphasizes the importance of developing sustainable public policies that prioritize human development. By identifying the potential for public debt to either harm or help well-being, the study offers a nuanced perspective that can inform policy discussions aimed at building resilient African economies. However, the study does not specify the thresholds for profitable public debt levels for well-being or the minimum social expenditure thresholds to counteract public debt effects. Moreover, it does not explain how

institutional, and governance quality are crucial in public debt management. Future research should address these aspects.

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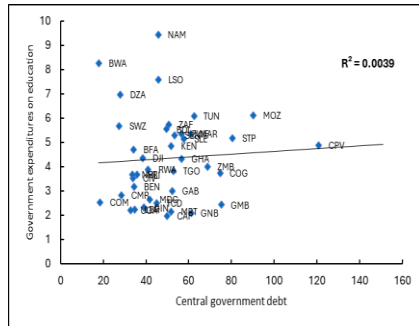
Appendices

Appendix A1: List of countries

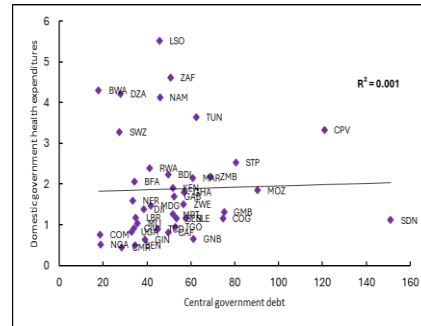
Algeria, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, Djibouti, Eswatini, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, Sudan, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

Appendix A2: Scatter plot central government debt and social spending

a. Debt and public education expenditures



b. Debt and public health expenditures



Source: Author, using IMF historical debt database and WDI databases

Restructuring African States to Achieve Sustainable Development Goals

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*If they can get you asking the wrong questions;
they don't have to worry about answers*
Thomas Pynchon, *Gravity's Rainbow*, 1973

Abstract

This paper is framed around two questions: why were European-style states, without effective domestic development institutions, created on the continent of Africa? And to what extent have the colonial states matured in post-independence Africa? Answering these two questions can help clarify the extent to which the United Nations Sustainable Development Goals (SDGs) can be achieved by African states in 2030. I contend that the post-independence African States retained both their colonial nature and the purposes for which Europeans created these states. That means that the states created in Africa in 1884-1885 are resilient, therefore, without intentional restructuring and reforming of the colonial/postcolonial states in Africa, the idea of sustainable development will simply remain an idea. Seven suggestions are offered for transformative and sustainable development across Africa.

Keywords: State Restructure, Nation-building, Agriculture, Governance, ODA, Resilience, SDGs, Trade

Introduction

Compared to states in other regions of the world, most African states are institutionally weak and conflict-ridden. Some of those states like Nigeria, Somalia, Mozambique, and the Democratic Republic of the Congo are generally poor and suffer from insecurity and banditry. They are also

foreign aid-dependent and lack functioning healthcare and educational infrastructure. The persistence of these variables since the end of the colonial period lead many African scholars and policymakers to ask the wrong questions. Some of the questions include: Why are African states economically undeveloped and characterized by a high level of political and physical insecurity? The right questions include: why were European-style states without effective domestic development institutions created on the continent of Africa? And to what extent have the colonial states matured in post-Independence Africa? Answering these questions can help clarify the extent to which the United Nations Sustainable Development Goals (SDGs) can be achieved by African states in 2030. International Organizations like the UN can effectively discharge their responsibilities to the extent their economically and militarily powerful member states allow. Like the SDGs, the previous Lagos Plan of Action, NEPAD, and Agenda 2063 “Africa We Want” require states with institutional capacities and internally generated revenue for successful policy implementation. The reason previous efforts, like the Lagos Plan of Action and New Partnership for Africa’s Development (NEPAD), remain unrealized has much to do with African leaders’ expectations that these development agendas should be externally financed. I contend that the post-independence African States retained their colonial structure and the purposes for which Europeans created these states. Consequently, external interests will not finance Africa’s development to become their competitor. Thus, to the extent that the colonial structures as states remain intact, these states will remain unable to facilitate transformative economic and political change. That is because the states created in Africa in 1884-1885 have become factories for extracting resources for external interests. And, without intentional restructuring and reforming of the colonial/postcolonial states in Africa, the idea of sustainable development to strengthen domestic institutions, governance, security, and economic development for the masses will remain an unfulfilled dream.

A Resilient State and Its Functions

Contrary to the notion that European states emerged because of a social contract between the citizens and their rulers, Charles Tilly (1985) argues that states emerged from violent conflicts between self/profit-seeking, violent, and coercive forces across Europe. According to Tilly (1985: 169), “coercive exploitation ... banditry, piracy, gangland rivalry, policing, and war-making” are central to understanding the rise of

European social formation and system of government within the framework of the state. Power holders used war to extract resources from the populations over which they had control and to promote capital accumulation by lords who could help them borrow and buy what they desired. Thus, "War making, extraction, and capital accumulation interacted to shape European state-making" (Tilly, 1985: 172). Charles Tilly's core argument on the functions of States can be summarized thus:

- (1) A state's war-making function is to eliminate or neutralize external rivals for the same territory
- (2) State-making results from neutralizing all internal rivals within the claimed territory
- (3) neutralize the State's chief supporter's enemies by protecting those who paid for their services, and
- (4) secure resources extraction necessary to hold and maintain State security; for successful implementation of its functions of war-making, State-making, and protection (Tilly, 1985: 181).

Consequently, a state that emerges from violence and is successfully institutionalized will have a revenue-generating mechanism in the form of domestic taxation, effective external and internal security institutions in the form of a professional army, navy, customs, and police service with the capacity to maintain law and order and protect citizens against domestic and foreign threats. Arguably, the capacity to organize and deploy violence accounts for the emergence of the earlier form of states in European homelands. The consequent capacity to extract resources from the citizens enabled the state to provide economic and infrastructural development and wealth expansion incentives. Subsequently, the expansion of local resources sustained the popular resistance that forced European states and leaders to make concessions that further expanded the political rights of the citizens. For example, with a stable government and functioning institutions, citizens' agitations against the lords and monarchies led to an enhanced guarantee of rights, representative institutions, and courts of appeal as conflict management tools that lessened violence amongst citizens and the state. Expansion of economic opportunities and political rights within institutional norms and values increased state legitimacy and the citizens' support for their states, which ensured European states' resilience could withstand external and domestic political, economic, and natural uncertainties. European citizens' support for their states and governments is possible because states in European

homelands emerged from domestic contestations for power, authority and control that eventually enabled European colonization and domination of other people's homelands including the continent of Africa.

African States' Resilience without Sustainable Progress

On the one hand, Europeans violently fought and created their states, and institutionalized their various organs – executive, legislative, bureaucratic, and judicial that did not erase their indigenous monarchial/traditional institutions of authority– to serve and protect European citizens' economic, political, and security interests. On the other hand, contemporary African states did not emerge from domestic contestations for power and authority. Rather, Africa's contemporary states were created by Europeans – whose strategies included erasing and compromising monarchial and traditional institutions in places like Buganda, Sokoto, and Mali to serve European interests. Consequently, externally created and imposed postcolonial African states did not use inter-state war-making to survive. Without internal reform and restructuring at independence, post-independence African states remain outward-facing and continue to carry out the functions for which they were created by external non-African actors. In the contemporary era, that function remains disproportionately focused on natural resources extraction and export of raw materials to feed external manufacturing facilities. This means that the colonial function of the African states as exporters of raw materials to European territories creates employment and wealth for Europeans and other countries, while they import finished products into the continent. The resulting economic impact of mounting trade deficits and borrowing without the capacity to pay back renders contemporary African states and citizens unable to finance sustainable development.

And to the extent that African states remain focused on the purpose for which Europeans created them – that is, exporters of Africa's raw materials to European countries and firms and importers of European manufactured products -- they remain subsidiaries of their former colonizing European nations. In the evolving freedom-based international arena, African states' subsidiary status warrants their inability to engage in inter-state war-making because it is not deemed necessary for their advancement or survival. Economically, engaged in non-productive services that include the approval of licenses and accepting foreign loans

and aid, these states have become *gatekeeper-states* (Cooper, 2002) that extract meager revenue from import licenses and fees and loans that do not need engagement with the local citizens across African states. By not engaging and listening to the people, many African governments and leaders have lost valuable local knowledge about food crops, markets, sustainable environmental practices, and community conflict management techniques and processes.

In terms of protection for the lives of the people - the critical function of a normal state, the security of the citizens has not been sustainably ensured because the postcolonial army and police institutions did not emerge from internal negotiation between the rulers and the ruled but from resource extraction related transactions from the colonial era. Consequently, postcolonial external collaborations between the various security institutions in the continent remain constant. Their persistence is evident in the presence of French military advisers in various francophone-African countries and the thousands of British and U.S. military advisers across the continent. The resulting insecurity, coup d'états, banditry, insurgencies, and civil wars have become the hallmark of failed states across the continent. In their capacity as tools for generating extractive resources without negotiating with the masses, African states are perceived as prized targets for capture by rent-seeking networks of domestic elites in collaboration with external actors who have no interest in African peoples, state formation, institutions, and nation-building activities, especially those that lead to sustainable economic development and security on the continent.

Effective state formation emanates from specific and local historical outcomes mediated by familiar social and political forces. Although the state structure and norms may have resulted from the activities and creations of certain individuals or policy networks, their legitimacy, and therefore resilience, are eventually based on the state's capacity to refract ideas and preferences of specific groups in local societies into general-purpose outcomes like enabling infrastructure that will sustain economic development and wealth for citizens. Botswana and post-genocide Rwanda are examples that point us to a possible path of how traditional and modern institutions cohere to ensure stability and relevant political and economic progress. The people's capacity to adapt to changing knowledges that produce progressive changes is enhanced through policies that provide and maintain good schools and learning, access to good and affordable

healthcare, physical security, and access to fair and equitable justice systems. States/governments that enable people to lead sustainable and resilient lives are vectors (Caporaso and Levine, 1992) of political and economic development especially when such states evolve autonomously from their local societies.

Effective states must consistently act as a vector that sustains the development and ideological underpinnings of its constituent members. It accomplishes this through transparent and transformative uses of collective resources for the best and general purpose. The extent to which its institutions serve the general purpose mediates and maintains the state's legitimacy and the obedience/loyalty of citizens. As the COVID-19 and the Russo-Ukraine War demonstrate such states and their constituent parts are mutually resilient and, usually, will organically adapt to technological, economic, environmental, political, and social changes that threaten their existence. Many contemporary African states do not meet these requirements because state institutions do not cohere with traditional African norms and institutions; rather, they are linked to European colonial interests and consequent activities that led to state creation in a specific historical process in the continent.

To become sustainably resilient, African states must execute their basic function by ensuring that competent and effective security institutions and personnel are established and deployed to protect the state and its people against foreign and domestic threats. In building and maintaining educational institutions embedded in African traditional norms and values, specific states will enable citizens to acquire and maintain core values and ideas that lead to strong patriotism, justice, and equity without losing sight of advances in modern science and technology. A sustainable and resilient future for citizens and communities across Africa starts with African states building and maintaining effective social services infrastructure for local citizens. Social services infrastructure like functional and accessible education research institutions, healthcare facilities, road networks, electricity/energy supply, communications, and transparent protection of ideas and property rights of its citizens pave the path to sustainably resilient communities across Africa. Lastly, African states can become sustainably resilient by rethinking and reestablishing effective agricultural policies that enhance different communities' capacity for producing locally grown food to feed the people. Such agricultural/food production policies must include incentives for young

people to become farmers and to ensure that food is available to and affordable by rural and urban dwellers without unnecessary domestic and external constraints as demonstrated by the effect of the Russo-Ukraine War on food prices and availability across Africa since 2022 – an evident outcome of the outsourcing of Africa’s food systems and production.

The existing structures (states) and their agents (leaders) in post-independence African states lack capacities for roles as vectors of development because they were largely conceived as externally autonomous structures and agents of society. That means that the competition for state capture for private wealth accumulation is directly responsible for the anti-democratic behaviors, which undermine political and economic development policies in contemporary African states. Contemporary states in Africa reflect the materialist preferences of hostile and illegitimate social and political forces. And, sometimes those forces merge with organized criminal gangs that parade as insurgents in places like Nigeria, the Democratic Republic of Congo, and Somalia to act as if they are agents of states with general rather than accumulative consumptive interests.

Centralized government institutions located in the capital cities without effective road networks that connect the capital cities to many rural areas, enable state agents to support and sustain the underdevelopment and insecurity of different communities. Consequently, insurgents and criminal gangs use brute force to disorganize citizens’ basic farming activities, making it difficult for them to feed themselves and effectively collaborate with government leaders to locate, exploit, and manage extractive resources necessary for sustainable development.

Unlike state-making that emerged from war-making in the case of European states, captured states in Africa are unable to use the instrument of governance to build functional developmental infrastructure across different states, therefore leaving citizens vulnerable to insecurity, health and food crises, kidnapping for ransom, and begging in the streets. As a result, many communities have become dependent on mostly Western-financed multilateral and non-governmental organizations, and diaspora groups for their basic needs survival. This means that the social organization known as the state is the basis for exercising political influence and projecting power (Herbst, 200: 21). Centralized development and governance pronouncements from the seat of government without road,

security, economic, and health infrastructures that connect the entire state from the capital to various regions of the state essentially leaves the citizens, especially the rural farmers, vulnerable and abandoned without the means for ensuring community resiliency.

While it is problematic that Europeans created states in Africa to serve European colonial interests, that is not as important as the failure of contemporary African leaders to reform and restructure the states to serve the interests of their peoples since independence. Thus, politics in contemporary Africa continues to reflect the patterns of personalized and informal nature of both traditional and colonial exercise of power and authority. For example, like Europeans who were mainly concerned with resource extraction from various parts of the continent for European industrial needs, many post-independence African leaders also captured the state for private wealth accumulation. And; with the end of the Cold War, the Chinese and other Asian countries have become key exploitative participants of natural resources from Africa. Also, instead of re-thinking state and institution building and working to industrialize their economies, post-independence African governments continue colonial practices of exporting local raw materials to Western and Asian industrial markets.

In the tradition of the Weberian notion of the state, Chabal and Daloz argue that “the modern state is the outcome of a process by which the realm of politics is gradually emancipated from society and constituted into increasingly autonomous political institutions” (Chabal and Daloz, 1999: 5). An emancipated state thrives because of its “successful establishment of a truly independent bureaucracy [that] rests on the establishment and operation of a civil service unconstrained by the dynamics of social pressures” (Chabal and Daloz, *Ibid.*). Such an emancipated state with a functional bureaucracy is contextually necessary because it can enable citizens to seek employment in private and public sectors based on merit, rather than personal connections. Such an institutional framework ensures that incomes are commensurate with skills and qualifications and are paid consistent with employment contracts (Chabal and Daloz, 1999: 6). Indeed, if such a Weberian state exists, it is yet to be manifest in Africa, even as one could consider a Weberian bureaucratic state possible in Botswana, Rwanda, and South Africa. The point is that, beyond its claims to the legitimate use of force, the external-imposed African states are different from either European or Asian states because they lack the necessary institutions and capacities to mobilize local

citizens within a framework of active patriotism and nationalism for sustainable development purposes. And to the extent that the nature and character of state institutions in Africa largely remain the same as they were at independence -- unreformed, progressively unproductive, unreliable, and unmoored from traditional values and norms -- as a platform for economic development, (Kalu, 2011) these structures called states and their governments/leaders do not have the *bona fide* capacity for creating independent policies that could lead to sustainably developed and resilient communities, like the evolving progress in Botswana and Rwanda.

