

African innovation and entrepreneurship research for sustainable development: A young scholars' perspective

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African innovation and entrepreneurship research for sustainable development: A young scholars' perspective

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ABSTRACT

This article presents a collection of essays on *African Innovation and Entrepreneurship Research for Sustainable Development*, authored by young scholars from the 2024 PhD Winter School at Bern University of Applied Sciences. To help harness the transformative power of innovation and entrepreneurship for sustainable development, the five essays explore necessary change on multiple levels – including the institutional, ecosystem, industry, and individual levels – as well as key concepts such as social entrepreneurship and affordable innovation. Collectively, they emphasize the

KEYWORDS

Innovation; entrepreneurship; sustainable development; context; North–South collaboration; multi-voice approach

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importance of contextualized research in entrepreneurship and innovation. This multi-voice article serves both as a call to action and a collaborative platform for PhD students from Africa and Europe to jointly generate new insights into how entrepreneurship and innovation can contribute to sustainable development in Africa. The collection is framed by an introduction and conclusion written by the editors of the multi-voice article.

INTRODUCTION

By Susan Müller, Nathaniel Boso, Pascal Dey, Nadine Gurtner, Sebastian Gurtner

Entrepreneurship and innovation are critical interrelated drivers of a sustainable future for Africa (Littlewood et al., 2022; Sun et al., 2020; Youssef et al., 2018) and play a central role in achieving many of the aspirations outlined in the African Union's Agenda 2063 (African Union Commission, 2015). Despite growing research outputs in leading entrepreneurship and innovation journals in recent years, African voices and contexts are underrepresented (Wickert et al., 2024), and many research questions related to how innovation and entrepreneurship contribute to sustainable development in Africa remain unanswered (Littlewood et al., 2022). There is an untapped potential for deeper, more context-sensitive research – research that creates better alignment between entrepreneurship and innovation theories and African realities, eventually resulting in more effective, locally appropriate solutions to the continent's complex and multifaceted challenges (Mammana et al., 2024). The need for contextualization cannot possibly be exaggerated given that “imported” theories and frameworks developed in the Global North often fall short of grasping the complexity, richness, and specificity of African settings, and are therefore ill-equipped to address the region's unique sustainability challenges (Beugré, 2015).

This multi-voice article aims to serve as (1) a call to action and (2) a collaboration platform for generating new context-sensitive insights into entrepreneurship and innovation for sustainable development in Africa. It seeks to foster equitable and collaborative research among early-career scholars from both African and European universities. The article therefore features five essays by PhD students who participated in the Swiss–African PhD Winter School on Innovation and Entrepreneurship at Bern University of Applied Sciences in 2024. Each essay tackles a specific topic within the field of entrepreneurship and innovation, offering contributions that aim to support sustainable development in an African context.

Both the Winter School and this multi-voice article are grounded in two key observations. First, while entrepreneurship and innovation hold significant potential to drive sustainable development in African countries, this potential remains poorly understood and, thus, underutilized (Littlewood & Holt, 2018b). There is a need not only for more research in these areas, but for research that is deeply rooted in and responsive to African contexts, so that the development of new theories or the alignment of existing theories with new phenomena (Fisher et al., 2021) will allow us to derive nuanced, context-specific understandings alongside robust claims, while also clarifying the conditions under which these claims hold. Second, addressing complex social and environmental challenges requires diverse perspectives and collaborative efforts. In particular,

partnerships between researchers from the Global North and Global South should be built on principles of equity, ensuring that all parties benefit fairly. The following section elaborates on these two foundational observations.

The Need for Contextualized Entrepreneurship and Innovation Research for Africa's Sustainable Development

African countries face numerous development challenges, including widespread poverty, the escalating effects of climate change, and increasing competition for scarce resources (Littlewood et al., 2022). In addition, access to basic healthcare (Tessema et al., 2022) and quality education (Evans & Acosta, 2021) as well as high youth unemployment (Karkee & O'Higgins, 2023) remain pressing issues across much of the continent. Entrepreneurship and innovation research and practice, in conjunction with supportive actors and policies, can help address some of these challenges. Although entrepreneurial activity is already strong in many African countries, its full potential to bring meaningful and inclusive benefits to citizens has yet to be realized (Devine & Kiggundu, 2016). However, there are several developments that give cause for hope. For example, pro-social and impact-driven entrepreneurial initiatives as well as grassroots efforts have enabled citizens to develop local solutions to pressing social problems (Littlewood et al., 2022). Moreover, pro-social enterprises are blossoming in many African countries, acting as important drivers of job creation and sustainable development (Siemens Stiftung, 2020). High-level initiatives such as the African Union's Agenda 2063, a long-term development roadmap for the continent, also demonstrate concerted efforts to advance Africa's pursuit of sustainable development through its own solutions and strategies (DeGhetto et al., 2016).

Both the challenges and the signs of hope mentioned above provide fertile ground for researchers to begin reimagining the conditions under which innovation and entrepreneurship can meaningfully support sustainable development in Africa. To attain this goal, we need to ensure that research considers specific African contexts and develops robust theories around them.

It is tempting to adopt models and best practices for entrepreneurship and innovation and use them as a blueprint for the African context. However, the diverse contexts across Africa bring with them unique enabling and disabling conditions – which can be technological, demographic, economic, sociocultural, or otherwise in nature (Kimjeon & Davidsen, 2022) – that shape entrepreneurial activity in distinct ways. For example, a significant portion of entrepreneurship occurs within the informal economy (Simba & Tajeddin, 2023) and is often guided by African context-specific value systems (Abubakre et al., 2021). This is not to suggest that Africa forms a homogeneous contextual entity. Indeed, an argument can be made that there is no single “African context” as the continent is made up of numerous countries and regions, each with its own languages, cultures, and socioeconomic realities, all of which contribute to a rich variety of innovation and entrepreneurship ecosystems. It is in this environment that many taken-for-granted assumptions from the Global North about entrepreneurship and innovation can lose their explanatory value and must therefore be questioned. For example, the informal economy is often seen by “mainstream” entrepreneurship scholars as something inferior and therefore in need of transformation (Simba et al., 2023), which blatantly ignores that the informal economy provides income to millions of people. This is not to suggest that existing concepts or

models developed outside of the African context should never be transferred. However, when doing so, it is essential to carefully consider the distal and proximal context and formulate research questions accordingly (Rivera-Santos et al., 2015; Welter, 2011). The following topics and questions serve as illustrative examples of how models and concepts might be thoughtfully adapted to ensure their relevance and usefulness on a local level (Fisher et al., 2021). For example:

- *Entrepreneurship concepts*: Concepts such as *social entrepreneurship*, *sustainable entrepreneurship*, *affordable innovation*, *social innovation*, *sustainable innovation*, and *circular innovation* hold significant potential to address sustainability issues and other grand challenges facing African countries. What are the genuine contributions of these concepts to Africa's most pressing problems? And how can these concepts be brought in alignment with the lived reality of specific African contexts to better reflect and respond to the specific socioeconomic, cultural, and institutional contexts across the continent?
- *Innovation management*: Innovations that have a social and ecological impact are not only promoted by entrepreneurial ventures but can also come from established companies. How can large, multinational companies or SMEs use their resources to develop and promote sustainable innovation in the African environment? How do these organizations need to collaborate with other actors or adapt their innovation processes? What resistance do such sustainable innovations encounter within organizations, and among stakeholders and customers, and how can this resistance be overcome?
- *Entrepreneurship ecosystems*: Entrepreneurial activities take place in environments with varying levels of resources, access to finance, and support organizations and are characterized by formal and informal institutions, such as rules, norms, and social structures. How can entrepreneurial ecosystems in African contexts be designed to consider specific conditions, including the diversity of informal economies (Nason & Bothello, 2023), which are largely ignored or completely misunderstood in the extant literature? How can ecosystems be designed to foster entrepreneurial activities capable of propelling sustainable development?
- *Women's entrepreneurship*: In developing countries women entrepreneurs make an important contribution to social and economic development. They are the breadwinners of many households, and women-owned and women-led businesses alleviate problems in many areas, such as child trafficking, lack of educational access, and poverty (Simba et al., 2022). However, women's entrepreneurship and its current and potential contribution to sustainable development in the African context have not yet been sufficiently researched. What are the framework conditions and drivers of women entrepreneurs' success? What kind of value, apart from direct family income, do women entrepreneurs create (e.g., empowerment, emancipation from systems of oppression such as entrenched gender roles or patriarchal systems)? What are potential negative side effects of women's entrepreneurship activities (e.g. family – work conflicts)?
- *Agriculture*: While many African economies are still agriculture-based, providing an immense potential to produce agricultural value-added products, agribusinesses need to enhance their capacities to contribute to meaningful sustainable growth (Babu et al., 2016). Issues that require academic inquiry are: How can entrepreneurship

and innovation help smallholder farmers to improve their often precarious situation? How can new technology and new kinds of agricultural organizations in Africa ensure food security or help to compete with subsidized food exports from industrialized nations?

- *Youth unemployment*: According to the International Labour Organization (ILO), more than 72 million young citizens in Africa are not in employment, education, or training (Karkee & O'Higgins, 2023). How can entrepreneurship education help to counteract and improve the unemployment situation? What are the success factors for young entrepreneurs with sustainable ventures and what role does their context play in this?
- *Climate change*: African countries are particularly vulnerable to the effects of climate change, and the situation is likely to get worse (IPCC, 2023). How can entrepreneurship and innovation research help to tackle the consequences of climate change? How can innovation and entrepreneurship help African entrepreneurs transition to a low-carbon and low-waste future, thus becoming part of the solution rather than a driver of the problem? How does climate change shape entrepreneurial opportunities?
- *Value creation*: Many African countries continue to export a significant share of their raw materials, while much of the value addition occurs outside the continent (Dorfmüller et al., 2024; Henri, 2019). What is the role of entrepreneurship in creating and keeping more value in Africa and building local, sustainable value chains? What are the particular challenges of scaling entrepreneurial activities and how can institutions and ecosystems help to overcome those challenges?

We believe that the above list – though far from exhaustive – highlights the urgent need for context-sensitive research that recognizes the unique characteristics and institutional landscapes of individual African countries and regions. We believe that joint research collaborations can be a helpful lever to carefully utilize, adapt, or redesign such concepts in the African context.

The Need for Collaborations Between Scholars with Contextual and Theoretical Knowledge

In recent years, research interest in Africa has grown significantly, alongside the rise of scholarship originating from within the continent. Illustrative examples include the biannual conferences hosted by the Africa Academy of Management (AAOM) that started in 2021, the launch of the *Africa Journal of Management* in 2015, and large-scale research projects such as “Trickle Out Africa,” which ran from 2011 to 2013 and examined environmental entrepreneurship across 19 sub-Saharan African countries using quantitative methods and multiple case study research (see Rivera-Santos et al., 2015 for a published output from the project).

However, there remains a dearth of work by African scholars and studies drawing on African context-specific data published in leading (predominantly US- or European-based) journals (Wickert et al., 2024). Breaking up the silos to generate more African-based research in mainstream journals would benefit scholarship in various respects. Studying African context-specific phenomena could help scholars develop new theories that prove to be relevant not only for Africa but also for the Global North. Moreover, applying and further developing theories originally derived from Global North empirical

contexts within African settings – which are characterized by different underlying conditions – can help redefine those theories' boundary conditions, modify key predictors and outcomes, and ultimately challenge their foundational assumptions (George, 2015).

Transcontinental research collaborations are therefore highly desirable, both to cross-fertilize the available knowledge and because many sustainability challenges transcend national borders. Too often, however, North – South academic collaborations are fundamentally unequal, with Northern researchers using research in Africa to advance their academic careers while Southern researchers support and facilitate the development of the former's expertise, investing time, effort, and passion without equally benefiting from the collaboration (Tilley & Kalina, 2021).