In Botswana, since independence, political stability and persistent development progress from poverty to a middle-income economy can be understood in (Pitcher, Moran, and Johnston, 2009:146) the context in which the domestic elites – mainly traditional power elites rooted in the village life – anchored their leadership on the personal connection and knowledge of what their communities need and therefore provide them with services to meet their basic needs. In return for the services by the leaders, the citizens reciprocally recognized and conferred legitimacy on their leaders and government, that, makes the democratic transition less onerous in Botswana compared to other countries in sub-Saharan Africa. In the case of Rwanda, the historical monarchical system of governance anchored on the Tutsi elite was upended by German and Belgian colonialism that subsequently unleashed the conflicts that culminated in the 1994 genocide. That colonial state architecture of division without economic development that the Kagame regime has sought to take apart, reorganize, and connect the people to the institutions of governance. And, working with traditional and modern institutions has started to lead to the coordination of resources to achieve the developmental needs of the citizens in post-genocidal Rwanda. This means the restructuring of the state, and building institutions of governance anchored on community norms and values of Rwanda. And, like Botswana, specifically and intentionally empowering women leaders in formal and informal government, anchors governance in the life of Rwanda's villages and communities with services the people need that can result in the achievement of the UN SDGs. Thus, irrespective of colonially intensified ethnic differences in both countries, the security and services that the government has provided the people consequently lead to the people's conferring of legitimacy and support for a consensus governance system that has stabilized Rwanda and Botswana.

Mahmood Mamdani has observed that colonial states in Africa were bifurcated to function in two parts: “Its one side, the state that governed a racially defined citizenry, was bounded by the rule of law and an associated regime of rights. Its other side, the state that ruled over subjects, was a regime of extra-economic coercion and administratively driven justice” (Mamdani, 1996: 19-20). Thus, at independence, a reformed and restructured state and its institutions “would have entailed the deracialization of civil power and the detribalization of customary power, as starting points of an overall democratization that would transcend the legacy of a bifurcated power” (Ibid, 24-25). Although the colonizers did not intend to build the foundations of a modern state in Africa, political independence offered opportunities for African elites to transform the colonial structures by connecting the state to local and indigenous societies through public education, and unify the bifurcated states based on reformed laws, institutions, and a prevailing ethos of collective destiny. Thus, like many European and Asian states where traditional monarchical or traditional authority structures are aligned with modern democratic institutions, reformed states in Africa moored to reformed traditional chiefly powers, Emirs, and other monarchical institutions should continue to aim to provide opportunities for the people to maintain their allegiance to consensus traditional governance/cultural institutions that hold them together while competing within the arena of contemporary electoral politics. The failure to create, at independence, a national platform that purposefully unified the citizens also paved the way for the emergence of different narratives based on multiple traditions and nationalities brought together by colonialism without a functionally institutionalized state apparatus independent of civil society and private enterprise.

Analytically, at independence, reforming and restructuring the state would have retrieved the African landmass from colonial European intentions and deployed the retrieved space for Africans in their various communities to collectively reimagine their lives and environment (Penrose, 2002). Jan Penrose observes that human beings perceive, experience, and interpret *space* as “structures of the real world ... [that result from] ... slow processes of long duration” (Penrose, 2002: 278). According to Penrose,

... space holds two sources of latent power for human beings. First, it comprises the substance ... land, water, and atmosphere ... the food that we eat, the water that we drink,

the air that we breathe, and the resources for protecting ourselves.... This relationship between space and human life in any form means that space is a source of latent material power: the power to sustain human life. Second, space is a source of latent emotional power ... [with] ... the capacity to invoke or release an emotional response. For example, where space is perceived as beautiful it moves us; where it is perceived as threatening it frightens us; where it is perceived as powerful, we respect it (Penrose, 2002: 278-279).

Thus, "space is present whether anyone knows about it or not, but space only becomes a place when it acquires a 'perceptual unity' ... and ... becomes a territory when it is delimited in some way" (Ibid., 279). Thus, "territories are the product of human agency, and this agency is usually referred to, as 'territoriality'" (Ibid.). Conceptually, "territoriality ... [is] the attempt by an individual or group to affect, influence or control people, phenomena and relationships by delimiting and asserting control over a geographic area ... called a territory" (Ibid.; Sack, 1986). And, ultimately, "the *control* of space is an extremely potent component of power relations ... [as] there is power in the actual *creation* of territories because the application of territoriality reflects the needs and values of those who design and maintain them" (Penrose, 2002: 279-280). The Weberian states in North America, Europe, and parts of Asia often reflect the memories, narratives, and hard work of the people and communities that created them. In the same vein, states in contemporary Africa reflect the materialist interests of those external actors whose paradigm of states in Africa was that of a frontier space colonized for its capacity to yield natural resources for exports. By accepting political independence without restructuring the systems of governance, economic, educational, and political orientations of the leaders and the people, states in Africa remain imbued with the narrative visions of European colonialists who saw Africa and its people as sources of raw materials for European economic needs.

With the end of the Cold War, Europeans, Americans, and Asians now see Africa and its people as problems to be solved. According to "experts," their gaze on Africa as a space of poor economic development, governance, disease, hunger, crisis-prone, and political instability can be reversed by following policies from various international institutions and governments. For example, western scholars and leaders have offered solutions to problems facing African states by urging Africans to follow the

examples of Western states that patiently reached the promised land of development through the free market economy without government interference. They suggest that, unlike European, Asian, and American societies, the use of subsidies to bolster basic government-supported activities like education, healthcare, and food production, and consistent subsidies to firms to enhance their competitive advantage, African states should look to Structural Adjustment Policies (SAP), the Millennium Development Goals, and now the Sustainable Development Goals (SDGs) as policies and yardsticks that can help Africans to develop the institutions and governments of their states. While the basic argument and framework of the SDGs are what states and people need in Africa, I think the global focus on poverty in Africa is a diversionary policy argument because the challenge in Africa is at the intersections between the State and Government. Thus, without institutionally restructured, effective, and capable states across the continent, sustainable development goals cannot be achieved by contemporary governments in African states. This means that to the extent decolonization did not lead to the institutionalization of functional state apparatuses in Africa, states remain bifurcated, unproductive platforms for natural resources exploitation that benefits external interests and the few African leaders who support the exploitation of their homelands.

The unreformed state boundaries, territories, and space remain contested between different visions of the right approach to nationhood and sustainable development. Consequently, the imposed arbitrary boundaries with problematic state lines that forced the creation of states without unifying policies depend on the emotional power derived from the memory of “our space” by many nationalities. The resulting multi-ethnic and multi-national states remain economically unproductive platforms governed by greedy leaders. According to Chabal and Daloz, the *state* bequeathed to Africans at independence is *vacuous* and *ineffectual* and its disorder and chaos have become sources of political benefit for the African elites.

It is *vacuous* in that it did not consolidate, as was once expected, on the foundations of the colonial legacy ... instead [the states] rapidly disintegrated and fell prey to particularistic and factional struggles. It ... failed to acquire either the legitimacy or the professional competence that are the hallmarks of the modern state. It is *ineffectual* in that it has never been in the interest of African political elites to work for the proper

institutionalization of the state apparatus (Chabal and Daloz, 1999: 14).

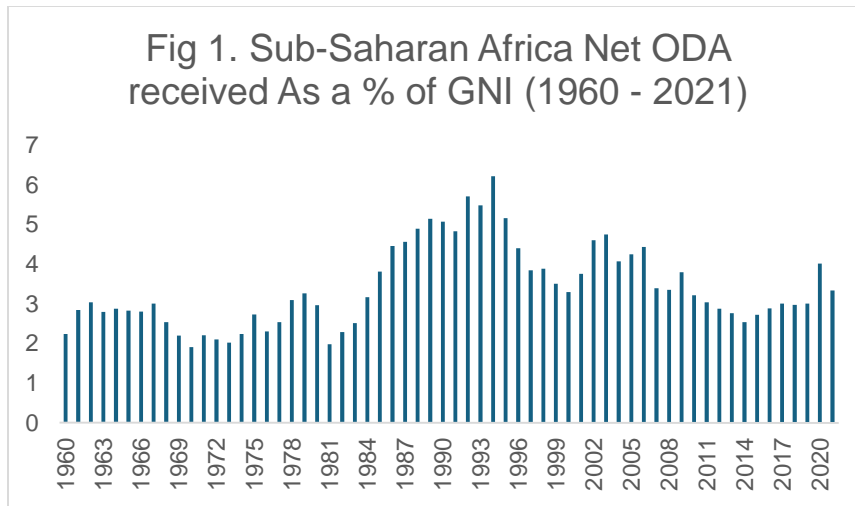
The challenge for African states is how to construct a narrative of community, unified by a love of space and territory and imbued with a narrative vision of possibilities crafted to reflect the values and norms of people within those communities. Put differently, the challenge is how to build one narrative of different nations that can sustain the contemporary states in Africa. An additional challenge concerns how to institutionalize a modern state apparatus, capable of acting in the interest of the citizens to solve problems for the collective good. Overcoming such a challenge requires transforming the colonial and post-colonial territory in ways that impose new and uplifting narratives in spaces with memories of state violence, abjection of the masses, and devoid of unifying patriotic emotions. The challenge for African states includes finding ways to build viable societies within the states where the citizens can all share in their civic responsibilities with pride and in peace. These challenges are at the core of African states' unproductive efforts to develop viable industrial policies to expand food production to feed people and advance economic and wealth-generating opportunities that enable families to end intergenerational confusions about both the state and government. Without restructuring and reforming state apparatuses across Africa, the expected results of the Sustainable Development Goals to institutionalize peace and security, promote gender equality, end poverty, provide healthcare delivery, and end economic and climate crises, banditry, insurgencies, and associated insecurities across Africa will not be achieved. Without restructuring and reforming the state in Africa, instead of ending insecurity and enabling accountable governments, improving food production, and eradicating poverty, African states will remain an economic appendage, exporting raw materials/wealth to industrialized countries, while importing manufactured products, poverty, and weapons that intensify conflicts and deaths in Africa.

Africa and Sustainable Development Goals¹

For example, with 169 targets and 232 unique indicators, African countries will need approximately US\$1.3 trillion yearly to meet the SDGs targets (The UN Economic Commission 2020). Given the above discussion about the inadequacies of the state in Africa, it is obvious that African countries lack the fiscal space to fund the implementation of the SDGs.

Public debt in African countries has tripled since 2010 and continues its upward trajectory (The World Bank 2023). Currently, 33 of the 54 countries are heavily indebted countries. And, while Africa's public debt is increasing, official development assistance continuously fluctuates, making it unreliable (see Figure 1) as a development strategy for fiscal poverty eradication. The weak fiscal state of African countries means they cannot initiate transformational projects without imposing additional severe economic and other hardships on their populations.

¹The SDGs data for this paper is from the 2023 Sustainable Development Report and is available here: <https://dashboards.sdindex.org/chapters> and from SDGs Tracker available here: <https://ourworldindata.org/sdgs>. Combined, this is the most comprehensive dataset on SDGs. The curators used the time series method to extrapolate trend lines from some data sets. For instance, they took the poverty headcount data from 2015 to 2023 and derived data from 2000 to 2014. Part of the problem with the resulting aggregate data is the lack of data for six African countries – Equatorial Guinea, Eritrea, Guinea Bissau, Libya, Seychelles, and Sahrawi Arab Democratic Republic or Western Sahara – with the effect of presenting inflated data for sub-Saharan Africa as empirically more progressive than it should. And, except for Seychelles, most of the omitted countries have internal stability problems.



Source: World Development Indicators

Currently, Africa has over 1.4 billion people; and at least 500 million of her population is projected to be under 25 years of age by 2050. Admittedly, and based on existing data, 13 of the 54 states in Africa have low populations and unsustainable economies. One of Africa's main challenges is its low intra-continental trade. For example, if instead of trading mostly with their former colonizers, the 54 states collaborate and trade with each other, with over 1.4 billion people, Africa currently has the largest trading areas. However, despite free-market policies, foreign aid, and external loans for economic development, trade within the continent remains below 15%. Theoretically, the AU's planned African Continental Free Trade Area (AfCFTA) is a move in the right direction – taking apart existing trade architecture, at least continentally, restructuring it or building new institutions that remove barriers that prevent the free movement of goods, and people, and services across the continent. The huge and foreseeable benefits, of that approach include enhanced economic productivity via trade, employment, reduction in poverty, and self-sustaining economic practices.

The challenge, however, is in how to implement the lofty goals in the planned AfCFTA without first restructuring and reforming existing state institutions and governance structures that continue to privilege trade with external partners, mostly former colonizing nations. Further, increased Asian interests in economic activities in the continent without regard to domestic or other human rights issues pose additional challenges

to these goals. For example, western public and private individuals with their home passports (an indication of the power of their states) can move freely across African countries – but the movement of *bona fide* Africans across the continent remains restricted. African Union’s seriousness with the achievement of the Agenda 2063 and the AfCFTA can start before the end of 2024 with the removal of state barriers that restrict the movement of Africans across the continent.

Without reforming African states to expand the domestic economies, especially food production opportunities, heeding external advice about the utility of the free-market approach will continue to undermine African countries' capacity for economic independence. In addition, it will continue to maintain Africa’s dependence on importation of food items from Western and Asian countries. For example, public debts that African countries accumulated since the 2019 COVID pandemic were mainly accumulated to finance food imports to feed a continent with a vast capacity to produce sufficient food for both consumption and export. This means that African countries cannot continue to outsource their food systems and hope to achieve sustainable development. Weak economic growth; combined with fast accumulation of public debt, has pushed the median public debt-to-GDP ratio from 32% in 2010 to 57% in 2022 (The Economist 2023). Regional variation in public debt puts the data at 56% for West and Central Africa; and, 64% for Eastern and Southern Africa.

Although; individual countries like Cote d’Ivoire, the Democratic Republic of the Congo, and Kenya experienced positive investment growths of 67%, 8.6%, and 5.2% respectively in 2022; aggregate, investment in sub-Saharan Africa fell from 6.8% in 2010- 2013 to 1.6% in 2021 (The World Bank 2023). However; for 2023, a growth rate of 2.8% or lower is projected for Nigeria. In addition to observed variations in public debts, economic growth, and investments, resource endowment also affects varying rates of growth. For example, commodity prices in resource-rich countries are expected to grow at a slower pace compared to non-resources-rich countries with lower import bills and expansion of services that are projected to “grow 4.2% in 2023 and to pick up to 5.1% and 5.3% in 2024 and 2025, respectively” (The World Bank 2023).

In sum, with a focus on sustainable development goals, at least 43% of Africa’s 1.4 billion population had no access to electricity in 2022. And, while maternal and child deaths, and incidents of HIV, malaria, and

tuberculosis are decreasing, the material poverty rate is increasing at a geometric rate; to the extent that 5 out of every 6 poor persons in the world reside in Africa (Global Multidimensional Poverty Index 2023).

Concluding Remarks

The SDGs are presented as a basic perspective aimed at homogenizing policies of governance that combine liberal democracy and a free-market economy. It is a persistently refreshed international institutions' prescription for material poverty eradication in African states. Contextually, African states, with currently low manufacturing capacity, price-takers in the global economy, and outward-facing economic relationships, lack relevant economic development policies and institutions to create enabling environments for entrepreneurial activities to expand their economies to help the masses transition from abject material poverty to resilient and sustainable existence. The SDGs are widely promoted by Western intellectuals, governments and institutions as the best strategy for helping African states and peoples emerge from poverty. To be sure, African governments accepted the SDGs as contained in the Common African Position (Africa Union, 2014)² – albeit, without African states' development of the institutional resources and capacities for effective implementation of the SDGs. This means that African states lack either the capacity or willingness to implement policies that can eradicate poverty because it is not in the interest of the current group of leaders. To experience a transformative march toward development and political stability, African states need to do the following: (1) restructure the inherited post-independence states, (2) recraft their modes of governance, (3) significantly enhance mobility within the continent, (4) increase intra-Africa trade, (5) unabashedly institutionalize and practice norms of gender and human rights protections, (6) promote land tenure reforms, and (7) make farming and agriculture both income-generating and honorable ways of making a living again. Implementing the above will inoculate African states and citizens against future internal and external shocks like the COVID-19 and Russo-Ukraine War that devastated many states' capacity for affordable food

²See the document - *Common Africa Position (CAP) On The Post 2015 Development Agenda*. Addis Ababa, Ethiopia, Africa Union, March 2014. Especially, see page 16, item 60 which reads "We call upon developed countries to provide sufficient and predictable financing to developing countries, mainly through effective use of the Green Climate Fund with US\$100 billion per year by 2020, as well as the transfer of technologies and capacity building in according with the relevant decisions adopted in Cancun.

and medicine. Handouts or foreign aid from Europe, America, and Asia should not become strategies for helping African countries end material poverty and build competitive industrial economies. External aid hoodwinks African leaders into continuing an unproductive economic relationship between African countries and external entities in economic relationships that increase rather than end material poverty. The legacies of weak post-colonial states with degraded institutional structures, suffocation of civil society, marginalization of groups using religious, ethnic, class, and racial differences, and the general unexamined acceptance of imported norms and values remain debilitating for political and economic governance and positive change in Africa.

The current situation supports and condones multidimensional poverty because it enables the lack of access to clean water, electricity, food, and affordable healthcare to flourish. It is difficult to confidently project the conditions under which African countries can meet the targets of the sustainable development goals by 2030 without a surgical rethinking of the extent to which political and economic development problems and their solutions must be anchored, directed, and implemented locally by Africans.

Lastly, it is unlikely that free-market and democratic liberal approaches have the development elixir to be effective in extricating African states from the ongoing economic and governance insecurities, the uncertain impacts of climate change, and the multidimensional poverty that is ravishing people who live in places that have both the knowledge and memories of exporting valuable raw materials to other global destinations. But, to reiterate, for African states to meet the UN SDGs targets, they can and must dismantle, rebuild, and reform the degraded institutional structures that they continue to rely on as the vehicle of advancement and growth.

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Lesson Learnt from Countering Militant Groups in Africa

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Abstract

The disconnect between what truly drives the contagion of violent militancy in Africa and governments' attempts at countering it has led to ineffective interventions. As seen in the theatres where violent militancy is rampant, interventions that are not informed by inclusive, people-centered, country-specific, and robust policymaking are bound to fail. This paper focuses on identifying the core factors that make counter militancy interventions effective or unsuccessful. These factors are derived from an analysis of the studies on countering militant groups in Mali, Burkina Faso, Niger, Côte d'Ivoire, and Kenya as well as the several workshops that the author has led on identifying best practices for countering violent militancy in Africa.

Keywords: defense and security forces, governance, militancy, insurgency, trust, interagency

Introduction

Much ink has been spilt in recent years attempting to unpack the seemingly interminable insurgencies that plague some fragile states in Africa. The drum beat of insights that emerged thumps home the common themes long scrutinized by scholars and astute observers of African insurgencies, namely how the combination of dysfunctional governance with weak and undisciplined defense and security forces (DSF) contribute to the rise and resilience of militant groups. Time and again and across disparate fragile countries in Africa, glaring deficiencies in governance, particularly in the areas of justice, defense, and law enforcement, have enabled and fueled insurgent activity. Indeed, it is not an exaggeration to say that in some countries that have been engulfed by violent militancy, governments and

their security forces have been their own worst enemies. Instead of undertaking the political, socio-economic and security reforms necessary to improve governments' legitimacy and fill counterinsurgency capability gaps, governments tend to double down on militarized interventions (arming militias, arbitrary arrests, systematic closing of markets, impositions of curfews, and so on) to halt insurgencies. These measures often end up further eroding local livelihoods, exacerbating communal frictions, and damaging state-society trust.

In the few cases where governments with limited resources and low state capacity have made inroads against militants, governments have generally made efforts to understand the nature of the threat and then respond with security reforms, community engagement, improvement in public service delivery, and dialogue with militants. Mauritania and Niger (before the July 2023 coup) are examples where leaders exhibited the political will to address the drivers of insurgency while fighting the militants and providing recourse for dialogue and reconciliation. In Coastal West Africa, Côte d'Ivoire, which was once ravaged by internal conflict, offers several important lessons in how to counter emerging militant groups. Abidjan's efforts to reorganize and align security and economic interventions have hitherto forestalled an emerging insurgency from taking root within communities along its long and vulnerable 630 kilometers border with Burkina Faso and Mali. In East Africa, Kenya provides a good case of the opportunities of balancing national leadership with local ownership in countering militant insurgency.

All these cases show what is possible when authorities make a candid effort to understand the threat and then craft integrated strategies designed not only to extend state capability and presence but also improve governments' legitimacy and build confidence between security services and aggrieved communities. Each context is different, but the cases' commonalities help illustrate what works and what does not in countering militant groups. This paper focuses on identifying these core factors of successful or otherwise failing counterinsurgency campaigns. These factors are derived from an analysis of the studies on countering militant groups in Mali, Burkina Faso, Niger, Côte d'Ivoire, and Kenya as well as the several workshops that the author has led on identifying best practices for countering violent militancy in Africa.

Mali: The road to Strategic Failure

Mali is a classical textbook case where the failings of a dysfunctional state created ideal conditions for violent militant groups to take hold and thrive. In the post-2012 security crisis that saw much of Mali's north overrun by Tuareg rebels and militant groups, the state's inability to protect communities and the tendency of security forces to commit indiscriminate violence against suspect civilians have contributed to recruitment into violent militant groups. Numerous empirical studies have demonstrated consistent evidence of an association between the need for protection and the decision to join violent armed groups (Boukhars and Pilgram 2023). State abuses have also been shown to be often 'tipping point' for insurgent recruitment (UNDP 2023)..

The dynamics of dysfunctional warfare that have characterized the security environment of Mali long predated the spread of violent militancy in the country (Pérouse de Montclos 2021). In the various uprisings that have engulfed the north of post-independence Mali, the choice of the authorities to unleash disproportionate violence while disregarding the demands of Tuareg rebels (end to marginalization of the north and "recognition of a northern political identity" played a major role in allowing resentments to simmer and propelling the narratives that have sustained the cycles of conflict (Chauzal and Damme 2015). To be sure, other factors fed the conflict between Bamako and its faraway northern regions, including internal divisions between and among the different clans and groups that populate the north, the influx of small arms, and recurrent droughts which made thousands of northerners climate refugees in Algeria, Niger and Libya where some Tuareg received military training and equipment (Chauzal and Damme 2015).. But it was the systemic weaknesses of the state and the dysfunctions of its security forces that abetted insecurity and fomented armed revolts.

Such failings became apparent in the 1990s and onwards when Bamako struggled to settle a new cycle of insurgencies that coincided with the country's tumultuous transition from military rule. Unlike the 1962 insurrection that was repressed in blood, the following rebellions proved hard to suppress using mere brute force. To tackle the new insurrections, Mali's elected presidents adopted a multi-pronged approach to suppress recalcitrant rebels, coopt leaders amenable to their control, and provide economic incentives to combatants willing to disarm. The government also made promises contained in different peace agreements to invest in the

development of the north, give localities more autonomy, integrate rebels in the army, and withdraw the bulk of the military from the north. The partial and bad implementation of these peace agreements worsened center-periphery relations, polarized community relations in the north, and paved the way for the rebellions of the 2000s, which took advantage of the weaknesses of Malian security forces and their sparse presence in the north.

President Amadou Toumani Touré (ATT), elected in 2002 and deposed in a military coup in 2012, tried to manage the restive northern regions through manipulation of internal divisions within northern communities and propping up of unaccountable ethnic and clan-based militias, some of whom were involved in trafficking and drug dealings (Lacher 2013). This fed distrust within Tuareg and Arab communities, fueled the anger of local populations at the unfulfilled promises of economic development in the north, and created entry points for violent militant groups that were pushed out of Algeria in the late 1990s (Boukhars 2013). The Algerian Salafist Group for Preaching and Combat (GSPC), which in 2007 evolved into al-Qaida in the Islamic Maghreb (AQIM), took advantage of the security vacuums created by the state's withdrawal from the north, the unreadiness of a military whose leadership neglected its rank and file soldiers, and the infighting among and between communities, to settle and thrive in the north of Mali (Boukhars 2012).

Ibrahim Boubacar Keita, aka IBK, who was elected in 2013 with a mandate to restore state authority and trust in public institutions, had done little to address the sources of spiraling security crises engulfing Mali. His tenure had been characterized by corruption scandals and failures in the security, judicial and administrative realms, the accumulation of which led to the territorial expansion of violent militant groups, the proliferation of ethnic based militias, and the death of thousands of soldiers and civilians. The dramatic deterioration of security led to his ouster in August 2020 by a military that was demoralized by its losses. When he took office, IBK pledged to put an end to the threat of mutinies and coups that undermined the power of governments. But his inability to address the systemic ills that kept the army enfeebled and severely disorganized had engendered deep disenchantment and anger among the soldiers. In the end, the widespread fraud and waste that roiled the ministry of defense as well as the embezzlement of soldiers' wages drove the rank and file to their boiling point (Schmauder, Soto-Mayor and Goxho 2020).

The military junta that took power in August 2020 tried to address the weaknesses of the military by investing in recruiting more soldiers and procuring new military hardware, notably aerial equipment. They also turned their backs on France and pivoted to Russia as a new security partner that they hoped could help stabilize their hold on power and turn the tide against the militant insurgencies raging in the country's central and north-eastern regions. The military regime claims that this security rapprochement with Russia and its linked private security company Wagner and its successor Africa Corps has bolstered the offensive capabilities of the army and boosted the morale of Malian troops (International Crisis group February 2023). The reality on the ground, however, is still precarious. The military has shown the capacity to conduct "complex operations," but this has not stemmed the continuing deterioration of security (International Crisis group February 2013). In fact, by doubling down on a pure military response that relies on hard counterterrorism tactics, local militias, and mercenaries, the Malian authorities risk pursuing the same old failed strategy that exacted a heavy toll on civilians and exacerbated communal tensions.

The worst part of this dynamic is also playing out in Burkina Faso where the coup leaders' very attempts to solve the country's insecurities might end up aggravating the problem. The new military authorities that emerged out of two military coups d'état in 2022 have taken the country's reliance on armed self-defense groups and civilian auxiliary forces to new levels, making them "the main pillar of their response to insecurity" (International Crisis Group May 2023). This dependence stems from a capability gap (de Bruijne 2022).. Despite the efforts to reinforce the security and defense forces through recruitment of soldiers and gendarmes and acquisition of military equipment, the military still lacks the manpower to contain the spread of militant groups. In theory, it seems sensible that the military rulers continue to resort to informal militia groups while revamping national security policy, modernizing outdated military equipment, and improving the functioning of its security forces. An appreciable number of Burkinabés also seem supportive of setting up self-defense units to help the efforts of security forces in protecting communities and securing border areas (Idrissa 2019).

The problem, however, is that without proper supervision, the government's massive recruitment of 50 000 additional armed civilian auxiliaries, called the Volunteers for the Defense of the Homeland (VDP), risks worsening the security situation (Koné 2023).. Already, the increased

militarization of Burkinabe society and the recruitment of state-backed self-defense militias from settled communities has led to a spike in violence against civilians, an increase in intercommunal clashes and additional recruitments of endangered pastoralists into violent militant groups. Militants have targeted communities they accuse of supporting and supplying armed militias, while the DSF seems to retaliate against villages they suspect of siding with the insurgents (International Crisis Group May 2023).

The military leaders' management of insecurity in both Mali and Burkina Faso risks repeating the same errors committed by their civilian predecessors. Their efforts to upgrade the tactical capabilities of their security forces is long overdue, but these endeavors will not come to fruition if they remain restricted to a pure military response that gives precedence to arming specific communities and bolstering the army's manpower and equipment. So far, neither military government has embarked on improving security sector governance and accountability. Nor have they engaged in addressing the underlying grievances that fuel violent militancy, namely political dysfunction, DSF abuse of civilians, uncontrolled state-affiliated militias, rampant banditry, and land tenure disputes.

Niger: A Promising Case Gone Astray

Before the July 2023 coup that overthrew President Mohamed Bazoum, Niger represented a promising case that demonstrated that fragile countries have the capacity to absorb and withstand shocks due to high levels of internal and external insecurity. Despite being surrounded with encroaching conflicts and insurgencies on its borders with Libya on the north, Burkina Faso and Mali on the north-west, and Nigeria on the south-east, Niger had shown remarkable resilience. Unlike its troubled neighbors, violent militant groups have not been able to establish permanent sanctuaries or occupy large swaths of territory.

This capacity to hold out against multiple destabilizing forces was largely due to the will of the highest authorities in the country to learn from the country's past struggles as well as that of its neighbors and adjust policies as conditions dictate. This is most evident in the way the country managed the insurrections and violence it has confronted since it gained its independence. Unlike its Malian neighbor, the authorities had the political wisdom to politically integrate the country's minority groups. The example

of Brig Rafini, a Tuareg who served as Minister of Agriculture in the late 1980s and then prime minister of Niger from 2011 to 2021, is a testament to the level of access to power that minorities were afforded. The government had also been more proactive in addressing some of the political grievances of Tuareg rebels. The ruling authorities enacted decentralization policies that devolved “some administrative functions and allowed local authorities to spend 15 per cent of locally generated mining revenues” (Pérouse de Montclos 2021).