Young Scholars' Essays on Entrepreneurship and Innovation for Sustainable Development

When we organized the Swiss–African PhD Winter School on Innovation and Entrepreneurship in 2024, we aimed to encourage joint research collaborations between African and European young scholars on equal terms. One starting point for such collaborations is this multi-voice article. During the Winter School, we gave participating doctoral students the opportunity to start collaborating on short essays, with the prospect of featuring them in a multi-voice article expressing different viewpoints on how innovation and entrepreneurship research can contribute to sustainable development in Africa. The student teams were coached by the co-editors of this multi-voice article to help them develop their essays.

The essays cover a wide range of topics. The first, by Sive Mbangiswano and Sadiq Abubakar Gulma, focuses on agribusiness in Africa. Drawing on an expert interview and a literature review, the authors identify key challenges in the sector. They then apply the transformative social innovation lens developed by Avelino et al. (2019) to propose a research agenda aimed at addressing these challenges.

The second essay, by Sikhumbuzo Maisela and Maria Ljung, challenges the assumption that Western theoretical frameworks, such as the entrepreneurial ecosystem, can be easily transferred to African contexts. To test the Western entrepreneurial ecosystem approach, the authors conduct a comparative analysis of South Africa and Switzerland. They conclude that South Africa has similar foundational ecosystem elements but suggest adapting them to take into account the unique contexts, such as government challenges, inequality, and necessity entrepreneurship.

The third essay, by Juliet Nwachukwu and Gift Dembetembe, deals with the concept of social entrepreneurship. As sub-Saharan Africa faces several severe challenges and the coordinated efforts of governments and international actors have been insufficient, the authors propose social entrepreneurship as a promising approach to solving these problems. The social entrepreneurship approach has been widely researched in Global North contexts, but its potential for sub-Saharan Africa is less clear. The authors conclude that the potential of social entrepreneurship for sub-Saharan Africa is limited due to institutional barriers. They instead propose a co-evolution of social entrepreneurship and institutions to create a conducive environment.

The fourth essay, by Chinedu Miracle Nevo and Naledi Gallant, deals with affordable innovation and socioeconomic development in Africa. Since large parts of the population

in Africa have a low income, but innovations are often expensive, the authors propose that innovations must be accessible and affordable in order to promote inclusive socio-economic growth. Using a case study of the affordable innovation company M-KOPA, they reveal the barriers to affordable innovation in Kenya and show how they can be overcome. To encourage African entrepreneurs to focus more of their innovation on African markets, the authors call for more research on how affordable innovation can successfully drive sustainable development and reduce inequality in African contexts.

The fifth and final essay deals with entrepreneurship education. In the essay, Noah Bellwald introduces self-regulated entrepreneurial learning as a meta-learning approach that can enhance the development of entrepreneurial competencies. Based on a comprehensive review of existing literature, he proposes a framework to guide future research and inform targeted interventions. He considers self-regulated entrepreneurial learning as a strategic tool to address youth unemployment and economic disparities in South Africa.

SHORT ESSAYS

Challenges in Agribusiness in Africa: A New Research Agenda Based on a Transformative Social Innovation Framework

By Sive Mbangiswano and Sadiq Abubakar Gulma

Introduction

In a recent expert interview with Professor Bitange Ndemo, Kenya's ambassador to the European Union and a well-known scholar of entrepreneurship, he highlighted that although agribusiness contributes significantly to Africa's economy, its full potential remains unrealized. He says this is partly due to the dearth of in-depth academic research and the persistence of simplistic assumptions about African farmers and the agribusiness (the business and industries involved in the production, processing, distribution, and retailing of agricultural products) sector in Africa that are inimical to sustainable development. This claim is substantiated in a peer-reviewed article that notes there is only one academic journal dedicated to research on agribusiness in developing countries (Bannor & Arthur, 2024). These limited publishing opportunities may be (at least partially) responsible for the limited scholarly work on the sector. Although some of the challenges facing agribusiness have been explored in peer-reviewed studies, such as those by Nwofoke and Nwibo (2024) and Musa et al. (2018), a large number of such studies tend to focus on individual issues in isolation from the broader systemic, environmental, and contextual landscape. These challenges have broader implications for the continent's ability to achieve the Sustainable Development Goals (SDGs), especially by 2030.

Considering these implications, our essay addresses the limitations by proposing a holistic and systemic approach to investigating African agribusiness challenges. We use the transformative social innovation (TSI) framework developed by Avelino et al. (2019) to guide our analysis. This framework enables us to formulate a new research agenda that challenges the assumptions currently dominating the African agribusiness discourse.

The Transformative Social Innovation Framework

TSI theory came about partly in response to limitations observed in traditional ways of understanding social innovation, widely understood as innovations that meet social needs (Littlewood et al., 2022). Agostini et al. (2016) noted that earlier definitions of social innovation were overly simplistic, did not capture the complex interactions involved, and thus did not record any transformations on the ground. Earlier approaches to social innovation often missed meaningful connections between individual, institutional, and broader societal dynamics, which prevented social innovation from addressing the challenges in a transformative manner. TSI therefore came to be understood as a process through which social innovation challenges dominant institutions (Agostini et al., 2016; Haxeltine et al., 2015) and as articulating a systematic perspective on social innovation (Avelino et al., 2019).

Based on the TSI theory, Avelino et al. (2019), introduced a TSI framework with four levels of change that must constantly evolve and interact with each other for transformative changes to occur. They argue that social innovation does more than just introduce new products or practices; it actively challenges and sometimes replaces established societal institutions. See Table 1 for details of the four levels. Each level explores transformations differently, from innovations in products or services to significant shifts in policy and change narratives.

With agriculture increasingly recognized as complex and interconnected, and the growing recognition and use of a systems approach in the sustainable development of agriculture (Lema et al., 2021), applying the TSI framework seems appropriate. Instead of focusing narrowly on isolated problems, adopting the TSI framework allows researchers to examine agribusiness challenges holistically. Doing so can help unpack deeper connections between local issues and broader systems, offering better guidance for scholarly investigations. The following section sets out our methodology and the utilization of the TSI framework.

Methodology

Two data sources form the basis of this essay: a systematic literature review paper by Bannor and Arthur (2024) and a semi-structured interview we conducted with Bitange Ndemo. We extracted the challenges of agribusiness first from the review paper. The findings from the paper aided the interview discussion, and the interview, in turn, provided further practical insights that enriched the findings from the literature review. We transcribed the interview using an open coding approach that highlighted challenges shared by the interviewee and grouped the challenges into themes. We compared the

Table 1. Four shades of change and innovation: working definitions (Avelino et al., 2019, licensed under CC BY-NC-ND <http://creativecommons.org/licenses/by-nc-nd/4.0/>).

4 Shades of change & innovation	Working definition
Social innovation	Change in social relations, involving new ways of doing, organising, knowing and framing
System innovation	Change at the level of societal sub-systems, including institutions, social structures and physical infrastructures
Game-changers	Macro-developments that are perceived to change the (rules, fields and players in the) 'game' of societal interaction
Narratives of change	Discourses on change and innovation, i.e. sets of ideas, concepts, metaphors, and/or story-lines about change and innovation

understanding of market systems; and inadequate flow of information in the sector. “Governance and institutional reforms” refers to the policies, acts, decrees, procedures, and any instruments state actors utilize to govern matters related to the sector. “Social and cultural norms” refers to the ideas, behaviors, attitudes, and norms driven by social and cultural factors, which are entrenched and practiced in a way that negatively impacts the sector. “Market systems” are the mechanisms, rules, institutions, actors, resources, etc., that influence the production, trading, and consumption of agricultural products and services. They include both formal and informal structures. The “flow of information” relates to the information infrastructure and systems and how information moves about within the sector. It can also relate to market pricing, new farming techniques, or new regulations.

Based on these four themes, research questions for future research were developed. Table 2 shows these questions and lays out a systematic framework for future research.

Discussion

The suggested research questions in Table 2 provide a framework for how scholars can investigate the challenges related to each theme, in order to give a systemic and holistic picture of the issues. It offers a multidimensional framework that captures the transformation of Africa’s agribusiness and agripreneurship (which combines agriculture and entrepreneurship to modernize traditional farming through innovative and sustainable practices) in its full complexity. This framework facilitates a deeper understanding of the various barriers and opportunities in the sector and provides a robust basis for developing targeted research questions and policy interventions. By integrating perspectives across social, societal, macro-level, and narrative dimensions, the framework underscores that transformative change in agribusiness requires both tangible and intangible factors to be addressed, ranging from infrastructural shortcomings to the pervasive influence of cultural narratives. This comprehensive approach is essential for promoting sustainable development and empowering stakeholders within the agribusiness sector.

The following sections explain how scholars can explore these questions under each level of inquiry from the TSI framework.

Level of Inquiry 1: Social Innovation

Social innovation broadly involves new ways of organizing and thinking that tackle sustainability challenges. Angelidou and Psaltoglou (2017) highlight that it can include new planning processes, policies, business models, or stakeholder interactions. The questions we raised in Table 2 can help researchers unpack certain related ideas. For example, it would be helpful to understand how current organizational structures within agribusiness might be limiting sector growth. Another area to explore is the impact of trade agreements. Researchers could investigate how participation in regional or global agricultural trade agreements empowers or disempowers African countries. These insights matter because social innovation is often seen as a way of empowering key stakeholders, although the effectiveness of this empowerment is still widely debated.



Table 2. Possible questions regarding the barriers and challenges in agribusiness and agripreneurship in Africa © 2025 by Sadiq Abubakar Gulma and Sive Mbangiswano is licensed under CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>.

Levels of inquiry	Major challenges and barriers			
	Poor governance and institutional reforms	Inimical social and cultural norms	Poor understanding of market systems	Inadequate flow of information
Social innovation	How are African countries empowered and disempowered by participating in continental and intercontinental trade agreements?	- In what ways do community values shape the adoption and rejection of innovative practices? - How do traditional and cultural practices influence decision-making in agribusiness governance?	How do market inefficiencies hinder the adoption of socially innovative agribusiness models?	- How does a lack of timely data impact the spread of innovative practices in the agribusiness sector? - What strategies can improve the flow of crucial information among stakeholders?
System innovation	How should the existing local, subnational, and national institutions be changed to address the challenges?	- How do we inculcate African culture in the sector's digital space? - How do prevailing cultural attitudes support or resist changes in institutional structures?	- What systemic market reforms are necessary to support sustainable agribusiness innovation? - How can supply chain inefficiencies be addressed to better integrate market systems?	- How does institutional rigidity affect the communication channels within the sector? - What mechanisms can be implemented to ensure transparent and efficient data sharing?
Game-changers	- Who is not involved in the decision-making and the industry but needs to be? - What limiting role does the World Trade Organization play in the two sectors? - How can intellectual property laws be extended to protect valuable indigenous knowledge and plant usage in Africa?	- What policies must be introduced to challenge unhelpful cultural and social barriers? - In what ways can community-led initiatives disrupt traditional cultural norms for positive change?	- How can disruptive market technologies transform agribusiness ecosystems? - How do we learn to utilize credit and sovereign wealth for the sector more effectively? - How do agricultural and trade policies in the Global North affect Africa's agribusiness industry?	- How can digital platforms and emerging technologies leverage African languages to bridge information gaps? - What policies and new technologies must be introduced to improve industry information flow?
Narratives of change	- How do narratives like "Africa depends on food imports and food aid" affect the growth of the sectors? - How can alternative governance narratives promote self-sufficiency and local empowerment? - How does the current definition of food security, which focuses on meeting nutritional needs, affect agricultural production?	- How do dominant cultural narratives influence perceptions of local agribusiness capabilities? - What counternarratives can be developed to empower local producers and shift traditional mindsets? - How does the widespread subsistence farming culture limit the aspiration of new agripreneurs?	- What assumptions do we make about African farmers? - How do prevailing market narratives perpetuate reliance on agricultural imports? - What changes in the narrative are required to encourage the development of robust domestic markets?	- How does the spread of misinformation affect public perception of the agribusiness sector? - In what ways can improved communication strategies help to reshape narratives and promote innovation?