The government of Niger had also taken deliberate decisions to avoid inflaming local conflicts among border communities. Niger, for example, had always been wary of the mobilization of vigilantes and ethnic militias to fight insecurities. In this regard, Mali offered a powerful warning about the risks of subcontracting conflict management to ethnic militias. But concerns about their potential to exacerbate local conflicts as well as their propensity to go rogue or be politically instrumentalized also stem from the hard lessons that Niger learnt during the Tuareg insurgencies that engulfed its north in the 1990s and 2000s and the ethnic Tebu rebellion that hit the country’s portion of the Lake Chad in the 1990s. In the latter case, Niger struggled to demobilize the Fulani and Arab militias that helped fight the Tebu rebels. Niger also learnt from the mistakes it made in 2017-2018 when it collaborated with Malian Daosahak and Tuareg-community armed groups to fight militant groups in northern Tillabery. Such military partnership, backed by French military forces, fueled deadly armed confrontation between competing communities as well as boosted recruitment for the militants, especially from Fulani young men who were disproportionately targeted by these joint offensives (International Crisis Group 2020). The authorities had to reverse course and suspend pursuing policies that carry heavy costs.

As a consequence, Niger has resisted the mobilization of community armed groups. In the areas bordering the Lake Chad Basin where Boko Haram is active, the authorities prohibited civilians from arming themselves, demanding instead “that vigilantes work as an informant network with the army’s civil-military cooperation teams ” (International Crisis Group 2017). When some of those areas became hard hit by insecurities and the government proved unable to protect civilians, the authorities came to terms with the emergence of vigilantes, but they nonetheless pressed that they register with civilian and security officials. They also provided alternatives for communities to be involved in the state’s security efforts at the local level. For example, the authorities started special training programs for young people in affected communities to join the National Guard. This was a

winning strategy as the integration of communities in local security initiatives improved relations between the National Guard and border communities. According to a 2021 study carried out by the Nigerien National Human Rights Commission (CNDH) on the obstacles of building trust between the security forces and the populations, the National Guard topped the rest of the DSF branches in terms of favorability ratings (ANiamey 2022). In fact, the study results revealed a convergence of positive opinion towards the National Guard, especially in the hard-hit regions of Tillabéri, Tahoua, and Diffa.

The study also showed that the government's efforts to bolster the operational effectiveness of its security forces and improve their relations with local populations were well-received in communities where DSF proved to be responsive to peoples' security needs. In the department of Konni of the Tahoua Region, majorities of respondents expressed confidence in the police, particularly in the Mobile Border Control Company (CMCF) that managed to reassure the populations thanks to the promptness and effectiveness of its interventions. In other regions where the police failed to promptly act on alerts from the populations, the study found low levels of popular satisfaction. The same applies to the military. In Diffa, the military managed to improve its image thanks to its awareness-raising activities and civil-military actions (CMA) while in Tillabéri the populations had a negative image of soldiers who they blamed for acts of human rights violations, especially in areas bordering Mali and Burkina Faso. This divergence of views shows that the DSF still have ways to go to rebuild trust with the populations. But, as the results of the study illustrate, DSF-population relations have gradually improved. By 2021, nearly half of Nigeriens had a positive assessment of their collaboration with DSF.

This positive trajectory was due to political determination to improve synergy of interventions between DSF, political actors, civil society organizations (CSOs), and local communities. In the years preceding the 2023 coup, Niger adopted several legislative and operational frameworks, including a National Strategy for the Prevention of Radicalization and the Fight against Violent Extremism (SNPRLEV) and a National Strategy for Local Security (SNSP), "as a model for community-oriented security management" (Mottet and Inkesha 2022). The High Authority for the Consolidation of Peace (HACP) and other structures were "all levers for coordinated and effective" action to operationalize this integrated multi-stakeholder approach to countering violent militancy.

Niger's multidimensional approach to countering militancy also included providing recourse for mediation, dialogue and possible amnesty to insurgents who accept to lay down their arms and reintegrate into society. Such non-military means of countering violent militancy were designed to ease intra and intercommunal conflicts, lure associates of militant armed groups to defect, and help diminish the human resources and military capacity of militant groups. As such, Nigerien authorities began in 2021 exploring the prospect of dialogue with leaders of insurgent groups, especially after several militants deserted in Tillabéri. Under the "outstretched hand" policy adopted by then president Bazoum, several high-level initiatives were launched to incentivize defections (Agence France-Presse 2023). Some targeted local commanders while others, under the auspices of the interior ministry and HACP "opened talks with factions of ISSP and JNIM (Héni Nsaibia 2023), exploring options ranging from ceasefires, renditions, and prisoner releases to more substantial reform-oriented negotiations" (Armstrong 2023). These outreach initiatives, backed with security upgrades and community engagements, helped drive violence down in the North Tillabéri area by "nearly 80 percent in 2022." The authorities' drive for experimenting with dialogue with insurgents was "inspired" by the relatively successful Diffa "disarmament and reintegration process launched in 2016" as well as the disarmament and reintegration of Tuareg rebels in the 1990s (Koné 2023).

The July 2023 military coup threatened to derail the progress that Niger made in countering violent militancy. The governments' astute handling of the multiple insecurities that have confronted the state spared Niger from the worse fate of its Malian and Burkinabe neighbors. In fact, the experience of Niger illustrates that political will, perseverance, and adaptive strategy are key to countering insurgencies. To be sure, Niger was certainly still volatile. Despite some progress, poverty was still prevalent, particularly in rural and border areas. Ethnicity also remained a polarizing issue that affected politics, military recruitments, communal relations, and armed conflict. But since the country's transition to democracy in the 1990s and especially its return to democratic order in 2011, the governments of Niger had made deliberate decisions to address security threats in a multidimensional way.

Cote D'Ivoire: Keeping Militants at Bay

Côte d'Ivoire's story of how it emerged from devastating civil conflicts (2002-2007 and 2010-2011) into a relatively stable country with the strongest economy in Coastal West Africa is quite remarkable. Equally important is how the country managed to roll back militant incursions into its territory. Côte d'Ivoire was the first country in Coastal West Africa to suffer militant attacks in March 2016 and then June 2020. Militant groups based in Burkina Faso and Mali exploited the porosity of borders, disorganized state security services, and rampant illicit transnational flows to infiltrate the country's vulnerable northern regions. To disrupt them necessitated that the country bolsters its security apparatus, enhance its socio-economic investments in affected regions, and improve trust between security actors, local authorities and populations that have been marginalized or hard to reach. Abidjan's efforts in this regard have hitherto forestalled an emerging insurgency from taking root within communities along its long and vulnerable 630 kilometers border with Burkina Faso and Mali.

The success of Côte d'Ivoire in rolling back the insurgency illustrates the importance of developing and implementing an integrated strategy that demonstrates government resolve to meet its most basic responsibilities. Since the end of its second civil conflict (2010-2011), Côte d'Ivoire has made important strides in reforming its security forces. The restructuring of the military made its composition more balanced in terms of ethnic and regional representation (International Crisis Group August 2023). The significant investments in recruitment, training and equipment have also made the Ivorian military more capable than ever before (Le Monde 2023).

Côte d'Ivoire has also invested in reforming the capabilities of the police and law enforcement agencies to meet their diverse functions needs in terms of population protection, intelligence gathering and analysis, and interrogating and detaining suspects. The police, gendarmerie (paramilitary national police force), forest rangers, etc. play a critical role in countering violent militancy, but as those familiar with the literature on countering insurgencies know, these forces can also abet the growth of insurgent movements. Weak, ill-prepared, or abusive domestic forces can feed insurgency momentum. Boosting the capacity and legitimacy of internal security forces is therefore key to stemming a budding insurgency.

Equally important, the authorities made a determined effort to address the deleterious gaps in coordination between its different security agencies. The special forces of the army, the Police Search and Assault Force of the National Police and the Intervention Unit of the National Gendarmerie have had to work together within the framework of mixed operational units (Ricard 2021). The country also invested in the development of counterinsurgency coordination mechanisms that can gather, analyze, process and transmit information to relevant stakeholders. The ability to connect the dots relates not only to information sharing among the varied national government agencies but also to integration of efforts across different levels of government (state and local) and between government and non-government entities. This interagency process enables informed decision-making and ensures appropriate preparedness to prevent, investigate, disrupt and dismantle militant threats.

The tasks of countering militancy also included enhancing DSF-community relations. To avoid the limitations of the security-heavy approach adopted in the central Sahel, Côte d'Ivoire recognized early on the importance of integrating communities into the efforts to prevent and counter militancy. Since the 2020 Kafolo attack, the authorities have stepped their endeavors to boost communications between local communities and the security forces, governors, and local authorities. The establishment of civilian-military committees have played an important role in mitigating disputes between local populations and DSF. Côte d'Ivoire has also implemented community policing and its military has made efforts to gain civilians' support through building basic infrastructure and offering healthcare to communities through its army mobile clinics.

The case of Côte d'Ivoire demonstrates that political will and sound strategy are key to thwarting nascent insurgencies. The functions of countering militant groups included security, socio-economic, informational, and political components, all of which have been designed to restore order, enhance security for local communities, and advance political objective of reconciliation. This whole-of-nation approach, also called a comprehensive approach, factored in the multiple dimensions of countering violent militancy in Côte d'Ivoire.

Kenya: Adapting in the Face of Evolving Militancy

Kenya provides a good case of innovative practices in countering militant groups. The country's experience of tragic militant attacks started with the 1998 truck bombs that exploded at the American Embassy in Nairobi. Since then, the threat has evolved and been superseded by the Somali-based violent militant group, al-Shabaab. The latter has subjected Kenya to most of its strikes outside Somalia, attacking government and security personnel operating along the Kenya Somalia border as well as civilians in northeastern Kenya, in particular non-locals and individuals suspected of being government spies. In response to these attacks, particularly the deadly 2013 attack on Nairobi's Westgate Mall and the 2015 killing of 148 students in Garissa, which borders Somalia, Kenya has invested significant resources in its struggle against violent militancy.

Deriving lessons learned from the shortcomings of its coercive approach to countering militancy, the Kenyan government began a gradual transition from a purely security-driven response to a more multi-stakeholder approach. After the 2013 attack, the government introduced new reforms to policing. Among other things, this included the gradual embrace of people-centered approaches to policing. This new approach to security was reflected in the creation of two state-initiated community-oriented policing models: the National Police Service's Community Policing Structure and the Nyumba Kumi (ten households). Both models were designed to help narrow the trust gap between the police and local communities. Indeed, an evaluation of community policing pilot projects found "better community involvement in the management and resolution of local security problems," and improved "trust and cooperation between the police, civil society, and local communities (United Nations Development Programme 2022). Promising community-friendly policing initiatives such as neighborhood 'police cafés' have also produced positive outcomes. Research has shown that dialogue forums between law enforcement and local communities in some restive borderland communities in Kenya tended to improve trust in security services (Jones 2020).

Traditionally, countering militancy practices have involved little consultation with local communities and have seldom taken into account their diverse needs, concerns and perceptions. The belief was that enforcement activities and intelligence-gathering methods must take priority over the arduous task of gaining public trust and earning the support of local

communities. The limitations of these methods, however, even when implemented within a rule of law framework, have highlighted the necessity of drawing on the support of local communities to successfully counter violent militancy. The logic behind this is quite simple. In many low-trust settings where policing is not closely integrated into local communities and where law enforcement agencies have little legitimacy and credibility, the ability of security actors to identify and enhance community safety issues and social order is undermined. By contrast, in areas where security actors adopt community-oriented approaches that prioritize public participation and support, their efforts tend to have positive impact.

Building trust is critical in contexts of countering militancy where communities and security actors must have a clear understanding of the nature and source of the threat they are facing as well as the causes and dynamics of violent extremism. This is the same rationale that drove a restructuring of security provision in Garissa. After the 2015 attacks, the authorities ordered a major personnel reshuffle that included the placement of locals in security positions of high prominence and visibility. The new security leadership, as documented in a 2017 Saferworld study, “commanded local trust and respect across social divides, clamped down on corruption and arbitrary arrest, worked with communities to restore trust and break up al-Shabaab cells” (Wakube 2017). The subsequent decline in militant attacks and improvements in local perceptions of security demonstrated the real and tangible benefits that could be derived from the adoption of strategies that seek to improve relations between the security services and local communities. This gradual shift towards people-centered approaches in the security space became notable in the state’s more measured response to militant attacks. During the 2019 DusitD2 hotel complex siege that saw gunmen associated with al-Shabaab attack the complex, leading to a standoff that lasted 19 hours, “law enforcement agencies were described as comparatively measured and sensitive in their response” (Jones 2020). This stood in sharp contrast to the 2014 indiscriminate security crackdowns associated with Operation Usalama Watch whereby thousands of Somalis in Kenya were “subjected to arbitrary arrest, harassment, extortion and ill-treatment” (Amnesty International 2014).

Despite these promising outcomes, the implementation of policing and security reforms has not been easy. The police system has been plagued by “in-house problems,” including “lack of human and economic resources, poor working conditions, training, management and leadership at various

levels in the police” (Gjelsvik 2020). Police reforms have also not fully filtered “down to frontline officers due in part to the insularity of Kenya’s institutions, the difficulties of cross-departmental collaboration and frequent rotations of personnel” (Jones 2020). Misalignment of approaches between national and local levels exacerbated these problems as discrepancies produced “contradictory outcomes.” (Jones 2020).

Adopting and implementing a collaborative, partnership-based approach to security is hard work. It requires significant organizational transformation and fundamental changes in policing and security cultures. This in turn necessitates political will, sufficient resources and on-going communication between all stakeholders. In other words, transitioning from a purely security-driven response to a multi-stakeholder, partnership-led approach entails a mindset change from all key stakeholders in the government, relevant ministries and defense and security agencies. For the latter, such a shift is a major undertaking as it requires a redefinition of identities, roles, mandates, and principles under which they operate.

Kenya’s adoption of National Strategy for Countering Violent Extremism (NSCVE) in 2016 was an important step towards formalizing this drive towards embracing and implementing collaborative, partnership-based strategies to countering militancy. The novelty of NSCVE resided in its mandating counties to develop their own county action plans (CAPs) with “accompanying local co-ordination mechanisms and structures” (Crosby and Pkalya 2021). The result is that each county in Kenya has developed its own action plan as well as a county engagement forum (CEF), the body responsible for implementing the CAP. The forum includes several stakeholders from the government and non-government. These innovations have elevated the critical role that local governments and grassroots civil society stakeholders can play in tackling security challenges that are often community specific.

Local authorities, whether in urban centers or border villages, are generally more socio-culturally attuned to their communities’ attributes and dynamics. They are often well placed to not only give contextualized understanding of local realities and provide early identification of risks for violence but also bring greater coherence to and alignment between often siloed locally driven initiatives and programing and national frameworks. Local governments can mainstream countering militancy activities into tailored development program that tackle the local causes of the problem.