Level of Inquiry 2: System Innovation

System innovation refers to significant societal changes, such as shifts in institutions or infrastructure. It looks at how current social and physical structures influence outcomes in agribusiness and how these might be adjusted to enable growth. The research questions in [Table 2](#) reflect this approach. For example, we suggest exploring what institutional changes are necessary to overcome current challenges. Questions about governance structures and what societal actors might be excluded from decision-making are equally important. Exploring these systemic issues could highlight which new actors and institutions might be introduced to drive positive, sustainable change.

Level of Inquiry 3: Game-Changers

Game-changers are major shifts at a macro level, involving large-scale changes in rules and policies. Christensen (1997) describes them as changes that fundamentally alter how things are done. Our interview with Professor Ndemo provided an example from practice, which highlights how European subsidies for poultry farmers disadvantage African producers. This insight raises essential research questions about the broader impact of EU agricultural policies on Africa. Additionally, understanding whether African policymakers fully grasp the implications of agricultural and trade policies would also be beneficial. Researchers can identify opportunities for meaningful policy shifts and strategic interventions by focusing on these big-picture factors.

Level of Inquiry 4: Narratives of Change

Narratives of change involve the stories, ideas, and metaphors that shape perceptions and influence how innovation is received or resisted in the agribusiness sector (Czarniawska, 2004) and agribusiness in general. Africa's storytelling traditions offer rich insights into how these narratives influence development. For instance, the saying "feed a woman, feed a nation" captures the critical role that gender empowerment plays in achieving UN Sustainable Development Goals (Struckmann, 2018). The questions we propose are helpful for exploring such narratives. For example, researchers might investigate how narratives of dependency on food imports affect local agricultural growth. Moreover, exploring new, positive narratives to empower local producers could offer solutions to existing barriers. McGrath et al. (2023) noted that current stories around digital agriculture emphasize negative aspects, suggesting a need for alternative narratives to shift perceptions and drive innovation positively.

While [Table 2](#) highlights several constraints affecting agribusiness growth, it also acknowledges the complexity of traditional agricultural practices. Although some traditions and norms may appear restrictive or limiting, it is also essential to consider their positive aspects. For example, while subsistence farming may limit entrepreneurial ambitions in some contexts, it contributes positively to biodiversity conservation and resilience to climate variability. Researchers should therefore approach these questions in a balanced way, recognizing both the challenges and opportunities that traditional practices may offer.

Conclusion

Agribusiness has great potential to foster economic growth and food security in Africa (Kazungu & Kumburu, 2023). However, it faces ongoing barriers that prevent it from

fully realizing its potential (Bannor & Arthur, 2024). This essay articulates four high-level themes that capture the sector's significant challenges.

We structured specific research questions according to these themes using the transformative social innovation (TSI) framework. The questions enabled us to go beyond evaluating challenges in isolation. We stressed the importance of rethinking institutional structures, reforming social narratives, and fostering collaboration between states, entrepreneurs, and communities to drive real change in agribusiness.

While our essay adds to the dialogue by redirecting attention toward solutions and transformative questions, it has some limitations. First, we based our results on one literature review and one expert interview, not allowing for much breadth. Moreover, the literature we referenced concentrated on a limited number of high-status journals, and so we may have omitted significant studies published in other outlets. Future studies that include broader data collection relying on multiple interviews would generate more comprehensive insights into these challenges.

Embracing Western Entrepreneurship Ecosystems for Africa: Appropriateness With Contextual Considerations

By Sikhumbuzo Maisela and Maria Ljung

Introduction

This essay, co-authored by a South African and a Swede based in Switzerland, originally set out to critique the transplantation of Western entrepreneurial ecosystem models to Africa. However, the research direction evolved following one author's (Maisela's) firsthand observations of Europe's economic landscape. Notably, the well-coordinated and functional infrastructure of European cities, exemplified by the integrated Eurail network connecting 33 countries, starkly contrasts with Africa's fragmented infrastructure and restrictive cross-border protocols (Bullock, 2009; Graff, 2024). Further research indicates that European employment and entrepreneurial activity rates often surpass those in Africa, a phenomenon attributed to explicit policy intentions and implementations, such as the deliberate promotion of entrepreneurship through well-developed entrepreneurial ecosystems. These disparities prompted critical reflections on how Africa might achieve similar economic efficiencies.

Due to scope limitations, this essay does not undertake an exhaustive economic comparison between Europe and Africa. Instead, it narrows its focus to the entrepreneurial context by selecting Switzerland and South Africa – leading economies in their respective regions with comparable metrics relevant to entrepreneurship – as case studies to investigate Africa's potential for entrepreneurial transformation. This analysis investigates the mechanisms through which a European nation fosters entrepreneurship by enhancing and leveraging key domains within its entrepreneurial ecosystem, juxtaposed against the challenges encountered by an African nation in cultivating similar entrepreneurial endeavors. Throughout this comparative examination, careful attention is given to contextual sensitivities, recognizing that the efficacy of entrepreneurial strategies is deeply influenced by the unique socioeconomic, cultural, and institutional landscapes inherent to each nation.

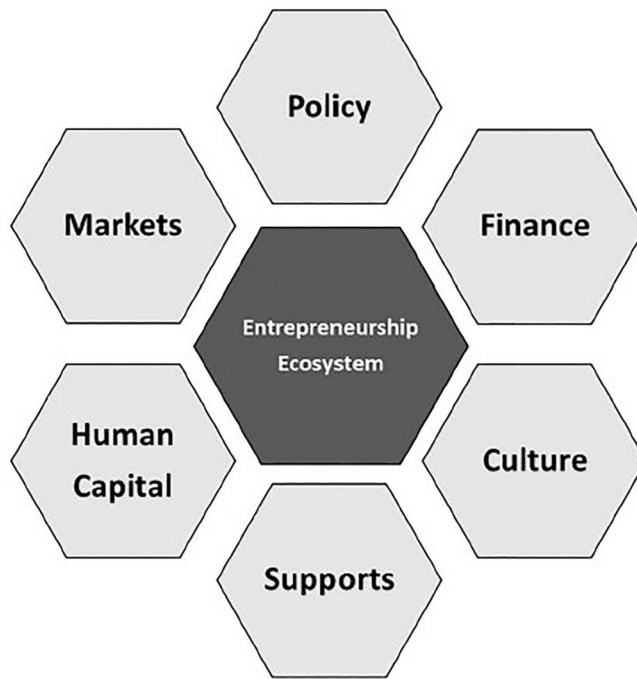


Figure 2. Six domains of an entrepreneurial ecosystem (Isenberg, 2011, as cited in and reproduced from Fuerlinger, Fandl, & Funke, 2015, licensed under CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>)

We employ Isenberg’s framework, which conceptualizes an entrepreneurial ecosystem as a network of interconnected stakeholders who collaboratively foster entrepreneurship. This model delineates six critical domains – policy, finance, culture, supports, human capital, and markets – each of which plays a pivotal role in promoting entrepreneurial activity (Isenberg & Onyemah, 2016). Governments and practitioners optimize the functionality of these domains by fostering their interconnectivity, enabling entrepreneurs to leverage them for their entrepreneurial success (Isenberg & Onyemah, 2016).

Policy establishes a regulatory framework that enables the structured creation and operation of businesses. Finance ensures access to the resources required for business initiation and expansion. Culture shapes societal attitudes that promote and normalize entrepreneurship. Supports provide essential infrastructure, mentorship, and resources to nurture entrepreneurial ventures. Human capital supplies the skills, knowledge, and expertise necessary for business development and effective management. Markets offer a consumer base that drives the growth and sustainability of entrepreneurial enterprises (Figure 2).

Method

Starting with an assessment of the economic and entrepreneurial landscapes of Switzerland and South Africa, we employed Isenberg’s framework to conduct a comparative

Table 3. Domain and element overview (based on WEF, 2019).

Domain	Element
Markets	<i>Buyer sophistication</i>
	<i>GDP per capita</i>
	<i>Market size</i>
	<i>Domestic competition</i>
Finance	<i>Trade openness</i>
	<i>Financing of SMEs</i>
	<i>Venture capital availability</i>
	<i>GDP per capita</i>
Human capital	<i>Quality of vocational training</i>
	<i>Skillset of graduates</i>
	<i>Digital skills among population</i>
	<i>Ease of finding skilled employees</i>
Policy	<i>Reliance on professional management</i>
	<i>Future orientation of government</i>
	<i>Property rights</i>
	<i>Cost of starting a business (% of GNI per capita)</i>
Culture	<i>R&D expenditures (% of GDP)</i>
	<i>Time to start a business</i>
	<i>Government responsiveness to change</i>
	<i>Efficiency of legal framework</i>
Supports	<i>Attitudes toward entrepreneurial risk</i>
	<i>Growth of innovative companies</i>
	<i>Companies embracing disruptive ideas</i>
	<i>Patent applications</i>
	<i>Business dynamism</i>
	<i>Innovation capability</i>
	<i>Multi-stakeholder collaboration</i>
	<i>Social capital</i>
	<i>Road connectivity index</i>
	<i>Railroad density/square km</i>
	<i>Airport connectivity score</i>
	<i>Electricity access (% of population)</i>
	<i>Internet users (% of adult population)</i>
	<i>State of cluster development</i>
	<i>ICT adoption</i>

analysis of the entrepreneurial ecosystems in the two countries. To quantify the ecosystem domains, we utilized data from the World Economic Forum's Global Competitiveness Report 2019, which has standardized indicators with scores ranging from 0 to 100, where 0 represents the lowest performance and 100 the highest. For each domain, the indicators were averaged to produce a composite score. The specific indicators are summarized in Table 3. To complement the quantitative data, we drew on relevant literature to provide a comparative assessment of each domain, enhancing the robustness of our analysis.

Due to space constraints, we focus on strengths of the Swiss ecosystem that can offer valuable insights for South Africa. Nonetheless, we acknowledge that the Swiss ecosystem faces its own challenges (see for example Baldegger et al., 2024; BAK, 2021) and recognize that the South African ecosystem possesses distinct strengths and opportunities, positioning it as "one of the most promising on the continent" (see for example StartupBlink, 2024). Thus, our aim is to inform entrepreneurial development in South Africa, rather than suggesting direct replication.

Comparative Analysis of Socioeconomic Landscapes and Entrepreneurial Ecosystems

The entrepreneurial outcomes observed in Switzerland and South Africa are intrinsically linked to their respective socioeconomic landscapes, the resources and capacities within their entrepreneurial ecosystem domains, and the effectiveness with which these are leveraged to foster entrepreneurship. These factors are analyzed in the following subsections.

South Africa's and Switzerland's Socioeconomic Landscapes

Switzerland and South Africa differ in their economic structures, governance, and entrepreneurship. Switzerland's federal system ensures stability, transparency, and equality. In contrast, South Africa's post-1994 democratic transition aimed to address apartheid-era disparities but continues to face governance challenges and corruption, exemplified by "tenderpreneurship," which undermines equitable resource distribution.

Switzerland's per capita GDP stands at approximately \$90,600, having quadrupled over the past four decades, whereas South Africa's has stagnated at \$6600 (Figure 3). Switzerland's innovation-driven economy, anchored in high-value sectors such as finance, pharmaceuticals, and precision engineering, ensures global competitiveness and resilience. In contrast, South Africa's reliance on resource-based industries such as mining and agriculture limits its growth potential and competitiveness.

Switzerland's strong democratic institutions and socioeconomic stability are associated with low unemployment (4%) and a relatively equitable income distribution (Gini coefficient 0.34). In contrast, South Africa faces high unemployment (32%) and severe inequality (Gini coefficient 0.54), stemming from apartheid-era policies that created a dual economy of affluence alongside marginalization (World Bank Group, 2026a; 2026b).

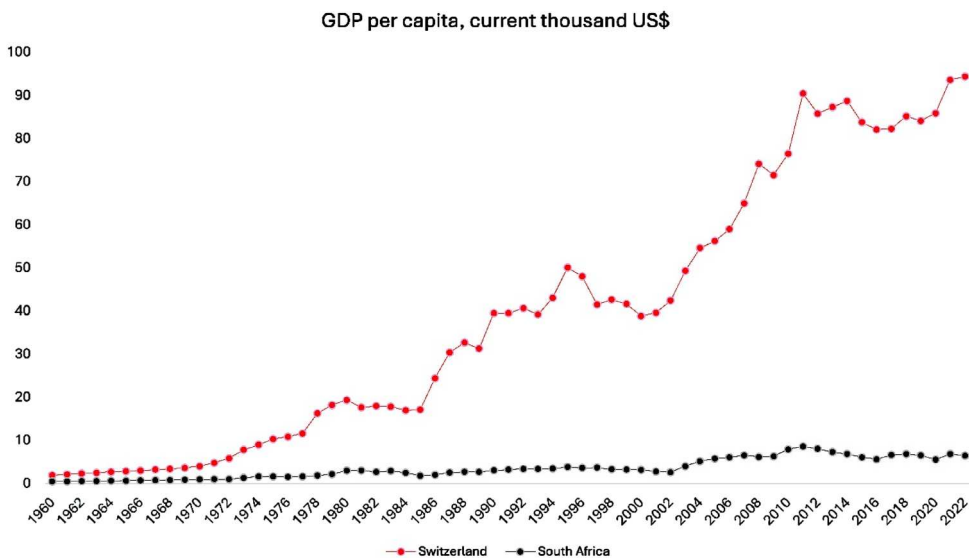


Figure 3. Swiss and South African GDP per capita, current thousand US\$ (based on World Bank Group, 2025, licensed under CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>).

Switzerland's equitable wealth distribution and high employment levels foster a focus on opportunity-driven and corporate entrepreneurship, with minimal necessity-driven ventures (Hill et al., 2023). This is evidenced by a total early-stage entrepreneurial activity (TEA) rate of 9.8% prior to the COVID pandemic and an established business ownership rate of 12% in 2019 (Hill et al., 2023).

In contrast, South Africa's dual economy results in significant disparities in entrepreneurial activity. Privileged groups primarily engage in opportunity-driven entrepreneurship, while marginalized populations are often confined to necessity-driven ventures. This dichotomy is reflected in a ratio of 3:7 (Hill et al., 2023), indicating that out of every 10 new ventures in South Africa, three are opportunity-driven while seven are necessity-driven, highlighting the unequal distribution of entrepreneurial opportunities across socioeconomic divides. South Africa's pre-COVID TEA rate of 11%, coupled with an established business ownership rate of 3.5% in 2019, underscores its struggles to cultivate a robust entrepreneurial ecosystem (Hill et al., 2023). The survival rate of businesses is very low, with approximately 40% failing within the first year, 60% within the second year, and 90% within the first 10 years (UNCTAD, 2023).

The stark differences in entrepreneurial outcomes between the two countries can be attributed to the distinct contexts and characteristics of their respective entrepreneurial ecosystems.

Analysis of Entrepreneurial Ecosystems with Recommendations for Enhancement

This section compares South Africa and Switzerland across the six domains of entrepreneurial ecosystems and offers recommendations based on Switzerland's best practices and South Africa's specific challenges and strengths.

Markets

Switzerland's markets score 69 compared to South Africa's 46 (Figure 4). Switzerland's high GDP per capita reflects substantial purchasing power and a wealthy consumer

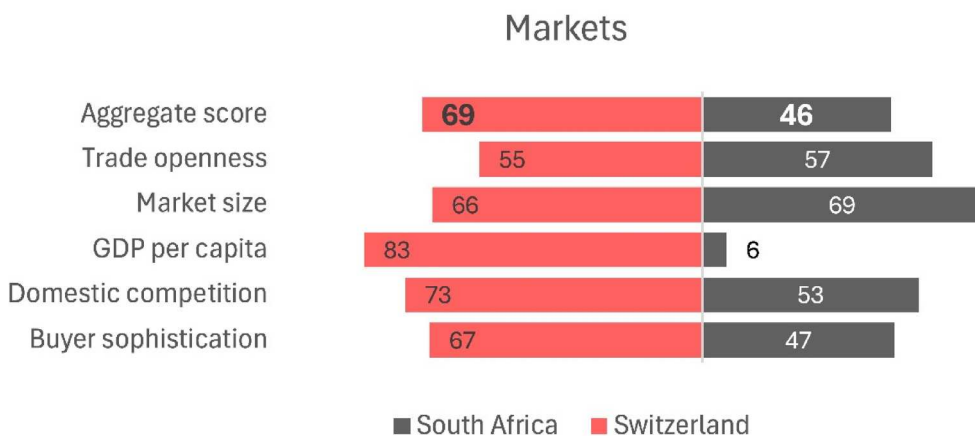


Figure 4. Market comparison (based on WEF, 2019).

base. Its strategic location in Europe grants seamless access to high-income markets within the European Economic Area (Egger & Erhardt, 2016). Conversely, South Africa's lower GDP per capita indicates limited domestic purchasing power, though its sizable population presents opportunities for entrepreneurs providing cost-effective, need-driven products. South Africa's membership in the Southern African Development Community (SADC) facilitates regional market access (Fish et al., 2014), while its strategic position and advanced seaport infrastructure enable its role as a hub for international trade (Scholvin & Draper, 2012).

South Africa could prioritize export-driven entrepreneurship by leveraging its strategic geographic location and focusing on industries where it holds comparative advantages. This approach could be further enhanced by fostering partnerships with high-income regions and investing in the development of innovative, high-value products tailored for both regional and global markets, thereby strengthening its market environment.

However, persistent challenges such as economic inequality, limited domestic purchasing power, and policy instability pose significant barriers to progress. To address these constraints, South Africa could also encourage entrepreneurs to effectively cater to the needs of its low-income markets, ensuring inclusivity and broader economic participation. Targeted governance reforms, coupled with efforts to diversify the economy, strengthen regional integration, and establish robust trade partnerships, are essential to unlocking the country's entrepreneurial potential and achieving sustainable economic growth.

Finance

Switzerland's financial environment scores 68, significantly outperforming South Africa's score of 28 (Figure 5). Switzerland boasts a robust financial ecosystem, characterized by accessible debt and equity financing, extensive self-funding, and government support (Ferrer, 2022; Zabolotskaya, 2020). Collaboration between banks, venture capitalists, and private equity firms provides Swiss entrepreneurs with diverse funding opportunities (Meier et al., 2012). Government initiatives, such as Innosuisse, enhance this ecosystem by offering grants and promoting partnerships with research institutions to advance innovation (Krienbuehl, 2020).

In contrast, South Africa's financial landscape is marked by fragmentation and limited access to funding for startups (Nkwinika & Akinrinde, 2023). Stringent banking requirements often impede entrepreneurs' access to debt financing, while weak collaboration among financial institutions hinders the development of comprehensive funding

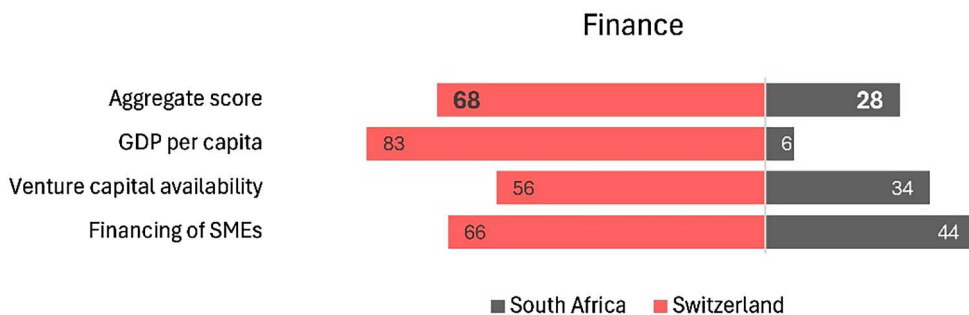


Figure 5. Financial landscape comparison (based on WEF, 2019).

solutions (Fatoki, 2014; Schmidt et al., 2017). As a result, many entrepreneurs rely on self-financing, often constrained by systemic poverty and inequality.

South Africa could partly address these challenges through government interventions, such as grants or guarantee schemes, to reduce the risk to banks and incentivize lending to (early-stage) entrepreneurs. However, limited fiscal resources and potential misuse of funds could hinder such initiatives. Establishing partnerships between banks, venture capitalists, and government agencies could create a more cohesive funding environment. Furthermore, reducing regulatory barriers to investment in startups and targeting financing solutions for necessity-driven entrepreneurs would strengthen South Africa's financial domain. Implementing anti-corruption measures would help ensure equitable access to financial resources, fostering broader entrepreneurial participation, but a lack of political will and accountability remain critical obstacles to success.

Human Capital

Switzerland's human capital scores 79, surpassing South Africa's 46 (Figure 6). Switzerland's high score may be attributable to its dual-education system, which integrates academic learning with practical, industry-relevant training (Oswald-Egg, 2021). This approach ensures students acquire essential skills, creating a workforce adept in high-tech and entrepreneurial sectors. World-class institutions such as ETH Zurich and EPFL Lausanne further enhance graduate readiness for modern economic demands (Eichler & Aebischer, 2012). A strong culture of lifelong learning fosters adaptability and innovation, allowing Swiss professionals to remain competitive amid technological advancements (Vujanovic & Lewis, 2017).

In contrast, South Africa grapples with systemic challenges in education and workforce development (Spaull, 2015). Resource inequities and inconsistent educational quality limit the capacity of graduates to meet the needs of a dynamic economy (Ndedi, 2013). While technical and vocational education and training (TVET) programs exist, they are often not aligned with industry demands and practical applications (Terblanche, 2017).

To bridge these gaps, South Africa could implement programs that foster collaboration between educational institutions and industries, enabling school leavers to acquire practical skills. These initiatives should emphasize entrepreneurial capabilities over long-term

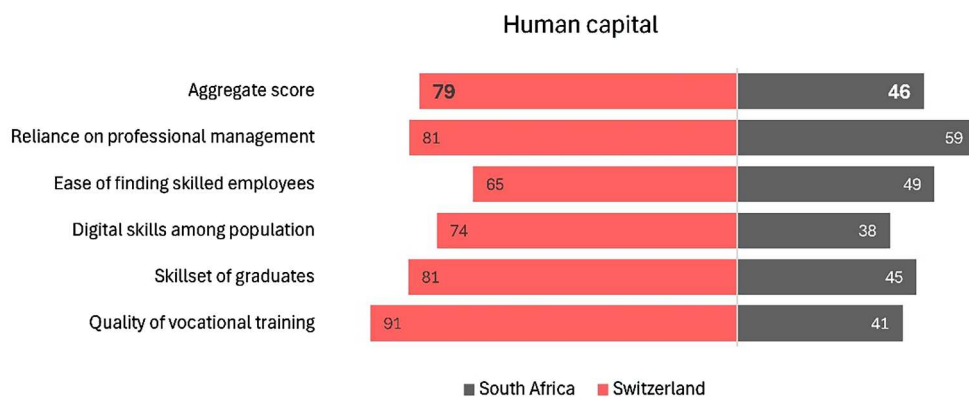


Figure 6. Human capital comparison (based on WEF, 2019).

employment preparation, benefiting necessity-driven entrepreneurs by equipping them with essential management skills for their businesses, though shifting entrenched mind-sets about traditional career pathways may require significant cultural change. Improving governance and ensuring the effective implementation of education policies are crucial for sustainable reform. By prioritizing industry-relevant skills development and leveraging public – private partnerships, South Africa can enhance its human capital and better support an innovation-driven economy, but achieving this will require overcoming entrenched structural and institutional barriers.