Their access to critical local services such vocational training, social welfare, sports, recreation, etc. creates opportunities for engaging harder to reach youth meaningfully. This is critical as fostering popular trust in state services is key to countering militancy.

These localized approaches to countering militant insurgency have helped improve cooperation and coordination between and among several agencies and actors at the national and county levels, ensuring in the process that national government plans are informed by “local practice and perspectives” and local action is “in line with national frameworks” (Rosand 2021). Naturally, not all counties, municipalities, provinces, or states need to develop local action plans to counter violent militancy. There is also not a one-size fits all template for the development of local action plans. There are, however, key principles and considerations which should be part of any successful local action plan. The latter must be rooted in a multisectoral, evidence-based, and community-led approach “with the local government playing a coordinating role” (Crosby and Pkalya 2021). It must also be financially sustainable and have the political buy-in of government stakeholders at the national and local level.

Conclusion

Africa’s evolving security landscape demands a shift from ad hoc approaches to more coordinated and strategic responses. As the case studies in this article demonstrate, states would benefit from developing and implementing comprehensive, coordinated, and sustained strategies that balance addressing the roots of violent militancy and increasing the legitimacy and effectiveness of the state and its security services with fighting the insurgents, interdicting their supply lines, and providing recourse for mediation, dialogue, and reintegration of insurgents who accept to lay down their arms and renounce violence. Every insurgency is unique, and the design and implementation of the strategy should be tailored to the context of the insurgency. There is, therefore, no one model for ending insurgencies. The only imperative is that any strategy must be multidimensional, realistic, and adaptable.

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Complex interlinkages between the SDGs and their importance to African development

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Abstract

A decade of research since the adoption of the Sustainable Development Goals (SDGs) argues that accurately measuring the relations between SDGs allows the identification of systemic leverage points that would unlock the achievement of the SDG agenda as a whole. While the literature on sustainable development linkages has evolved rapidly, regional variations tend to be overlooked. And yet, we have identified important differences between the SDG interlinkages in Africa and Sub-Saharan Africa in comparison to the World as a whole. The accurate identification of these links and regional differences between them hold important consequences for Africa achieving its development goals. We found that the observed significant interlinkages, more central SDGs, and nexuses between certain SDGs showed different patterns of variation between sub-Saharan Africa, Africa as a whole and the World. Leveraging significant interlinkages through policy, planning and practice can contribute to unlocking systemic advances to achieve the full SDG agenda. If regional differences in leverage points are not accurately identified, any policy and practice will be neither effective nor cost-efficient. Our findings also indicate that existing evidence on sustainable development that may be appropriate in the Global North may not be directly applicable in Africa, and therefore support contemporary calls for improving knowledge equity and evidence production between Global South and North.

Key words: SDGs, Africa, development, complexity, interlinkages, systems approach, network analysis

Introduction

Sustainability encompasses a system of tightly interlinked biophysical, economic, environmental, and social interactions. The text of the Sustainable Development Goals (SDGs) recognises these “deep interconnections and many cross-cutting elements across the new Goals and targets” (UNGA, 2015, §17). A decade of research since the adoption of the SDGs in 2015 consistently argues that the accurate detection of the relations between SDGs would allow the identification of systemic leverage points that would unlock the achievement of all SDGs. Research to date has tended to focus on either global or national levels, which may overlook certain regional features that may be better understood, advocated for, and addressed through collective regional responses. And yet, leveraging meaningful SDG interlinkages through policy, planning and practice can contribute to unlocking systemic advances to achieve the full SDG agenda. If regional differences in leverage points are not accurately identified, any policy and practice will be neither effective nor cost-efficient.

This paper uses complexity-informed mathematical analyses to identify the SDG interactions that matter in and for Africa: (1) the SDGs that are most central to achieving all other SDGs on the African continent, (2) the specific patterns of interlinkages between the SDGs in Africa, and (3) the particular clusters (or nexuses) of SDGs with strong interdependencies in Africa. Our analysis compared SDG interlinkages in sub-Saharan Africa and Africa as a whole to the results for the whole World, identifying significant differences between all three axes of analysis. In so doing, we detected key systemic leverage points for Africa and sub-Saharan Africa as regions (while recognising national and local variations within these diverse regions) which do not follow the same pattern as worldwide. The contribution of this article lies in identifying the interlinkages between Agenda 2030 goals, and specific goals and goal clusters that hold the highest potential to leverage systemic effects across the full range of sustainability targets specifically in Africa. Despite the specificity of the pattern of Agenda 2030 interlinkages in Africa, so-called “global” research continues to be considered appropriate to answer Africa’s challenges. In contrast, we argue that our findings support calls for greater epistemic justice (Mbembe, 2015; Odora Hoppers, 2002) in order that

African researchers might develop relevant responses to these African challenges.

Literature

The interlinkages between sustainability issue areas and goals were introduced onto the global stage in the Brundtland report (WCED, 1987), which argued that different issue areas were not separate domains of expertise and practice but rather were systemically interconnected. While the literature on sustainable development linkages has evolved rapidly, analyses of data for the whole world dominate alongside some studies of national contexts. For example, Nilsson et al.'s (2016) 7-point scale has been deployed to provide analyses of the world (UNSG ISG 2019, 2023) and national contexts (e.g. Bisaga et al., 2021 in Rwanda; Zhang et al., 2022 in China). This literature also encompasses studies of sub-national regions (e.g. Eliasson & Grönlund (2023) in Sweden or Wu et al. (2022) in China).

Nevertheless, Nilsson et al. (2016) also indicated the importance of regional variability in SDG interlinkages, since contextual factors structure these interlinkages and affect how they play out (Nilsson et al., 2018). However, regional analyses and variability tend to be overlooked. Some regional analyses exist, usefully focusing on a subset of Agenda 2030 concerns. For example, in Africa, Mpofu (2022) conducts analyses on green taxes as a policy response to implement Agenda 2030, while Müller et al. (2021) examine energy justice and transitions (SDG7). What is missing are analyses that examine the different *regional* patterns of systemic interlinkages between the different goals in the broader Agenda 2030 (the SDGs and Paris Agreement on Climate Change).

Methodologically, this relational perspective has been translated into research through (1) conceptualising relations between economic, environmental and social aspects of sustainability (such as Raworth's (2017) Doughnut Economics), (2) quantifying linear links between two SDGs (for example, Nilsson et al.'s (2016) 7-point scale of identifying synergies and trade-offs between the goals), (3) examining variable rates of change between several sustainability goals simultaneously (e.g., Anderson et al., 2021), and (4) complexity-informed research that simultaneously detects variability in both rates and directions of change within the system of sustainability goals (Laumann et al., 2022).

The findings associated with the latter three empirical approaches differ regarding regional analyses. Pradhan et al. (2017) note that individual countries may show a pattern of SDG interlinkages that differ from the global picture. Anderson et al. (2021) used their SDG systems model to carry out regional analyses of nonlinear interlinkages between the SDGs to examine the contribution of different continents to the three targets that they found provided most synergies or hurdles to other SDG targets. However, they found only small variations in regional contributions to the global picture: Africa contributes slightly less to making these targets the most synergistic or antagonistic for other SDG targets, while Europe and North America contribute comparatively more. By contrast, Laumann et al. (2022) found significant differences between regional groupings, which we examine further in this article.

Methods

Like Laumann et al. (2022), we used nonparametric measures of dependence (distance correlation) to analyse pairwise dependencies to detect complex interrelations, examining changes in both the rate and direction of variation (that is, nonlinear and nonmonotonic relationships). In nonlinear nonmonotonic relations, the *direction* of change can vary as well as the *rate* of change. An example of a nonmonotonic relationship is eating chocolate, which generates a positive feeling at first that can change to a negative feeling if you continue eating too much, with different individuals having different tipping points regarding amount and time. Relations between SDGs may follow similar dynamics, where – rather than always being either synergistic or antagonistic – they may tip from positive to negative (or vice versa). The methods we use allow the detection of how the relationship between SDGs may be both reinforcing and counteracting, changing over time and/or depending on the region of operation.

We also remove spurious dependencies by factoring out confounding variables. For example, in Sub-Saharan Africa, SDG8 and SDG9 are frequently incorrectly identified to have a direct relationship (Swain & Ranganathan, 2021), whereas this relationship is actually explained away by the links between SDG4 and SDG8, and SDG4 and SDG9 (Laumann et al., 2022). Once SDG4 is taken into consideration as driving the relationship between SDG8 and SDG9, the direct relationship between these two SDGs is erased. Thus, in sub-Saharan Africa, SDG4 is a confounding, or lurking, variable, in the supposed interactions between SDG8 and SDG9.

In addition, we utilise network theoretical analysis (informed by mathematical graph theory) to simultaneously consider the dependencies between the 17 SDGs and global temperature (an indicator of progress on the 2015 UNFCCC Paris Agreement on Climate Change). This analysis allows the detection of the most important dependencies and clusters (or nexuses) of strongly related SDGs

Our dataset of time series data measuring progress on the SDGs is sourced from the World Bank (2020) and comprises 400 indicators tracking the progress of the 17 SDGs from 2000 to 2019 across 181 countries. The time period for our observations covers years in which the UN focused on the MDGs (from 2000 to 2015) and the SDGs (from 2015 to 2019). Hence, progress on the selected indicators of our study might be accredited to policies addressing both the MDGs and SDGs. However, the observed variables are the indicators which were subsequently defined by the World Bank for every goal and target of the SDGs, so we measure progress towards the SDGs when observing how these indicators have changed over time.

At the time of analysis, SDG13 focused entirely on inputs and procedures, such as the integration of climate change into national policies (indicator 13.2.1), but no SDG indicator actually measured the *results* of the implementation of such inputs and procedures. They describe which *actions* are taken against climate change. The text of the SDG agenda acknowledges “that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.” We use rising temperatures as a better proxy for climate change than the SDG13 targets, since other climate change indicators are correlated with, or caused by temperature rise. By including our 18th variable (temperature), we measure actual temperature changes, that is, outcomes and impacts of the actions taken in SDG 13 and the other SDGs. For annual country-level average temperatures, we utilised data from the Climatic Research Unit (2020). Each indicator corresponds to one of the 18 objectives (the 17 SDGs plus climate change).

For a given grouping of n countries, we treat the countries as independent samples of the grouping (e.g., the World, Africa, sub-Saharan Africa); hence, the sample size of a grouping is n . Let X represent one of our 18 variables (SDGs and climate change). Each variable X has an associated set of indicators I_X , and each indicator $i \in I_X$ has 20 observations over time

(from 2000 to 2019). Thus, the dimensionality for each variable X is $d_X = 20 |I_X|$.

The distance correlation $R^2(X,Y)$ between X and Y is a measure of dependence between these variables with the following properties: $0 \leq R^2(X,Y) \leq 1$, indicating it is a normalised quantity, with $R^2(X,Y) = 0$ only if X and Y are independent. This makes it a non-parametric measure capable of detecting nonmonotonic as well as nonlinear dependencies, unlike Pearson or Spearman correlation (Faul et al., n.d.). Moreover, $R^2(X,Y)$ is well-defined for $d_X \neq d_Y$. This latter property is particularly advantageous in our context since the dimensionality varies significantly between variables due to the differing numbers of indicators per SDG. Given two variables X and Y , another variable (or a set of variables) is considered a confounder if it causally influences both X and Y . Our method therefore enables the detection of this causal influence that can induce a statistical association between X and Y even if there is no direct causal link between them. Thus, pairwise dependence between X and Y may arise due to the influences of the other 16 nodes.

To determine the direct strength of dependence between any pair of nodes (X, Y) , we controlled for the shared effects from other nodes by conditioning on any subset of the remaining nodes: $Z \subseteq V \setminus \{X,Y\}$, where V represents the set of 18 nodes. As a measure of the direct dependence between X and Y , we use the minimal partial distance correlation over all possible subsets:

$$R_n^*(X,Y) = \min_{Z \subseteq V \setminus \{X,Y\}} R_n^*(X,Y | Z)$$

This measure reflects the strength of the dependence between X and Y that cannot be explained away by the subset Z that may influence both X and Y . In our study, we analysed 153 unique pairs of the 18 variables (SDGs and climate change). For each variable pair, we computed the partial distance correlation by minimising over the 65,535 conditional sets Z formed by the remaining 16 variables. This process was conducted for each of the country groupings to obtain a contextualised description of the dependencies among SDGs and climate change.

For any given grouping of countries (we analyse sub-Saharan Africa, Africa, and the World), the described procedure yielded a set of significant interlinkages among the 18 variables, with strengths as previously detailed. To further analyse these interdependencies, we employed a network representation, where the variables are depicted as nodes and the significant minimal partial distance correlations constitute weighted edges. Having

constructed an undirected, weighted network for each country grouping, we conducted two additional analyses. Firstly, we quantified the relative importance of each of the 18 nodes (variables) using eigenvector centrality, a network-theoretic measure that assigns high ranks to nodes with strong connections to other highly ranked nodes. Secondly, we applied community detection by modularity maximisation to group nodes into nexuses, which are clusters of variables with strong interdependencies.

Analyses

We represented the obtained dependencies among the 18 interrelated objectives (17 SDGs and mean annual temperature rise) as a network, which was analysed to compute the (1) *centrality* (that is, the relative importance) of each goal individually, (2) *most strongly linked pairs* of goals, and to which we applied community detection to find (3) *nexuses* (or groups of most strongly interconnected variables). We report our analysis at increasing levels of complexity: first individual goals, then pairs of goals, and finally groups of goals. It is critical to note, however, that these results arise from the analysis of *all linkages* between all goals in the whole Agenda 2030. Thus, the results of the importance of individual goals are ranked as they affect the whole system of SDG goals and temperatures; so are the results of the importance of pairs of goals, and then significant clusters. Our findings show strong discrepancies between country groupings Africa, sub-Saharan Africa, and the World (global results), highlighting the importance of regional analyses and solutions produced in and for the regions in preference to so-called “global” prescriptions.

Eigenvector Centralities of Agenda 2030 Goals in sub-Saharan Africa, Africa, and the World

Table 1 summarises the relative importance of the top ranked, most central Agenda 2030 goals in the networks of interlinkages studied. The more central the goal, the more important its achievement is to achieving the remainder of the goals. The means of implementation and partnerships (SDG17) and infrastructure and innovation (SDG9) appear as central in the World and Africa but do not appear in the top three leverage point goals in sub-Saharan Africa. In contrast, sub-Saharan Africa shares no leverageable goals with either Africa or the World, prioritising instead sustainable communities and cities (SDG11), education (SDG4) and equalities (SDG10) as most important to bring about systemic change across the full Agenda 2030. Rising global temperatures (T) are seen to be second most important in Africa, a country grouping already among the worst affected by climate

breakdown, while affordable, sustainable energy (SDG7) is most important in the data for the World. These analyses therefore show the importance of regional and sub-regional analyses for identifying the key goals to leverage in order to bring about systemic change across all Agenda 2030 goals.