Policy

Switzerland scores 86 for its policy environment, outperforming South Africa's 56 (Figure 7). Switzerland's policy framework prioritizes innovation, research, and global competitiveness (Baldegger et al., 2023). Central to this framework are low corporate tax rates and R&D tax incentives, which foster a conducive environment for entrepreneurship (Baldegger et al., 2023). Additionally, robust intellectual property (IP) protections enhance entrepreneurial confidence by safeguarding innovations and enabling their commercialization (Huguenin-Elie, 2024).

Conversely, South Africa's policy framework, while acknowledging entrepreneurship's critical role in economic growth through policies such as the National Development Plan, suffers from significant implementation challenges (Chilenga, 2017). IP protections exist but are undermined by inconsistent enforcement (Chidede, 2022), while insufficient R&D funding and fragmented public – private partnerships stifle innovation in emerging sectors (Govender et al., 2022).

South Africa could recalibrate its policies to better reflect the country's entrepreneurial dynamics, which are characterized by a predominance of necessity-driven entrepreneurs and a limited number of high-growth, opportunity-driven entrepreneurs. Immediate priorities should include implementing programs that promote high-growth entrepreneurship while empowering necessity-driven entrepreneurs to achieve self-employment and subsequently transition beyond the necessity/opportunity divide. Tailored interventions, such as targeted training and support services, can enhance the entrepreneurial self-efficacy of necessity-driven entrepreneurs, facilitating their progression toward



Figure 7. Policy environment comparison (based on WEF, 2019).

opportunity-driven entrepreneurship. Long-term policies must increase R&D funding, particularly in technology-focused sectors, and strengthen IP enforcement mechanisms to incentivize innovation. Given South Africa's governance challenges as a young democracy, achieving these objectives will require overcoming systemic inefficiencies and fostering public – private partnerships, as well as a strong commitment to accountability and governance reform.

Culture

Switzerland scores 71 for entrepreneurial culture compared to South Africa's 50 (Figure 8). This high score reflects Switzerland's legacy of precision, quality, and technological progress (Kaasa & Baldegger, 2022). The education system fosters entrepreneurial thinking, laying a strong foundation for future innovators (Müller et al., 2020). This innovation-centric culture is evident in Switzerland's high patent activity, which underscores its commitment to cutting-edge solutions and global competitiveness (Niggli & Rutzer, 2023).

In contrast, South Africa's entrepreneurial culture is shaped by a history of systemic oppression that excluded the majority population from entrepreneurship, resulting in a lack of entrepreneurial skills. Persistent socioeconomic disparities and limited access to resources perpetuate these challenges (Urban, 2020). A shortage of entrepreneurship-focused education further hinders the development of entrepreneurial mindsets (Mahlaole & Malebana, 2021).

To cultivate a robust entrepreneurial culture, South Africa could integrate entrepreneurship into the core education curriculum, positioning it as a viable alternative to formal employment. Regular entrepreneurship competitions can stimulate creativity and innovation, with outstanding ideas receiving recognition and support. Facilitating interactions between necessity-driven and opportunity-driven entrepreneurs would enable cross-pollination, aiding the transition to opportunity-based entrepreneurship. Implementing a merit-based system to allocate resources based on proposal quality,

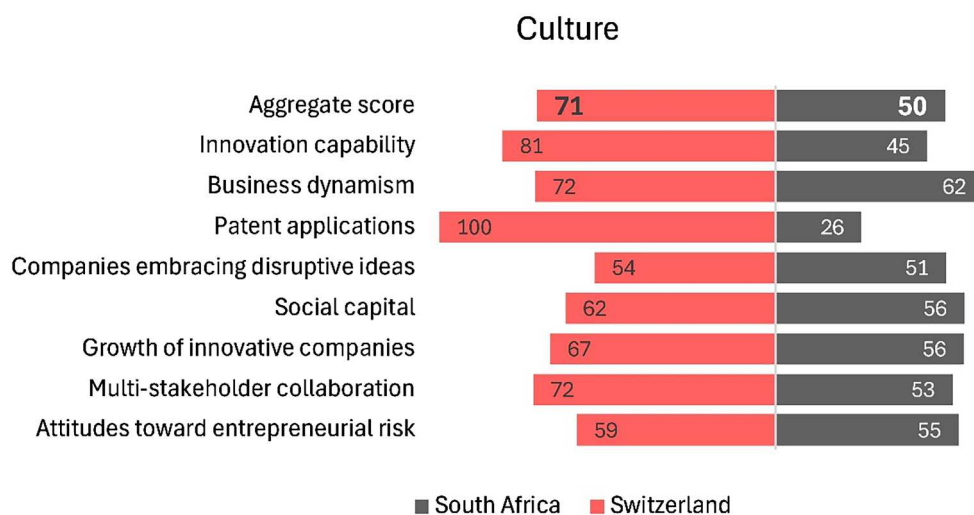


Figure 8. Cultural environment comparison (based on WEF, 2019).

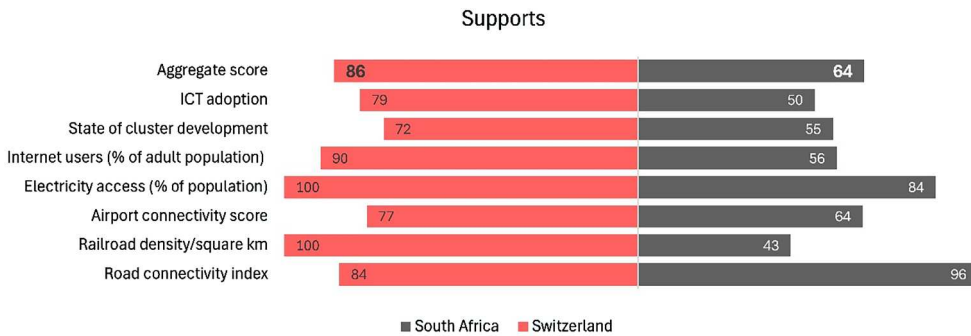


Figure 9. Supports comparison (based on WEF, 2019).

rather than political connections, is essential. Ensuring equitable access would also be critical for successful implementation.

Supports

Switzerland's entrepreneurial support system scores 86, significantly surpassing South Africa's score of 64 (Figure 9). This is based on factors such as an extensive road network, advanced infrastructure, high rail density, strong airport connectivity, full electrification, and high internet penetration, along with robust cluster development and ICT adoption rates. Switzerland's superior support system is bolstered by well-developed incubators and accelerators that offer mentorship, networking, and financial resources that are crucial for scaling startups (Dementyeva & DaSilva, 2020).

In contrast, South Africa faces considerable challenges, particularly in rural areas, where inconsistent access to electricity and the internet, combined with limited and ineffective incubators and accelerators, impedes entrepreneurial activities (Ndlovu, 2024). Despite being the most developed country in sub-Saharan Africa, South Africa underutilizes the potential of its infrastructure to foster entrepreneurship.

South Africa could prioritize investments in digital infrastructure, focusing on internet access and ICT adoption in underserved regions. Expanding the presence of incubators and accelerators and enhancing access to professional services, such as legal and financial advisory support, would strengthen its entrepreneurial ecosystem. A strategic shift from welfare-driven infrastructure projects, such as free basic housing, to high-return investments supporting entrepreneurial activity is necessary. This reorientation would require a governance framework that prioritizes economic growth through entrepreneurship, ensuring infrastructure development aligns with the needs of a thriving entrepreneurial population. Addressing inconsistent electricity and internet availability in rural areas and overcoming institutional fragmentation in the implementation of infrastructure projects will be critical to achieving meaningful progress.

Conclusion

Our analysis indicates that while Switzerland's entrepreneurial ecosystem is not without flaws, its overall performance surpasses that of South Africa by approximately 36%,

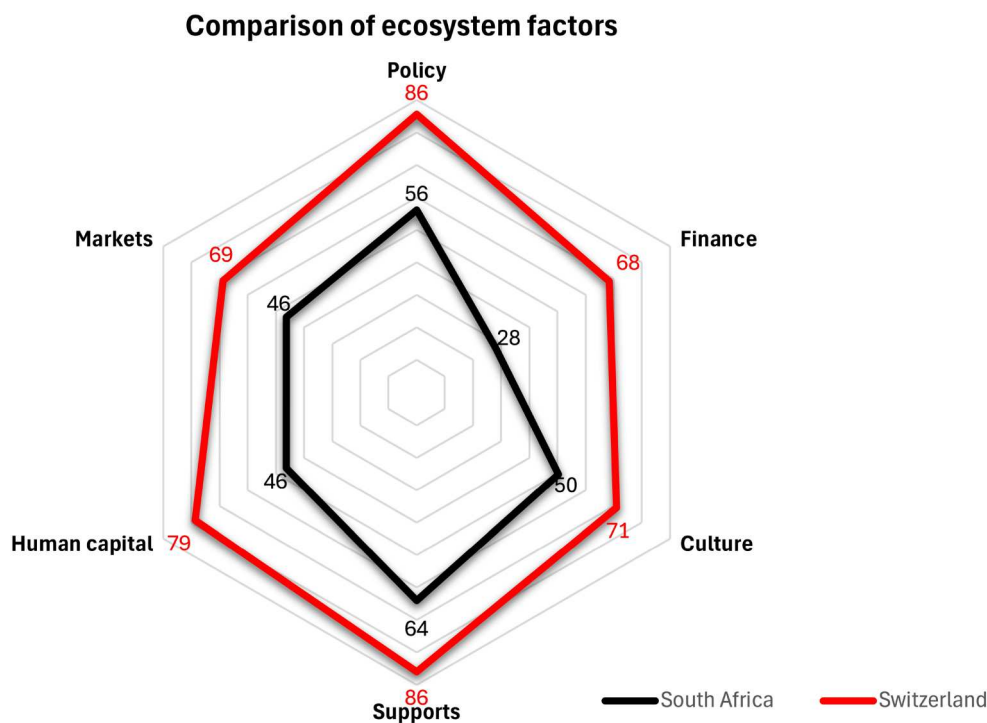


Figure 10. Visual comparison of ecosystems (based on WEF, 2019).

pointing to valuable opportunities for South Africa to develop its ecosystem, building on local needs and strengths (Figure 10). The findings highlight significant challenges and opportunities across all domains of South Africa's entrepreneurial ecosystem, underscoring the need for targeted and context-specific interventions to address these gaps effectively.

South Africa possesses foundational elements of an entrepreneurial ecosystem, eliminating the need to build one entirely from scratch. However, lessons from countries like Switzerland must be adapted to South Africa's unique context, which is characterized by high levels of inequality, necessity-driven entrepreneurship, cultural and educational barriers, and governance challenges. Governance reforms are essential for implementing inclusive policies that support both high-growth and necessity-driven entrepreneurs, thereby fostering a more effective and comprehensive entrepreneurial ecosystem.

To achieve inclusivity, South Africa could adopt a hybrid approach that addresses the needs of both necessity- and opportunity-driven entrepreneurs. This can be accomplished through improved access to capital, targeted skills development programs, and governance reforms emphasizing transparency and empowerment. By addressing systemic barriers and embracing context-sensitive strategies, South Africa can unlock its economic potential and contribute to sustainable regional and continental development.

Navigating Societal Development Challenges in Sub-Saharan Africa: Examining the Co-Evolution of Social Entrepreneurship and Institutions

By Juliet Nwachukwu and Gift Dembetembe

Introduction

Sub-Saharan Africa (SSA) faces persistent developmental challenges, including infrastructure deficits, economic fragility, unemployment, intergenerational poverty, inequality, disease outbreaks, and environmental degradation (Bacq & Lumpkin, 2021; Boon, 2016; Osei-Hwedie, 2014; Simbanegavi, 2019). Statistically, SSA accounts for 67% of the world's extremely poor despite the region accommodating only 16% of the global population (World Bank, 2024). In 2023, the youth rate not in employment, education, or training (NEET) in SSA was 21.9%, exceeding the global rate of 20.4% (ILO, 2024). Most importantly, in the health sector, only 50% of primary healthcare facilities in SSA have access to clean water and adequate sanitation, while a mere 30% have access to electricity (AfDB, 2022). While these challenges could in theory be solved by social enterprises, the absence of enabling institutions hinders such social enterprises, preventing them from achieving large-scale impact (Littlewood & Holt, 2018b).

Drawing from Scott (2013), we define institutions as normative, regulative, and cultural-cognitive structures that furnish social behavior with collective meaning and stability. Similarly, North (1990) defines institutions as "the rules of the game" in society, which provide incentives and constraints that structure economic, political, and social interactions. Developmental challenges in SSA stem from weak social protection systems that restrict access to essential services, as well as corruption, insecurity, and economic dependence on primary commodities (Cerami, 2001; Pindado et al., 2023).

Additionally, poor governance and political instability, marked by a lack of accountability and unequal resource distribution, hinder economic progress through mismanagement and inefficiency (Farazmand et al., 2022; Mlambo, 2023).

The failure of collaboration efforts by governments and international stakeholders as well as market failure has prompted social entrepreneurs to intervene in addressing critical societal needs (Johnson & Schaltegger, 2020; Santos, 2012). SSA has one of the fastest-growing social enterprise sectors, with an estimated 28–41 million jobs created by social enterprises in 2021 across the region (Smith, 2021). Nonetheless, as we shall elaborate later, despite the rapid growth of social enterprise activity, the institutional environment has constrained a faster and perhaps more sustainable development path.

Social entrepreneurship (SE) seeks sustainable solutions to neglected social, cultural, and environmental challenges while generating positive externalities (Santos, 2012). The approach integrates economic benefits with social and environmental outcomes, fostering innovation, sustainable production, and entrepreneurship-driven development (Haugh, 2007; Mthembu & Barnard, 2019). By aligning business activities with societal development, SE addresses issues traditionally managed by governments and nonprofits (Betts et al., 2018; Ramya et al., 2024). Consequently, social enterprises play a crucial role in driving socioeconomic progress in developing economies (McWade, 2012).

However, SE is not a universal solution to societal challenges, as its capacity for large-scale structural transformation remains limited (Nega & Schneider, 2014). Institutional barriers hinder its rapid growth, underscoring the need for institutional support and capacity-building initiatives (Siddiqi et al., 2018; Thompson et al., 2000). Some argue that SE may even undermine state-led development initiatives and democratic reforms (Urban, 2013). Nonetheless, given the persistent failure of such state-driven efforts to achieve structural transformation in SSA, revisiting the SE-institutions nexus is essential for fostering sustainable and large-scale progress (Eshun, 2018; Thorgren & Omoredé, 2018).

As evidenced by persistent developmental challenges, the impact of SE ventures on SSA's development remains limited (Calderón & Servén, 2010; Rivera-Santos et al., 2015). We seek to understand why this is the case. Comparing the institutional environment across SSA with regions where SE has influenced societal progress shows that organizations in developed economies benefit from robust institutions that provide stability for social enterprises to grow and attract investment (Scott, 2013). For instance, political stability and good governance in these regions enable social enterprises to thrive, unlike in developing countries where instability and governance challenges hinder progress (Alesina et al., 1996). Hence, we argue that a hostile institutional environment underlies the limited impact of SE, resulting in persistent developmental challenges in SSA. We focus on institutions because they shape societal functioning by providing stability, reducing uncertainty, and setting frameworks for interaction (North, 1990; Scott, 2013).

Extant literature shows that SE can change institutions, transforming the institutional environment for societal development. Institutional change occurs when an institution or governance structure is formed, relinquished, or replaced (Scott, 2013). To foster institutional change, social entrepreneurs need to act as institutional entrepreneurs. Institutional entrepreneurs are often privileged societal actors who leverage their power and position in organizational fields to transform institutions in their favor (Hardy & Maguire, 2008). However, while SE is growing in SSA, the institutional environment remains hostile (Rivera-Santos et al., 2015; Saebi et al., 2019). This situation is surprising because SE is recognized as instrumental in promoting growth and institutional change (Saebi et al., 2019).

We seek to further understand the linkage between SE and institutional environments in SSA. We surmise that the SSA institutional context provides unique normative, regulatory, and cognitive-cultural frameworks that limit the full impact of SE. We examine these institutional challenges and outline how SE can effectively foster institutional change and promote societal development in SSA (Ahmed & Nwankwo, 2013; Harrison, 2024).

Challenges for SE in SSA

A hostile institutional environment stifles SE and, consequently, hampers society-wide development. SSA is characterized by weak protection systems, corruption, reliance on primary commodities, and weak governance manifested through inconsistent policies and an absence of legal frameworks for SE (Rivera-Santos et al., 2015; Saebi et al., 2019). Weak protection systems deprive social entrepreneurs of a safety net, causing them to struggle to recover from economic shocks and limiting the sustainability of SE ventures (Rivera-Santos et al., 2015). Corruption discourages investment in SE by raising

bureaucratic hurdles, increasing operating costs, and creating uncertainty, while insecurity pushes social entrepreneurs to invest in security at the expense of business expansion (Littlewood & Holt, 2018a). Reliance on primary commodities limits funding opportunities for social entrepreneurs during periods of global market fluctuations (Rivera-Santos et al., 2015). Weak governance hinders formal recognition of and support for SE, while political instability impedes long-term planning and discourages investment in SE (Rivera-Santos et al., 2015).

Strategies for Fostering Institutional Change Through SE

Despite institutional challenges, some social entrepreneurs in SSA have developed several strategies that have enabled them to thrive (Littlewood & Holt, 2018a). For example, mobile banking has been successful despite challenges such as regulatory and financial barriers (Amankwah-Amoah, 2019). Following specific strategies that we detail in the following paragraphs, the success of mobile banking subsequently transformed the banking institution, gaining support from regulators and other social actors. A second success story is Connect Lab Africa, which has supported over 2000 individuals in Nigeria through educational funding and startup investment, fostering entrepreneurship among women and youth. Lastly, the Bertha Centre in South Africa awarded over R8 million in scholarships to students across Africa while integrating social innovation into the University of Cape Town Business School's curriculum. The progress of these projects also influenced entrepreneurial constraints around them demonstrating the possibility of promoting SE while transforming institutions. This process can be achieved through several mechanisms.

The first mechanism: As argued by Alvord et al. (2004), building local capacity enhances self-reliance by equipping communities with skills and resources necessary for problem-solving and sustainable development. Capacity building initiatives in turn contribute to broader social transformation by fostering resilience and inclusivity among local actors who then bring about long-term change.

The second mechanism: Alvord et al. (2004) further asserts that providing essential resources also contributes to broader social transformation by fostering resilience, inclusivity, and long-term change. This approach involves restructuring technical knowledge and innovations into accessible formats to meet the needs of underserved populations, with an emphasis on scalability and adaptability. Consequently, these initiatives empower marginalized communities enabling them to positively influence institutions around them.

The third mechanism: The same author highlights the building of movements as a contributor to social transformation and institutional change (Alvord et al., 2004). This mechanism comprises mobilizing grassroots alliances to challenge oppressive systems and advocating for systemic change through collective action and policy influence. Consequently, movements drive change by addressing systemic social issues.

The fourth mechanism: Social entrepreneurs can act as institutional entrepreneurs who bridge institutional voids through internal and external repertoires of practices, experiences, networks, assets, customary practices, religious beliefs, etc. (Mair & Marti, 2009). Institutional voids arise due to the absence of supportive institutions or the presence of weak institutional structures. This can be seen, for example, in a lack of formal

regulations, poor infrastructure, and limited access to financial and market information (Mair & Marti, 2009).

The fifth mechanism: Social entrepreneurs can act as intermediaries who fill institutional voids. Unlike institutional entrepreneurs in the fourth mechanism, intermediaries are actors who fill in institutional voids in rural markets by facilitating transactions and reducing inefficiencies (Mair et al., 2012). Intermediaries play a crucial role in connecting rural producers with buyers, providing financial services, ensuring product quality, and fostering trust between market participants. By addressing these institutional deficiencies, intermediaries enable greater economic participation for marginalized communities and contribute to the development of inclusive markets.

While intermediaries help mitigate institutional voids, their effectiveness is constrained by factors such as resource limitations, potential conflicts of interest, and regulatory challenges. Mair et al. (2012) suggest that policymakers should recognize and support intermediaries through targeted interventions, such as financial incentives, regulatory frameworks, and capacity-building programs, to enhance inclusive market development. If successfully implemented, this approach to promoting the role of intermediaries can advance SE while simultaneously transforming institutions. Nevertheless, the reciprocal role of policymakers in supporting SE activities is not always fulfilled.

The sixth mechanism: Busch and Barkema (2022) highlight how social enterprises in SSA can navigate network formation and scaling challenges. The authors point first to embeddedness, noting that social enterprises must balance being sufficiently embedded in their local contexts while expanding beyond their initial networks and connecting with diverse stakeholders, including funders, suppliers, and government actors. Social entrepreneurs can subsequently scale up their projects by building beneficiaries' capacity while aligning with key political and institutional actors. Next, they can develop self-sufficiency and sustainable income streams through aligned capacity-building. Eventually, they can align incentives with political actors to ensure effective navigation of regulatory and policy landscapes. In response, governments and incubators should tailor support programs based on individual SE venture growth phases rather than applying a "one-size-fits-all" approach (Busch & Barkema, 2022). In conjunction with SE efforts, SSA governments need to become developmental states with a strong planning approach (Busch & Barkema, 2022).

Considering the above strategies, we assert that SE can foster institutional change while simultaneously addressing SSA's societal development challenges. The relationship between SE and institutional change is bidirectional, as institutional conditions – such as corruption, social networks, property rights, and government structures – shape both emerging and established SE initiatives (Audretsch et al., 2022; Li et al., 2021). Conversely, SE can drive institutional transformation by leveraging mechanisms such as bricolage to reconfigure existing resources and legitimize change within restrictive environments (Desa, 2012).

Institutional configurations – including formal regulations, informal cognitive norms, and cultural expectations – jointly influence SE (Stephan et al., 2015). Social enterprises can achieve institutional sustainability by embedding themselves within political, legitimacy, and discourse frameworks to challenge systemic barriers (Chatzichristos & Nagoopoulos, 2020). Furthermore, national ethical institutions, such as public-sector integrity and societal values, impact the formation of social enterprises, while decentralized

governance structures and civic approval facilitate their institutionalization (Chatzichristos & Nagopoulos, 2021; Muralidharan & Pathak, 2017).

Despite lacking significant power or positional leverage to transform hostile institutional environments, social entrepreneurs in SSA possess considerable potential (Hardy & Maguire, 2008). They can enhance their influence through social movements, which challenge institutional and cultural norms to drive systemic change (Snow, 2004). These movements may take the form of identity-based resistance to dominant cultural codes or arise from marginalized actors initiating change from the periphery of organizational fields (Greenwood & Suddaby, 2006).