Table 1. Most central Agenda 2030 goals with their eigenvector centralities in Africa, Sub-Saharan Africa, and the World

| Country Grouping | 1st most central Agenda 2030 goal | 2nd most central Agenda 2030 goal | 3rd most central Agenda 2030 goal |
|--------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Sub-Saharan Africa | 11 (0.35) | 4 (0.33) | 10 (0.33) |
| Africa | 17 (0.38) | T (0.34) | 9 (0.33) |
| World | 7 (0.46) | 17 (0.43) | 9 (0.34) |

Figure 1.a shows that in sub-Saharan Africa, mean annual temperature rise (T), the means of implementation and partnerships (SDG17) and infrastructure and innovation (SDG9) (the top three in Africa as a whole (Figure 1.b) are close behind the top three reported in Table 1. In the World (Figure 1.c), improving hunger and nutrition ranked fourth, whereas this ranked much lower in Africa and sub-Saharan Africa.

Figure 1. Mapping eigenvector centrality against SDGs and temperature

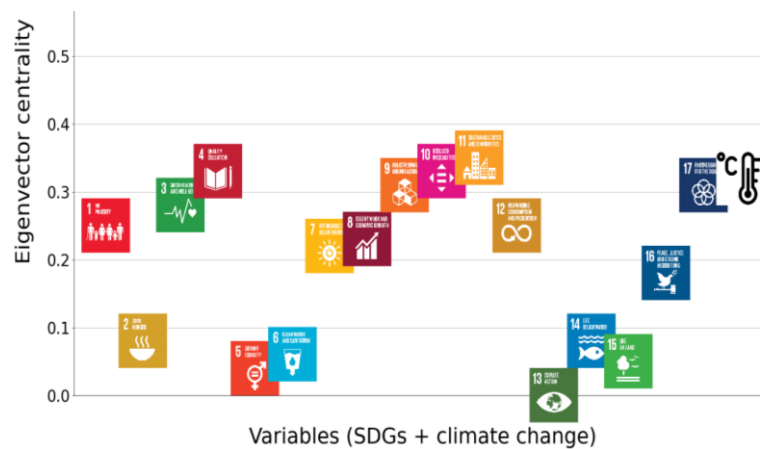


Figure 1.a. Sub-Saharan Africa

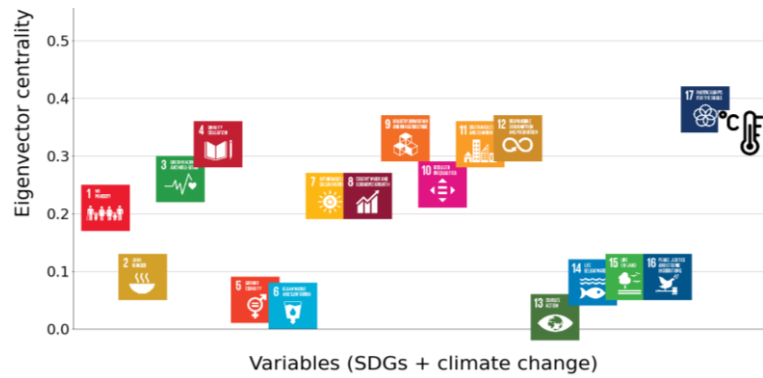


Figure 1.b. Africa

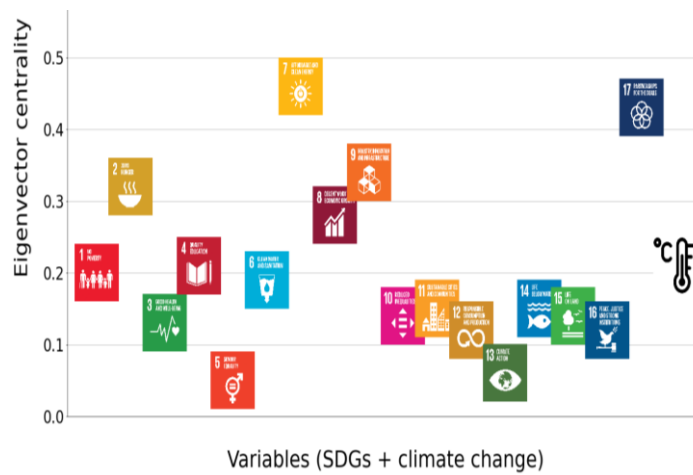


Figure 1.c. The World

Networks of Agenda 2030 Goals' Linkages in sub-Saharan Africa, Africa, and the World

Network maps illustrating the strength of the partial distance correlation in the weight of the lines linking the goals reveal strong differences between the analysis for the World (Figure 2.c.) in comparison to sub-Saharan Africa (Figure 2.a) and Africa (Figure 2.b), which are relatively similar to each other.

Figure 2: Network maps of simultaneous analysis of interlinkages between Agenda 2030 goals



Figure 2.a. Sub-Saharan Africa



Figure 2.b. Africa



Figure 2.c. The World

The three strongest of all interlinkages in each of these three groupings $[R_n^*(X, Y)]$ are reported in Table 2. These are the strongest pairwise interlinkages as detected within the enmeshed system of Agenda 2030 goals, not as if they were independent variables (Laumann, 2022). The connection between decent work and strong economy (SDG8) and the means of implementation and partnerships (SDG17) appears in all three country groupings (and all other regional groupings except North and Central America). The link between sustainable communities and cities (SDG11) and rising global temperatures (T) holds prime position in both Africa and sub-Saharan Africa but does not appear in global results for the World. The important links between the Agenda 2030 goals in Africa and sub-Saharan Africa have more in common than the links calculated to be important for the World as a whole. Again, the differences between these results reveals the importance of regional and sub-regional analyses for identifying the most leverageable links to bring about systemic change across all Agenda 2030 goals.

Table 2: The Three Strongest Pairwise Interlinkages with their Minimal Partial Distance Correlation in sub-Saharan Africa, Africa, and the World

| Country Grouping | 1st strongest interlinkage | 2nd strongest interlinkage | 3rd strongest interlinkage |
|--------------------|----------------------------|----------------------------|----------------------------|
| Sub-Saharan Africa | 11 - T (0.24) | 1 - 16 (0.15) | 8 - 17 (0.14) |
| Africa | 11 - T (0.24) | 8 - 17 (0.13) | 1 - 8 (0.12) |
| World | 7 - 9 (0.30) | 8 - 17 (0.25) | 7 - 17 (0.25) |

Nexus of Interconnected Agenda 2030 Goals in sub-Saharan Africa, Africa, and the World

In this section we report on results of nexuses of interconnected SDGs with strong interdependencies to each other, detected through network analyses identifying clusters of interlinkages. Action on these clusters of goals is widely theorised to leverage the achievement of the wider system of goals. None of these clusters follows the conventional sustainability heuristic “economy, environment, society”, showing that this categorisation does not necessarily support strategic decision making for sustainability.

In all groupings, a nexus between poverty eradication (SDG1), education (SDG4), and decent work and strong economies (SDG8) was detected. Peace, justice and strong institutions (SDG16) joins this triplet in sub-Saharan Africa and Africa as a whole, but are replaced by the means of implementation (SDG17) in the World analysis. Beyond the importance of certain connected goals, the remaining goals differ between regional groupings.

All three groupings we examine in this paper contain a nexus that includes sustainable communities and cities (SDG11) and mean annual temperature rise (T). These two goals form a nexus alone in Africa, whereas in sub-Saharan Africa, they are joined in the same nexus by health (SDG3), clean water and sanitation (SDG6), improving inequalities (SDG10), and sustainable consumption and production (SDG12). In the World, these two goals were also joined in the same nexus by health (SDG3), and sustainable consumption and production (SDG12) (as in sub-Saharan Africa), but also by

peace, justice and institutions (SDG16). The remainder of the nexuses are more unlike than alike.

Figure 3. Nexuses of Interconnected Agenda 2030 Goals



Figure 3.a. Sub-Saharan Africa



Figure 3.b. Africa



Figure 3.b. The World

The structure of the nexuses in Africa (in which 5 significant clusters were detected) is more complicated than in sub-Saharan Africa or the World, which have three significant clusters each. Again, the regional differences apparent in these analyses call for a more granular, regional analysis of interlinkages between Agenda 2030 goals and sensitivity to regional needs and evidence to serve them.

Discussion

Regional differences matter more than global patterns. The observed central goals, important interlinkages between two goals, and nexuses of several goals that we identify show different patterns of interlinkages between Agenda 2030 goals in sub-Saharan Africa, Africa as a whole and the World. Using partial distance correlations, we calculated nonlinear nonmonotonic dependencies between all 17 SDGs and mean annual temperature rise while discounting the effects of removing spurious dependencies originating from confounding variables. Leveraging significant interlinkages through policy, planning and practice can contribute to unlocking systemic advances to achieve the full SDG agenda. If regional differences in leverage points are not accurately identified, any policy and practice will be neither effective nor cost-efficient. Given that none of the clusters identified through these analyses follows the conventional sustainability categorisation “economy, environment, society” (Figure 3), we argue that this heuristic does not support strategic decision making for

sustainability. By contrast, systemic analysis such as ours identifies action points with the potential for more systemic effects, and the different policy action needed in different leverage points in Africa in comparison to the World.

Regional patterns are different to analyses of the “global” aggregate data of the World; addressing them requires knowledge and solutions that are locally relevant and contextually rooted. Our findings also support contemporary calls for improving knowledge equity and evidence production between Global South and North. In addition to a perspective grounded in epistemic justice to right historical wrongs in research and knowledge equity, we also emphasise the pragmatic argument that existing evidence on sustainable development produced in the Global North may not be applicable to Africa. We deliberately do not use the language of “global vs. local”, since this gives the false impression that research that is denoted as global (produced in and by the Global North) is placeless and universal, in contrast to the local–contextually grounded, locally relevant–evidence from the Global South. Language that discriminates between “global and local” elides the equal “localness” of research and evidence produced in the Global South and North, and also the equal potential global usefulness of both.

Two policy implications arise from our study. First, focus more attention on region-specific interlinkages and focus policy action to those SDGs that hold the greatest potential to unlock systemic effects across the full SDG agenda. Secondly, provide more funding for African research in Africa to respond to regional needs and address region-specific concerns. Funding African research is critical to identifying solutions to the complexity of SDG interconnections in Africa at the same time as decision makers use these insights as they work towards achieving these goals and elaborating the next global development agenda.

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The Future of Development in Africa within the Framework of UN Policy and the 2030 Agenda

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Abstract

As a geographical formation, Africa includes the most extraordinary and significant territories enriched with colossal resources and opportunities. Despite this, the continent still struggles to address challenges predetermining its economic, social, and political developmental model. The rise of Africa's development significantly relies on adequate implementation of the broad statecraft maps of the set goals. The prospects for developments in Africa within the UN policy and the 2030 Agenda are rather promising. They can be achieved through the engagement of the Sustainable Development Goals in Africa, which includes economic diversification, infrastructure development, good governance, human capital investment, environment conservation, regional integration, and technological advancement. African leadership and private enterprises' coordination with civil society and international actors will positively transform the continent based on the vision provided by the 2030 Agenda.

Keywords: Africa Agenda 2063, food security, poverty eradication, UN 2030 agenda, Sustainable Development Goals (SDGs).

Introduction

Africa stands as a continent of rich diversity which was shaped by a complex history, and distinct cultural identities (Raji et al., 2024). It is a continent positioned to play a key role in global development, considering its abundant natural resources, youthful population, huge agricultural capacity, and the prospects for renewable energy to bolster its global

importance. However, since its early phase of colonization at the end of the 19th century, Africa has been practically in a state of upheaval with considerable stress situation (Polte, 2023). Africa presents a unique developmental crisis; not only does the continent hold the status of being the poorest region in the world, but it was also reported as the only major developing region experiencing a decline in income per capita from 1980 to 2000 (Sachs et al., 2004). Africa contends with a high poverty incidence, with a substantial segment of its populace residing below the poverty threshold. Despite Africa being home to only 10% of the world's population, about 30% of the world's poor people are Africans, living on less than US\$1.90 per day (Bruckner et al., 2022; Le Pere and Ikome, 2009). Therefore, an array of economic, social, and political hurdles has been reported as profoundly influencing the development trajectory in Africa (Grinin and Korotayev, 2023; Miller, 1999).

A prominent hurdle that Africa grapples with is the issue of governance and political stability. Many African nations struggle with corruption, opacity in government, and frail institutions which pose barriers to effective governance and sustainable development (Prince et al., 2023). More so, political unrest, internal conflicts, and reluctance to enact transformative reforms further complicate efforts toward progressive advancements (Muma, 2018). Furthermore, limited access to quality education, healthcare, and essential services impedes overall developmental strides (Kanayo et al., 2013). In addition, the deficiency in infrastructure development stands out as a critical impediment facing Africa, as inadequate infrastructure, such as good roads, energy facilities, water supply systems, and telecommunication networks, curtail economic expansion and hinder connectivity both within and between African nations, thereby hampering the service delivery, obstructing trade flows, and stifling investment opportunities (Arimah, 2017). Coupled with this condition are the effects of environmental challenges such as climate change, deforestation, and desertification, which also compound the developmental hurdles in Africa. The adverse effects of these are felt on agriculture, food security, and threats to the livelihoods of millions across the continent, thereby further heightening the susceptibility of Africans to natural disasters and other climate-related risks (Chirwa and Adeyemi, 2020). To overcome the challenges impeding advancement in Africa, the hurdles must be addressed with a comprehensive strategy that is deeply rooted in supportive policies and frameworks (Odeyemi et al., 2024). In light of this context, the initiatives of the United Nations (UN) Policy

framework and the 2030 agenda pivot on the UN 2030 Agenda for Sustainable Development Goals (SDGs) offered a comprehensive policy blueprint for all nations to achieve economic prosperity, social inclusion, environmental sustainability, and good governance by the year 2030 (Weiland et al., 2021). In furtherance to this, the African Agenda 2063 was adopted in 2013, and it constitutes the development framework and the roadmap to inclusive growth in Africa. The agenda emphasizes economic transformation, poverty eradication, and regional development to reduce reliance on external aid and establish African solutions to African challenges. It emphasizes that African economic transformation by 2053 is desirable to achieve balanced economic growth, decent employment, and a safe work environment (Ketu and Wirajing, 2024). This structural transition is important to address issues like unemployment and urban development, aiming to create cities as centres of economic and cultural activities with modern infrastructure and green economies. Discussions on structural transformation and green economy are essential for Africa's economic development and addressing contemporary challenges (Baek, 2019).