Discussion

The SSA context offers a unique institutional environment that has made it impractical for social entrepreneurs to propagate institutional change and achieve societal development. While SE is relevant for addressing socioeconomic and environmental challenges (Maas et al., 2014), in SSA the approach is further shaped by local norms, values, and beliefs, which challenge predominant Western assumptions about the phenomenon (Farhoud et al., 2023). Effective development in SSA requires understanding and respecting local cultural norms and values, so that solutions can be built from the inside out (Malunga, 2014). One unique feature of this context remains unaddressed in our essay – the unresponsiveness of governments to the agency of social entrepreneurs in instigating institutional change. SSA governments remain reluctant to support SE by responding to needs and providing a conducive environment for the establishment and scaling of SE initiatives.

Examining the uniqueness of this environment and deducing possible mechanisms for fostering institutional change through SE in SSA is a promising area for further research. We call upon scholars of institutional theory, development, and SE to research the role of structural issues, such as colonial legacies, tribalism, weak governance, corruption, dependence on primary resources, and political instability, in hindering institutional change through SE. We hope our essay will inspire further research on the SSA context to elucidate this phenomenon.

Affordable Innovation and Socioeconomic Development in Africa: A Case Study of M-KOPA in Nairobi, Kenya

By Chinedu Miracle Nevo and Naledi Gallant

Introduction

Innovation is frequently heralded as the solution to Africa's developmental challenges. In his 2018 address, Akinwunmi Adesina, President of the African Development Bank, emphasized technology's transformative potential to "leapfrog"¹ Africa's development. However, while innovation often fosters economic progress, affordability remains a significant challenge for Africa's predominantly low-income population (Fu, 2020). This essay contends that innovation in Africa must be context-specific, addressing both affordability and accessibility to drive inclusive socioeconomic growth. Using the case of M-KOPA – a Kenyan

enterprise offering solar energy and financial solutions – it examines affordable innovation through the lens of affordable innovation literature and base-of-the-pyramid perspectives. M-KOPA's success highlights how affordable innovation can overcome institutional voids and generate sustainable impact. This analysis provides actionable lessons for African entrepreneurs and innovation researchers while underscoring the applicability of M-KOPA's strategies to other critical sectors such as healthcare, education, and agriculture.

Our rationale for this essay is straightforward. Firstly, this analysis is grounded in the assumption that a substantial portion of Africa's population belongs to the low-income group (Lange et al., 2023). Consequently, many innovative products and services in Africa are unaffordable for most Africans (Fu, 2020; Muza & Debnath, 2021), leading to such products and services being exported to advanced economies instead. David-West et al. (2019) corroborate this view, adding that resource constraints in Africa have made the continent suitable for frugal innovations. Secondly, a substantial gap remains between Africa's innovation and development levels compared to those of advanced economies (Adebowale et al., 2014; Gupta & Kanungo, 2022). This indicates that African innovators may need to focus more on prioritizing African markets. The push for entrepreneurs to focus on African markets for their innovations, however, brings us back to the issue of affordability. It can be argued that entrepreneurs seeking financial sustainability would logically target markets with better economic prospects. This raises the crucial question: How can innovation be made affordable in Africa?

Theoretical Framework: Affordable Disruptive Innovation and the Base of the Pyramid

Affordable innovation refers to the development of cost-effective solutions tailored for resource-constrained markets, which are primarily aimed at "Frugal innovation," as articulated by Radjou and Prabhu (2015). Frugal Innovation thrives on resource constraints by "doing more with less" – addressing economic limitations while solving social challenges. It is the umbrella term for various types of resource-constrained innovations, including affordable disruptive innovations (Dzimba & van der Poll, 2022).

Similarly, the base-of-the-pyramid (BoP) view highlights the untapped potential of low-income consumers, suggesting that enterprises can generate value by innovating in this segment (Prahalad, 2009). Affordable disruptive innovations, which cater to customers with low ability or willingness to pay (often due to economic resource constraints), address society's most pressing problems while also generating economic value for their creators (Benzidia et al., 2021; Mookerjee & Rao, 2021; Schaarschmidt et al., 2022). Resource constraints and social problems are critical elements addressed by affordability, which is central to the disruptive innovation theory (Bower & Christensen, 1995; Roblek et al., 2021). Thus, a crucial attribute of affordable disruptive innovation should be its ability to make previously expensive or inaccessible products or services available to a larger, often underserved market by focusing on simplicity, accessibility, and cost-efficiency (Gupta & Kanungo, 2022). These innovations can transform industries and create new opportunities while solving social problems by mitigating institutional voids caused by disparities in government presence, inadequate infrastructure, lack of access to

financial services, and illiteracy within communities (Dzimba & van der Poll, 2022; Ramani et al., 2023).

Dzimba and van der Poll (2022) argue that innovation can be affordable and disruptive in an existing market when it offers a unique value proposition by introducing a new performance aspect previously unaddressed by preexisting products and services. In Africa, due to institutional challenges such as insufficient financial lending facilities, entrepreneurs can gain a competitive edge by offering products and services that allow for installment payments over time (Purohit et al., 2021). A notable example of this is the growing popularity of “pay-as-you-go” solar solutions in several countries (Mutongwa & Abeka, 2020). Hence, by targeting low-end and resource-constrained markets, affordable disruptive innovation becomes an ideal strategy for businesses operating in BoP environments (Decker & Obeng Dankwah, 2023). BoP theory, introduced by Prahalad and Hart in 2002, highlights the economic potential of low-income populations (Prahalad & Hart, 2002). It suggests that businesses can tap into profitable market opportunities by serving low-income communities, while also generating social value. Given these attributes, M-KOPA can be described as an affordable disruptive innovation.

Though affordable innovation may not necessarily need to be frugal, as the former focuses on the cost implication for the consumers while the latter focuses on the input implication for the producer (as defined above), frugal innovation and BoP theories are still particularly relevant in Africa, where infrastructural deficits and institutional voids exacerbate economic disparities. Innovations in such contexts must offer unique value propositions that compete against “nonconsumption,” i.e. scenarios where consumers lack access to traditional products or services. Viewed through the lens of affordable innovation, disruptive innovation, and BoP theory, it could be inferred that innovations can be made affordable and successful by focusing on simplicity, cost reduction, and scalability; this could also make it possible to serve underserved markets (Dzimba & van der Poll, 2022).

Affordable innovation emphasizes the importance of designing cost-effective solutions that meet the essential needs of low-income consumers without unnecessary complexity. Disruptive innovation highlights how new market entrants can challenge established players by offering lower-cost alternatives that are initially aimed at niche or underserved segments but eventually scale to disrupt mainstream markets. BoP theory underscores the potential of developing business models tailored to the unique challenges of low-income populations, such as flexible financing, community engagement, and leveraging local resources (Ramani et al., 2023). These concepts form the backbone of M-KOPA’s approach to affordable solar energy solutions, demonstrating the transformative potential of inclusive business models.

M-Kopa: A Case of Affordable Disruptive Innovation

Over 400 million Africans lack access to electricity, and a majority survive on less than \$2.50 a day (World Bank, 2018). For these consumers, purchasing solar energy systems upfront is unattainable. Furthermore, formal financial services remain inaccessible for nearly 60% of the population (David-West et al., 2019; Muza & Debnath, 2021; N’Guessan & Hartarska, 2021). M-KOPA emerged to address these dual challenges of energy poverty and financial exclusion through an innovative “pay-as-you-go” (PAYG) model. Founded in

2010, M-KOPA combines asset financing with GSM-enabled micropayments to provide affordable solar energy kits. Customers make a small initial deposit, followed by daily installments of approximately 50 U.S. cents for one year. Once the payments are completed, ownership of the system is transferred to the customer. By integrating mobile money systems into its operations, M-KOPA leverages existing infrastructure to enhance affordability and accessibility.

In the words of Nick Hughes, Chad Larson, and Jesse Moore, the founders of M-KOPA:

There are four steps involved in our innovation: (a) Make a deposit, and you get the latest smartphone; (b) You can make payments regularly and easily; (c) You can own your product; and (d) You can then upgrade your services. M-KOPA is headquartered in Kenya and is available in three other countries: Nigeria, Uganda, and Ghana. We began our pilot in October 2012 with a product bundle that included a solar panel, three lamps, and a kit for charging phones. After eight years, M-KOPA extended this micro-credit system beyond energy products, defining itself as an asset financing company rather than just a solar energy company. M-KOPA makes financing more straightforward and accessible, so every M-KOPA device has a SIM card. To get any of these, a customer is required to make a down payment and then make subsequent weekly payments for a duration of between nine and twelve months. (AfriRadar, 2024)

M-KOPA's down payment approach incentivizes individuals with limited means to save for asset acquisitions. Moreover, these repayments establish a credit history for poor consumers, potentially granting them access to additional financial services. Atinda (2022) argues that M-KOPA's success stems from recognizing a crucial issue: the digital divide, which is heightened by the high cost of smartphones and internet access in Africa. The startup has remained committed to bridging this divide by making these technologies accessible and affordable. Additionally, M-KOPA transformed the concept of lending to cater to the specific needs of underserved communities, ensuring that its offerings align with the needs of the target low-income demographic. This approach has resulted in customer-friendly and adaptable products and services and bolstered the company's expansion.

Overcoming Barriers to Affordable Innovation

M-KOPA, like many other businesses, faced significant barriers to penetrating the Kenyan market and reaching underserved communities. Benzidia et al. (2021) report that the most significant barrier involved building consumer awareness and trust, particularly in rural and underserved communities. This was crucial for M-KOPA's success. Lack of trust could lead to an immediate rejection of affordable innovation or resistance to its adoption, given that trust is a key success factor for implementing a project (or innovation) in many communities. The three stages of trust-building are deterrence-based trust, knowledge-based trust, and identification-based trust (Lander et al., 2004). As regards the lack of awareness of affordable innovation, there is a possibility that local community-dwellers are not aware because they are also innovating within their communities without the support of mainstream entrepreneurs or development agencies in the country (Matthews, 2017). In this scenario, affordable innovation would entail discovering and supporting indigenous innovation to make it more refined and cheaper. M-KOPA implemented extensive marketing and community outreach efforts to overcome this barrier through its numerous agents. These efforts included word-of-mouth advertising,

door-to-door sales, demonstrations and expositions at innovation events, and partnerships with local organizations and community leaders (Shahan, 2016).

Traditional lending mechanisms in Kenya did not cater to low-income consumers, as most loan products had repayment periods of less than two months (M-KOPA Labs, 2017). Recognizing this gap, M-KOPA extended repayment periods to 9–12 months, aligning payments with consumers' income cycles. This innovation in financing enabled affordability while fostering financial inclusion by creating credit histories for previously "unbanked" individuals. Similarly, within the African nations where M-KOPA operates, especially in rural regions, it faces significant barriers in the form of inadequate infrastructure, including road, electricity, and telecommunication networks. M-KOPA overcame these challenges by deploying decentralized distribution systems and GSM-enabled devices (Shahan, 2016). Mobile money platforms facilitated seamless payments, circumventing the lack of formal banking infrastructure (Iwayemi, 2021).

Other challenges M-KOPA faces include regulatory hurdles and limited access to finance. It has successfully navigated these challenges by working closely with regulatory authorities while leveraging multiple funding sources, including venture capital funding, impact investment, and debt-equity funding (Khairnar, 2023).

Conclusion and Key Lessons for African Entrepreneurs and Innovators

African entrepreneurs can draw valuable lessons from M-KOPA's innovative approach to addressing societal challenges while creating economic value. The case study of M-KOPA is particularly compelling because it demonstrates how affordable innovation can bridge institutional voids within underserved communities, such as lack of access to clean energy and financial services. The path to affordable innovation in Africa involves leveraging technology, fostering trust and awareness, investing in infrastructure, and fostering collaboration with regulatory authorities and financial institutions. These efforts are crucial for developing sustainable solutions that cater to the needs of low-income populations and drive socioeconomic development. Affordable innovation could address society's grand challenges, including climate change, natural resource depletion, an overstrained health system, and insufficient/low-quality education because, as Schaarschmidt et al. (2022) put it, it creates solutions that are affordable to the majority of people.