The synergies between the AU's Agenda 2063 and the UN's 2030 Agenda for Sustainable Development

The future of development in Africa within the policy of the United Nations and the 2030 agenda entails a comprehensive and transformative approach aimed at addressing key challenges and driving sustainable development on the continent (Dobrescu, 2017; Machin and Liu, 2024). Such development is grounded on the 17 SDGs of the 2030 agenda for enhanced global development. These goals cover diverse fields such as the provision of employment opportunities, elimination of poverty, strengthening of health and education, gender equality, and boosting of economic development, as well as ensuring the sustainability of the environment, among others (Salvia et al., 2019). It consists of a set of adopted goals aimed at ending poverty, protecting the environment, and promoting the welfare of citizens worldwide. The Agenda 2030 can also be described as a vision and ambitious strategy for international development. Its holistic approach to the 5Ps – people, planet, prosperity, peace, and partnership responds to the development objectives in an unprecedented manner. This framework encourages collaborative action to tackle shared challenges, with all countries expected to assess how the SDGs can be integrated into their national strategies (Oladele, 2022).

To Africa, this agenda is very relevant as it outlines development goals appropriate for the continent. The prospects of Africa's development, considering the UN policies and agendas of the 2030 vision, focus on the priorities and participation of different actors in the development process. One such focal area is economic development and diversification, which is important to developing Africa's economy (Sparks, 2016). The SDGs focus on economic growth to achieve development in line with the 2030 Agenda. It stimulates African countries to look inward for the development of other sources of income. The Agenda 2063 fosters this through the promotion of trade and market access, such as the implementation of the African Continental Free Trade Area (AfCFTA), which could turn the African continent into a very competitive player in the global economy (Jonker et al., 2018). Strategic investment in infrastructure is another important prerequisite to support and boost the growth and development process and realize the sustainable development goals and objectives (SDGs). The idea of proper development is covered in the United Nations' 2030 Agenda, where the focus is on Infrastructure, Industrialization, and Innovation. This entails the acquisition of transportation and energy and the development of water and other digital structures while channeling funds toward the development of new partnerships between public and private organizations through regional auspices across the continent (Brodny and Tutak, 2023). In furtherance to the above, sustainable development is contingent on good governance and institutional strengthening.

The UN speaks of peace, justice, and strong institutions as preconditions of the 2030 Agenda. However, African countries still need to develop sound governance structures, increase accountability, and fight corruption to improve the economy. UN-funded capacity-building programs can help strengthen the legal and institutional frameworks as well as human rights and the rule of law (Hancock, 2023). The UN 17 SDGs with the year 2030 targets consider quality education and computed healthcare service to be important for sustainable development. In essence, African nations need to invest in better educational performance and the provision of efficient and effective care. The UN's support is commendable with the programs that mainly address the issues of education, vocational training, and upgrading the health care facilities. Education does not only increase productivity in a country's growth and development but also brings about the well-being of citizens and reduces disparities (Aarts et al., 2020). Environmental sustainability is another considerable issue affecting Africa due to climate change, which has major implications for the

continent's development. The development agenda for this century is provided by the 2030 Agenda. This means African countries must embrace sustainable practices, especially in agriculture, energy and resource utilization. The UN supports the putting in place of green technologies and avails financial cooperation to conserve biological diversity and encourage the use of renewable energy (Obaisi et al., 2022)

Africa's progress towards the SDGs 2 to date

The second SDG aims to end hunger, achieve food security, improve nutrition and promote sustainable agriculture (Saravanakumar et al., 2020). Despite some progress made, attaining this goal by the set year 2030 remains a daunting task for many African countries. However, the major factors leading to hunger in Africa include poverty, high post and pre-harvest losses due to pests and diseases, unemployment, civil unrest, wars, insurgencies, unfavourable climate, and corruption (Gyimah et al., 2023). To propel the achievement of SDG 2 in Africa before the year 2030, there is a need to embrace a multi-sectoral approach such as financial, capital management, risk management and adaptation of farming systems to society's demand in mitigating the constraints experienced (Alemaw and Simatele, 2020). This therefore calls for governments to budget at least 10% of the national budget on agriculture for the continuous provision of necessary infrastructure such as roads and irrigation systems, while private sector engagement has to be encouraged by reducing barriers to entry and sourcing for financing for agribusinesses (Borsellino, 2020). Farmers will be able to borrow, invest and manage climate risks through credit, mobile loans and micro-insurance (Borsellino, 2020).

Furthermore, practicing sustainable agriculture, using resistant crop varieties, and ensuring proper soil management can help increase production while reducing losses incurred during farming (Brodt et al., 2011). Also, embracing the recent technological advancements in agriculture such as practicing precision farming systems which entails the use of drones, satellite imagery, big data and other smart agricultural technologies helps enhance farming efficiency, estimating agricultural yields, and creating data-based policies (Al-Mallahi, 2024). This therefore calls for policy review, particularly on land and resource rights for women, and support for innovation and training for youths in agricultural activities. African governments are therefore encouraged to focus on comprehensive

food security strategies including partnerships with international organizations and public-private partnerships for sustainable food systems.

Importance of the UN SDGs in African Development

The SDGs have had considerable transformations and expansions to provide a holistic approach to tackling these global concerns. One of the changes is the overall multiple objectives to end extreme poverty and hunger and change it to the general goal of 'End poverty in all its dimensions' (Sachs et al., 2019). The change is a broad approach that factors in the different dimensions of poverty other than extreme poverty. Furthermore, SDG 2 has a shift of emphasis from hunger to a greater level of energy since the provision of food security is an essential factor for sustainable development (Banik, 2019). The SDGs also have broadened their aims on advocating education for all on a lifetime basis to encourage lifelong learning so that people can continue learning as they learn new things and develop themselves for the benefit of society (Benavot et al., 2022). Parity or equity and non-discriminant targets have become more overt and integral within and across nations as SDG guiding principles. This may point to the ultimate aim of promoting social justice in the global sphere to achieve equal opportunities and triumphs for all (Sharma and Tripathi, 2021) (Table 1).

Further goals of SDGs are focused on meeting the essential global challenges of providing universal access to energy (SDG 7) and eradicating youth unemployment (SDG 8) (Rahman, 2020; Tucho and Kumsa, 2020). Regional integration and collaboration are essential to attaining the SDGs in Africa as a continent. United Nations' framework has multilevel partnerships embracing the local, national, regional as well as international levels. Hence, the SDGs also emphasize the importance of a 'Global Partnership for Sustainable Development' with changes in focus towards finance, investment promotion regimes, and multi-stakeholder partnerships involving various entities like multinational enterprises and international capital. The UN 2030 Agenda signifies a shift towards a more comprehensive and inclusive approach to sustainable development, addressing a wide range of global challenges and aiming for transformative changes by 2030 (Cruz, 2023) (Table 1).

Table 1: Relevance of UN Policy and the 2030 Agenda in African Development

| Category | Relevance | Examples | References |
|--|---|--|---|
| Holistic Development Framework | Provides comprehensive development across multiple sectors | Ethiopia’s Growth and Transformation Plan (GTP) | (Ybabe, 2019) |
| Economic Growth | Promotes sustainable economic growth, industrialization, and innovation | Rwanda’s Vision 2020 | (Ansoms and Rostagno, 2012; Mushimiyimana and Buheji, 2024) |
| Poverty Eradication | Aims to lift millions out of poverty and reduce inequality | Ghana’s LEAP program | (Amofa et al., 2023) |
| Environmental Sustainability | Addresses environmental challenges and promotes sustainability | Kenya’s Green Belt Movement | (Mwanzu et al., 2023) |
| Peace and Security | Essential for stability and development | UN-AU peace and security partnership | (Khorram-Manesh, 2023; Kirby and Shepherd, 2021) |
| Global Partnerships | Ensures international support and resource mobilization | The New Partnership for Africa’s Development (NEPAD) | (Unya and Okorie, 2024) |
| Health and Well-being | Improves health services and reduces mortality rates | Uganda’s National Health Policy | (Bhangyi et al., 2024) |
| Education and Skill Development | Empowers youth with skills and education for future opportunities | Nigeria’s free primary education program | (Ajaude, 2024) |
| Inclusivity and Equality | Reduces inequalities and empowers marginalized communities | South Africa’s Commission for Gender Equality | (Lwamba et al., 2022) |

All these goals represent the changing trends in the country's infrastructure, urbanization, and some dimensions of sustainability within contexts of different areas of development; they also help in satisfying the needs of people around the world to establish sustainable solutions in society. The SDGs seek to ensure that sustainable development is achieved

without causing any detrimental effects on the economy, society, as well as the natural environment (Almulhim et al., 2022).

Conclusion

Taken together, the future of development in Africa within the policy of the United Nations and the 2030 agenda envisions a sustainable, inclusive, and prosperous future for the continent, with a focus on addressing key challenges, promoting equity, and driving progress towards the achievement of the SDGs by 2030.

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The Role of Youths in the Global Agenda: Case-studies from Africa

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Abstract

This paper examines the role of African youths in the global agenda. Youths are the powerhouse and future of any economy, so it is pertinent to explore the contributions of youth initiatives to achieving sustainable development goals (SDGs). The paper adopts the Social Change Theory, which reveals the evolution of societies. Five underlying processes of this theory are developed to understand the SDGs: systems thinking, agency and structure, power and inequalities, social movements and collective action, and cultural change. Also, the paper evaluates the youth initiatives across Africa. These initiatives include Youths for Green Action Kenya, Nigeria Youth SDGs Network, The Egypt Network for Integrated Development (ENID) project, and the South African Youth Council. The initiatives aim to reduce poverty and unemployment, improve healthcare access, and promote sustainable cities and communities. Finally, this paper reported the challenges hindering active participation by African youths. These include Gender inequality, Limited access to learning facilities and opportunities, and Political exclusion.

Keywords: Development Goals, Youths, Africa, Contributions

Introduction

The youths are the most energetic and ever-transforming generation in any given society. Their potential in catalyzing positive change is great in societies. As the United Nations reiterates, "Empowered youth are crucial for a peaceful and sustainable future" (UN, 2023). This paper discusses the critical role played by youth empowerment in promoting peace and

development, which is a matter of inquiry into how empowering the youth can contribute to addressing global challenges, fostering social cohesion, and building resilient communities. The United Nations Development Programme (UNDP) estimates that the global youth population, now estimated at 1.45 billion people between the ages of 18 and 29, is the largest single cohort of youth ever and has begun profoundly impacting the physical world. With unprecedented levels of digital connectivity and strong commitments toward creating change, this generation of young people is increasingly pushing innovation in social, political, and economic spheres at the local and international levels. This advancement emphasizes the necessity of involving youth in governance, empowerment, and initiatives for community development. Acknowledging the crucial contribution of young individuals in promoting peace, the United Nations Security Council has formulated a framework aimed at their incorporation into peace-building activities. Five primary domains have been identified as critical for enhancing youth involvement: (1) participation, (2) protection, (3) prevention, (4) partnerships, and (5) disengagement and reintegration. This resolution would allow youth to become agents of peace, better equipped to prevent conflicts, build lasting peace, and effect meaningful positive change in their communities. According to the African Development Bank Group report (2023), the youth population in Africa is growing rapidly, and it is estimated that by 2050, there will be over 1.2 billion young people living on the continent. This demographic shift portends some inherent risks, particularly when not fruitfully engaged.

However, it also presents a unique opportunity for the continent, as the energy and creativity of its youth can be harnessed to drive socio-economic growth and development. There are challenges that need to be addressed. Many young Africans are unemployed, lack access to education and healthcare, and are vulnerable to exploitation. In order to realize the potential of youths, Africa needs to invest in their education, skills development, and employment opportunities. There are some case studies from Africa that demonstrate the positive impact that young people can have on the global agenda. In Kenya, for example, young people have been at the forefront of the fight against climate change. They have organized protests, lobbied for government action, and developed innovative solutions to address the challenges posed by climate change and other vagaries.

Social Change Theory and SDGs

Social change theory represents a broad paradigm applied to understanding and analyzing the processes through which societies evolve with time. It forms the core basis of much knowledge regarding intricate dynamics related to sustainable development. This theory explains the underlying processes driving societal transformation, placing it as a key tool in understanding and achieving the SDGs.

Key links between Social Change Theory and SDGs

Systems Thinking: Both social change theory and the SDGs emphasize a systems approach to problem-solving. They recognize that societal issues are interconnected and require holistic solutions. This perspective is essential for addressing the complex challenges of sustainable development, such as climate change, poverty, and inequality.

Agency and Structure: The theory of social change indicates that personal agency must work in tandem with the structural factors in society. The important point in the SDGs is the emphasis that, while individual efforts may be influential, systemic changes are needed if sustainable development goals are to be realized. In addition, giving people the agency and responsibility to make sustainable choices has to be matched by equally enabling policy and infrastructure.

Power and Inequality: One of the focuses of any social change theory is power and inequality. Most of the challenges faced by countries in the developing world are based on unequal power relations and systemic injustices, which the SDGs are addressing for sustainable development.

Social Movements and Collective Action: Social change theory underlines the role of social movements and collective action in bringing societal change. This specifically relates to the SDGs since many challenges necessitate coordinated action at the level of individuals, communities, and governments. Grassroots movements, for instance, may be fundamental in advocating for sustainable policies and practices.

Cultural Change: The social change theories manifest that cultural change is always associated with societal changes. In that regard, with the SDGs, sustainable development often means significant changes in cultural norms

and value systems. For instance, sustainable consumption patterns or reduced waste generation require cultural change.

In South Africa, young people have been using social media to raise awareness of social issues such as gender-based violence and HIV/AIDS. They have also used technology to create new businesses and employment opportunities (World Bank Group, 2013). In Nigeria, the Future African Leaders Foundation is a non-profit organization that provides young people with leadership training and opportunities to participate in development projects.

Youth Initiatives around Africa

The African continent, characterized by an abundance of youthful dynamism and promise, is currently experiencing a notable increase in initiatives spearheaded by its youth, transforming its societal framework. This ranges from local community endeavors to groundbreaking technological innovations, young Africans are assuming leadership roles and facilitating constructive advancements. This article explores the lively domain of youth initiatives throughout the continent, emphasizing their effects, obstacles, and the future possibilities they represent for the development of Africa.

East Africa

East African youths have contributed immensely to Sustainable Development Goals (SDGs) through various initiatives like promoting education, climate action, gender equality, and entrepreneurship, which have, in turn, brought about positive change in their communities. According to the UNDP 2024 report, the contribution by youth-led organizations through active awareness raising, sensitization efforts, grassroots community development, and climate action in sustainable development initiatives has resulted in positive contributions regarding public perceptions of achieving goals within specific contexts. They use social media platforms to create awareness about societal issues and mobilize their peers for collective action. These inspiring young leaders are making a significant impact and inspiring others to join the movement for a better future. They organized youth-led projects to reduce poverty, improve healthcare access, and promote sustainable cities and communities. They also use their creativity and tech skills to develop innovative solutions for

environmental challenges. Whether through volunteering, advocacy, or entrepreneurship, East African youths are making a significant impact. For instance, Youths for Green Action Kenya, in a project tagged "Future in a Million Trees," is expected to have significant environmental and social impacts. The planting of 100,000 trees will contribute towards the restoration of degraded lands, enhance ecosystem services, and help mitigate the impacts of climate change. Additionally, the campaign will provide job opportunities for local communities and raise awareness about the importance of environmental conservation. The following are some case studies of programmes geared towards the SDGs and organized by East African youths.

Education for All is a youth-led initiative to provide access to quality education, such as setting up libraries, tutoring programmes, and scholarships for underprivileged students. The Green Schools Initiative and Girls Empowerment Network were organized in Kenya, and the program promoted environmental sustainability in schools through waste management, tree planting, and renewable energy projects (Lorentzen, 2020). The initiative aimed to provide education, mentorship, and life skills training to empower young girls and promote gender equality.

Next, there have been some youth-led climate change awareness campaigns, tree planting drives, and renewable energy projects to reduce carbon emissions and promote sustainable practices. In Tanzania, a program tagged "Youth for Sustainable Cities" was organized and centered on sustainable urban development through initiatives like waste management, community gardens, and clean energy projects (MICPD, 2022).

Additionally, there have been youth-led health campaigns addressing health and well-being issues such as HIV/AIDS prevention, reproductive health education, and access to healthcare services in marginalized communities. For instance, a Health Champions campaign was organized in Uganda, addressing HIV/AIDS prevention, reproductive health, and hygiene practices (UAC, 2019).

Finally, youth-led incubators and startup accelerators to support young entrepreneurs in developing innovative solutions to social and environmental challenges are rife in the region. In Rwanda, Youth Climate Ambassadors raise awareness about climate change, promote sustainable practices, and advocate for environmental protection (Prevention Web,

2021). Also, Digital Skills for All is a program that provides digital literacy training to empower youths with essential skills and bridge the digital divide

West African Youths' Contributions to Sustainable Development Goals (SDGs)

Youths in West Africa serve as crucial catalysts for transformative change in pursuing the Sustainable Development Goals (SDGs). Their capacity for innovation, entrepreneurial vigor, and deep-seated local knowledge enable them to tackle significant challenges effectively. This article examines their diverse contributions across multiple sectors, emphasizing their influence and the opportunities for enhanced advancement toward a sustainable future.

Nigeria Youth SDGs Network, registered as the Network of Youth for Sustainable Initiative, is a youth-led and youth-serving civil society organization that is localizing the UN SDGs. The Network was launched in April 2017 (Blueprint, 2017). According to NGYouthSDGS (2024), the organization, with funding from the United Nations Department of Economics and Social Affairs, worked with the International Labour Organization and the Federal Ministry of Youth and Sports towards the revision of the Nigeria Youth Employment Action Plan (2021-2024). The organization, launched in August 2020, conducted a survey to understand the decent work aspirations of young Nigerians in the light of COVID-19 and how they want policymakers to support them (Akomolafe, 2021). More than 100,000 young people responded to the survey over six weeks. This was followed by a youth validation workshop held across the 36 states of Nigeria and the Federal Capital Territory. The Nigeria Youth Employment Action Plan was launched in September 2021 and is estimated to meet the decent work aspirations of 3.5 million young Nigerians (ILO, 2021). The Nigerian Youth Employment Action Plan (NIYEAP) for the period 2019-2024 is a confirmation of Nigeria's commitment to tackle youth employment and contribute to national and global development goals (ILO, 2024). It complements and operates in the context of existing policies, frameworks, and strategies such as the Economic Recovery and Growth Plan, the National Youth Policy, the National Employment Policy, the United Nations Development Partnership Framework, and the Call for Action. The NIYEAP aims to address the youth employment challenge in a comprehensive and coordinated manner by guiding the work of relevant institutions of the Federal Republic of Nigeria, civil society, youth organizations and development partners in the promotion of decent jobs for youths and intends

to inform the development of related programmes, initiatives, and budgets in a complementary and sustained manner (ILO, 2021).

Next, She Leads Africa provides women with the support, knowledge, and motivation they require to live a fruitful life. With 700,000 active female members throughout Africa, it claims to be a major contributor to reducing gender inequality by fostering networking, goal-achieving, and lifelong partnerships (SLA, 2024). Motherland Mogul Insider, a private online community for young African female professionals and entrepreneurs hoping to reach their objectives, is one of their two main programs. Through this initiative and its programs, the platform has transformed members' businesses positively, increasing productivity and women's participation in job creation and income generation.

SDSN Youth Nigeria is the Nigerian node of The Sustainable Development Solutions Network (SDSN) Youth, the youth arm of the SDSN, launched by the former UN Secretary-General, Ban Ki-moon. It serves as a platform for youths to use their creativity and knowledge to pioneer innovative solutions towards attaining the SDGs (SDSN, 2024). The Network commenced activities in 2015 and has embarked on a number of initiatives. One of the signature programs is the SDG Advocates Programme, which has taught youths about various aspects of the SDGs. These include the Age of Sustainable Development Goals, Pillars, Principles, and Dimensions of the Agenda 2030, Innovation and Technology for Sustainable Development, Climate Solutions and Sustainable Energy, Circular Economy, Consumption and Production, Design Thinking and Innovation Process, Project Management/Community Development, Achieving and Measuring the SDGs, and Advancing Sustainable Development through Governance and Partnership. Through the Community Development projects, over 230 secondary schools and 100,000 secondary school students in 27 states of the federation were trained on SDGs, and 80 community groups were impacted via the training-of-trainers model. The SDSN Youth Nigeria Report 2022 shows that the program's impact has increased the spread of SDGs in Nigeria, particularly among the youth, which has led them to take action (MSME Africa, 2022).

The Future African Leaders Foundation's goal is to investigate and enhance Africa's capacity for leadership. It recognizes, honours, and provides support to young Africans who have exhibited outstanding leadership by positively influencing their generation via mentoring,

education, and other initiatives that help develop the next generation of leaders and set them up for success (The Future Africa Leaders, 2024).

The goal of educating school-age girls about gender-based violence and adolescent pregnancy is achieved through a multitude of verified reports. Through several of her projects, Gifty Nordzi has assisted marginalized girls in realizing their full economic and social rights (UNESCO, 2019). The concept of establishing an organization to advance girls' education in Africa was born out of a debate among five female attendees during a 1992 conference of African Ministers and Deputy Ministers of Education situated in Manchester.

The Climate Leadership Programme for Women in West Africa (WAFriCLP) is hosted by the West African Service Centre on Climate Change and Adapted Land Use of the University Félix Houphouët-Boigny Cote d'Ivoire's Doctoral School in Biodiversity-African Centre of Excellence on Climate Change, Biodiversity and Sustainable Agriculture (USAID, 2023). This is noteworthy because Côte d'Ivoire has one of the most significant land management and climate change institutions. Female scientists, innovators, analysts, and editors will have access to this center's training, research, education, and experimental opportunities, among other things. Another program that is being carried out in Côte d'Ivoire is called Youth Impact for the SDGs. It is a \$118,500 project partially sponsored by Microsoft and carried out in association with AIESEC, UNESCO, and United Nations Volunteers (UN Volunteers, 2018). The initiative resulted from a September 2016 workshop held by the UNV Regional Office for West and Central Africa (ROWCA) in Dakar, Senegal, on utilizing youth volunteerism to help accomplish the Sustainable Development Goals. It seeks to guarantee the widespread participation of young people between 18 and 39 while improving access to information and communication technology (ICT) training. The project integrates information and communication technology with hands-on training in entrepreneurship. The nation was also the first to introduce the Scaling Up Nutrition (SUN) Youth Network, which unites 37 youth organizations and 5,000 young people to work on sustainable development, nutrition, and food. The goal is to carry out initiatives to address hunger and malnutrition to achieve the Sustainable Development Goals.

Contributions from North Africa

In Morocco, the Youth Action for Zero Road Fatalities is one of the noteworthy programs being carried out. It implements the Global Plan for Road Safety 2021–2030 recommendations, citing Morocco's youths as key stakeholders who must be involved in decision-making (Cherif, 2021). The National Road Safety Agency (NARSA), the Ministry of Transportation, the Ministry of the Interior, civil society organizations, and other decision-making bodies are among the organizations targeted by its toolset. The tool wills the objective of creating a safer future for mobility in Morocco with the sustainable development goals of health and well-being, sustainable cities and communities, and decreased inequalities. The Sustainable Development's Youth Association Morocco is fueled by the desire to make Morocco a pioneer in achieving the Global Goals. Launching a nationwide campaign to promote the SDGs while giving civil society organizations training and guidance to put specific SDG solutions into practice was a first for the Middle East and North Africa (MENA) region (SDG Action Award, 2024). This organization was inspired by the inaugural UN SDG Global Festival of Action.

Since 2012, The Egypt Network for Integrated Development (ENID) project has embarked on a collaborative effort with the Ministry of International Cooperation and the United Nations Development Programme (UNDP) (UNDP, 2024). With a strong goal that was in line with Egypt's goal 2030 and Sustainable Development Goals (SDGs), ENID set out to empower women and young people. The project leveraged the potential of skill formation for employability and job creation, focusing on socio-economic empowerment. A platform called Sustainable Development Ambassadors is also in place with the goal of educating young people about the SDGs and helping them to become reality. It has links with the Egypt Vision 2030 Program, among other things (Daily News Egypt, 2020).

Tunisian youths have started working on environmentally friendly projects such as garbage recycling, organic farm development, processing of local fishery products, eco-tourism, and plant distillation. In addition to helping to maintain the Ghar El Melh ecosystem's distinctive natural and cultural value, these efforts have the potential to provide economic value and increase job opportunities for young people. In addition to being a wetland of international significance for its biological worth, the Ghar El-Melh is where youth emigration is frequently fuelled by the area's comparatively low

economic chances. Future economic activity, youth employment, and environmental sustainability are all greatly encouraged by the enthusiasm that young people have shown in developing and implementing green company concepts through the sustainable use of the wetlands' resources.

The World Wildlife Fund (WWF)-North Africa and Global Water Partnership (GWP)-Mediterranean supported the development of these admirable initiatives into tangible, self-sustaining enterprises. In order to support the Ghar El Melh's sociocultural, ecological, and economic growth, the "Conservation and Sustainable Development of Coastal Wetlands with High Ecological Value" (GEMWET) Project was created. This wetland area is renowned for its biological and historical richness (it is a Ramsar wetland and the first city in North Africa and the Arab world to be recognized as a Ramsar city). A Ramsar site is a wetland of international importance under the Ramsar Convention, which is also known as the 'Convention on Wetlands' – an intergovernmental environmental treaty established by UNESCO in 1971 and named after the city of Ramsar in Iran, where the convention was signed that year. Nevertheless, it is under pressure to grow due to various factors, most notably the effects of climate change and its fragility (GWP, 2020).

The event supported young people between the ages of 16 and 24 by encouraging their creativity, enhancing their entrepreneurial skills, and assisting them in coming up with creative solutions that address the social and environmental challenges in their communities. Additionally, to help youth take ownership of the universal values the UN promotes and use as a catalyst for social peace and sustainable development, UNESCO trains professionals who work with the youth, such as managers in youth organizations and specialized educators. Over 200 CEOs, both male and female, participated in this program, and about 150 of them are currently educating their peers by using a teaching kit that UNESCO created especially for this purpose. UNESCO has also trained youth educators to improve young people's media and information literacy. The educators who participated in the training now operate in the field, sometimes through the Algerian Network of Training Educators, and a guidebook has been produced in this regard. Once more, since 2019, young people in Algeria have been actively participating in a vast, nonviolent movement for democracy, justice, and dignity on an unprecedented scale. Profound reflections on the significance of environmental preservation have also occurred within this movement. This has included disputes over Algeria's

natural resource sovereignty and opposition to international oil companies' involvement in dirty sectors like hydraulic fracturing. This occurs at a time when awareness of the threats to biodiversity and climate change on a worldwide scale is growing, as is the need for Algeria to diversify its economy and take advantage of the enormous potential of solar and other renewable energy sources (UNSDG, 2020).

Contributions from South Africa

As seen in South Africa, where a network of youth associations within the South African Youth Council was established in 1997 as an independent, nonpartisan umbrella body for youth groups (Pure Portal, 2022), young people can inspire one another's feeling of civic competence. About 500 Enviro-Champs have demonstrated a solid commitment to safeguarding their local habitats in South Africa. They meticulously evaluate the condition of streams by measuring the number of particles in the water and the flow rate using a velocity plank and clarity tube. A sample of water is also taken in order to help identify and match invertebrates on a chart and further help show levels of contamination. People from all walks of life collaborate with the Enviro-Champs in their environmental activities. They interact with the community to provide ideas for problem-solving strategies. One is the removal of solid waste dumping near streams and the incineration of home garbage that degrades air quality (Fricker, 2023).

Youth Participation and Engagement: Challenges towards the SDGs Achievement in Africa

Despite their immense potential to contribute to sustainable development, many challenges and limitations hinder African youth's active participation.

Limited access to learning facilities and opportunities: Many young people across Africa are denied proper access to quality education and the acquisition of employable skills that would enable them to contribute to sustainable development actively. High unemployment rates and underemployment among African youth have been extensively linked to severe economic problems while lessening their potential to contribute to development.

Political exclusion: Youths are often marginalized from decision-making processes, limiting their influence on policies and programs related to the SDGs.

Gender inequality: Gender-based discrimination may hinder young women's contribution and participation in the process of achieving sustainable development. Cultural expectations and traditions that place restrictions on the potential roles and responsibilities of youth can serve as a barrier to their involvement in community development.

Stigmatization and discrimination: Negative perceptions or stereotypes associated with some demographics among youth—such as those living in poverty, for instance, or youth with disabilities—may ultimately bar their participation.

Resource Constraints

Insufficient financial resources: Organizations and initiatives spearheaded by youth frequently encounter difficulties in obtaining sufficient funding necessary to facilitate their operations and fulfill their objectives. Limited access to technological resources: Insufficient availability of technology and digital tools is a severe constraint to participation and interaction by the youth on virtual platforms and networks.

Governance and Policy Challenges

Corruption and mismanagement: Corruption and mismanagement within governments undermine the potency of youth participation in development projects. Youth-unfriendly policy: Governments might not have appropriate policies and programs that help youth participation and engagement for sustainable development.

Conclusion

The contribution of the youth in Africa toward the achievement of SDGs cannot be overstated. The creativity, vibrancy, dynamism, and innovative behavior of the African youths have the potential to spark changes across a wide range of sectors. They contribute significantly to reducing significant challenges to poverty, inequality, and environmental degradation through entrepreneurship, community-based initiatives, and advocacy.

Realizing this potential, however, requires concentrated collaboration by governments, civil society organizations, and the private sector. Access to education and building of skills, combined with access to financial means, will enable them to become active agents of change. What is required is an enabling environment that allows for full manifestations of innovation, entrepreneurship, and civic engagement in order to unlock the full potential of Africa.

With specific targeted investments in youth empowerment, accompanied by enabling conditions, Africa can release the pent-up potential of its young population, enabling the SDGs and creating a more sustainable, equitable, and prosperous future for all.

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