The key message to African entrepreneurs and innovators is that understanding the economic realities of low-income consumers is critical. Flexible financing options, such as M-KOPA's PAYG model, can enhance affordability while enhancing financial sustainability. Similarly, African innovators must proactively engage with policymakers to address regulatory challenges and align their business models with local realities. Awareness and trust are pivotal for innovation adoption, particularly in rural contexts. Community engagement and partnerships with local organizations can bridge this gap. Mobile technology and digital payment systems present significant opportunities to reach underserved communities. By integrating GSM connectivity, M-KOPA successfully overcame infrastructural barriers. M-KOPA's model demonstrates that affordable innovation can be both scalable and profitable. Entrepreneurs must design solutions that address immediate needs while creating long-term value.

Lastly, some research areas in the context of affordable disruptive innovation in Africa require further exploration to better understand how these innovations can drive

sustainable economic development and social impact. Key research areas may include the scalability of affordable disruptive innovations, consumer adoption and behavior, and the leveraging of cross-sectoral synergies for effective innovation. Future research addressing these gaps can provide a more comprehensive understanding of how affordable disruptive innovation can drive sustainable development and reduce inequality in Africa.

Strengthening Entrepreneurial Competencies: The Role of Self-Regulated Entrepreneurial Learning in Addressing Youth Unemployment

By Noah Bellwald

Introduction

Entrepreneurial competence (EC) is a key driver of entrepreneurial success and economic development (Bird, 2019; Man et al., 2002). It encompasses cognitive, behavioral, and social skills that enable individuals to identify opportunities, make informed decisions, and execute entrepreneurial activities effectively. Prior research has made substantial progress in conceptualizing EC and identifying its components, such as opportunity competence, strategic competence, and relational competence (Mitchelmore & Rowley, 2010; Rasmussen et al., 2011). However, significant challenges remain in understanding how EC develops.

While scholars have proposed various determinants of EC – including formal education, experiential learning, mentoring, and training programs (Fayolle & Gailly, 2015; Lans et al., 2011) – the knowledge base is fragmented. Studies often treat EC as an outcome of external inputs, such as training or education, without sufficiently accounting for internal, self-regulated learning processes. Moreover, little is known about the mechanisms through which individuals actively build and refine their entrepreneurial competencies over time, particularly in dynamic and resource-constrained contexts such as those found in Africa (Bruton et al., 2008). This lack of clarity hampers the development of effective, evidence-based interventions to foster EC.

Against this backdrop, the present study introduces self-regulated entrepreneurial learning (SREL) as a promising meta-learning approach for enhancing EC development. SREL refers to self-generated goal-setting, monitoring, adaptation, and reflection processes that individuals use to optimize their entrepreneurial learning (Winkler et al., 2023). Prior work suggests that SREL enhances innovation (Bellwald, 2024a) and improves entrepreneurs' ability to navigate uncertainty (Bellwald, 2024b), yet its specific role in shaping EC has not been systematically explored. Importantly, simply examining the direct effect of SREL on EC is insufficient, as it leaves the critical question unanswered: Through what mechanisms does SREL translate into competence development?

This paper argues that two key mechanisms mediate the SREL – EC relationship: metacognitive regulation and self-reflection. Metacognitive regulation enables entrepreneurs to plan, monitor, and adapt their learning strategies in alignment with environmental demands (Bastian & Zucchella, 2022; Schunk, 2008). Self-reflection makes it possible to

critically evaluate past actions, learn from successes and failures, and refine future approaches (Hägg, 2021). These mechanisms provide alternative and complementary pathways through which SREL enhances EC, moving beyond a simplistic, linear relationship.

This study aims to develop a conceptual model explaining how SREL fosters EC through these mechanisms. Doing so bridges the gap between entrepreneurial learning and competence development, offering a structured framework for research and practice. The study makes three key contributions. First, it advances theoretical understanding by identifying and elaborating the mediating role of metacognitive regulation and self-reflection. Second, it provides a conceptual framework integrating these mechanisms into the SREL – EC relationship. Third, it delivers actionable insights for entrepreneurship education, particularly in African contexts where innovative, context-sensitive solutions are urgently needed to address youth unemployment (African Development Bank, 2023; World Bank, 2023).

Theoretical Background

EC encompasses cognitive, behavioral, and social skills that enable individuals to identify opportunities, make informed decisions, and execute entrepreneurial activities effectively (Man et al., 2002). It is a multidimensional construct essential for business success (Mitchellmore & Rowley, 2010). In Africa, the development of EC is further challenged by limited resources, underdeveloped support networks, and historical educational disparities (Bruton et al., 2008). These contextual factors require tailored approaches that account for the specific socioeconomic realities of the region. Opportunity competence refers to identifying and evaluating business opportunities (Shane & Venkataraman, 2000). Strategic competence involves formulating and implementing business strategies (Man et al., 2002). Relationship competence consists in building and maintaining networks (Rasmussen et al., 2011). Conceptual competence includes problem-solving, critical thinking, and decision-making (Bird, 2019). Organizing competence covers the management of resources, processes, and operations (Mitchellmore & Rowley, 2010). Finally, commitment competence reflects persistence, motivation, and resilience in entrepreneurial ventures (Man et al., 2002).

EC is a key factor in entrepreneurial success (Bird, 2019). Entrepreneurs with higher EC levels take more risks, innovate more, and build sustainable businesses (Mitchellmore & Rowley, 2010; Naudé, 2011). Various initiatives, such as entrepreneurship education and training, aim to develop EC (Hammoda, 2024). However, EC research remains fragmented, particularly in Africa, where many models exist but lack a cohesive framework (Brixiová et al., 2015; Fayolle & Gailly, 2015).

SREL is defined as “self-generated thoughts, feelings, and actions that are proactively planned and cyclically adapted to achieve personal entrepreneurial goals” (Winkler et al., 2023, p. 2072). At its core, SREL is about continuously improving one’s learning process through self-regulation. Entrepreneurs must constantly refine knowledge in changing markets, making SREL crucial for competence development (Fust et al., 2018). In Africa, where formal education often falls short, SREL offers an adaptable learning framework that fosters self-initiative (Eniola et al., 2022). SREL can be conceptualized as a process consisting of three interdependent phases: forethought, performance, and self-reflection (Bellwald et al., 2023). In the forethought phase, entrepreneurs set learning goals, plan

strategies, and anticipate challenges (Zimmerman, 2000). The performance phase involves implementing strategies, monitoring progress, and adapting to emerging obstacles (Schunk & Zimmerman, 1998). Finally, the self-reflection phase enables entrepreneurs to critically evaluate learning outcomes, adjust strategies, and refine decision-making processes for future challenges (Bellwald et al., 2023). Each phase integrates cognitive, metacognitive, and motivational elements, enhancing learning effectiveness. Empirical studies suggest SREL fosters innovation, resilience, and adaptability (Bellwald, 2024a, 2024b). Entrepreneurs who regulate their learning are better at identifying opportunities, making strategic decisions, and sustaining growth.

SREL plays a pivotal role in the development of EC. EC does not emerge naturally but requires active learning processes (Kolb, 1984; Minniti & Bygrave, 2001). Entrepreneurs acquire and refine their competencies through experience, self-observation, imitation, and feedback (Bandura, 1977). However, traditional training programs often fail to account for the dynamic and iterative nature of entrepreneurial learning (Neck & Corbett, 2018). SREL offers a structured and systematic approach to fostering EC by enabling individuals to actively regulate and optimize their learning processes (Zimmerman, 2002). Entrepreneurs engaged in SREL can set clear learning goals, monitor their progress, and adapt their strategies to new challenges (Winkler et al., 2023). This iterative learning process enhances knowledge acquisition efficiency, deepens skill internalization, and promotes long-term competence development. These benefits are especially significant in Africa, where entrepreneurs frequently operate in environments with limited formal support (Glaub et al., 2014). SREL can empower them to navigate uncertainties and leverage local opportunities effectively.

Empirical research supports the link between self-regulated learning (SRL) and competence development. Studies in education and management demonstrate that SRL significantly improves skill acquisition and performance outcomes (Zimmerman, 2008). In the entrepreneurial domain, Bellwald (2024a) found that a structured SREL intervention led to a significant increase in innovative work behavior among entrepreneurs. Participants in the treatment group exhibited faster learning cycles, greater adaptability, and a stronger ability to translate knowledge into action than the control group. Despite these initial insights, the direct relationship between SREL and EC remains largely unexamined. To date, no systematic research has investigated the precise mechanisms through which SREL fosters the development of EC. This critical research gap calls for a comprehensive theoretical framework delineating the pathways linking SREL to EC enhancement. The following section addresses this gap by identifying key mediating mechanisms and developing a conceptual model to explain how SREL contributes to EC development.

Theoretical Framework and Propositions

Existing models for developing EC primarily focus on general entrepreneurship education or external training programs (Neck & Corbett, 2018). However, they rarely consider the role of individual learning regulation. Without targeted learning strategies, the development of EC remains inconsistent and inefficient (Pittaway & Cope, 2007). While SREL holds significant potential to address this gap, the relationship between SREL and EC is often treated as a direct, linear effect. Yet this oversimplifies the complex learning processes

involved and obscures the underlying pathways through which SREL fosters EC development.

To fully understand how SREL enhances EC, it is essential to identify the mechanisms that mediate this relationship. This study proposes two central mechanisms – metacognitive regulation and self-reflection – that are alternative but complementary pathways linking SREL to EC. Importantly, these mechanisms do not merely reinforce the direct effect but shape and explain it, each contributing distinctively to competence development.

The first mechanism, metacognitive regulation, refers to the adaptive steering of learning processes in real time. It enhances reflective thinking, adaptive learning, and self-directed knowledge acquisition (Mitchell et al., 2000). Entrepreneurs with strong metacognitive skills can set appropriate goals (Cardon & Patel, 2015), monitor their progress (Flavell, 1979), and refine strategies in response to feedback and environmental changes (Hisrich et al., 2007). This pathway emphasizes real-time adaptability – enabling entrepreneurs to make immediate adjustments that improve decision-making and sustain growth (Haynie et al., 2009; Shepherd & Patzelt, 2018).

The second mechanism, self-reflection, operates after action. It enables entrepreneurs to analyze past decisions, extract lessons learned, and apply these insights to future endeavors (DeTienne & Chandler, 2004). Reflective entrepreneurs reduce failure rates, make more informed decisions, and develop innovative solutions over time (Cope, 2011). Within the SREL framework, self-reflection involves systematically assessing past learning strategies (Ellis et al., 2014), recognizing strengths and weaknesses (Rae, 2000), and incorporating improvements into future actions (Kolb, 1984). This pathway focuses on long-term learning optimization and continuous competence enhancement across learning cycles.

Together, metacognitive regulation and self-reflection explain how SREL translates into EC, providing a nuanced understanding of entrepreneurial learning. Furthermore, under certain environmental conditions, such as high uncertainty or rapid change, these mechanisms may mediate and moderate the SREL – EC relationship – amplifying or dampening the effect depending on the context. For example, in dynamic markets, metacognitive regulation may be stronger, while reflective learning may be more critical in more stable environments.

This study proposes a conceptual model (Figure 11) that illustrates the direct and indirect pathways linking SREL to EC. The model explains the cognitive and reflective processes underlying competence development by integrating these two mechanisms. This contribution advances the entrepreneurial learning literature by moving beyond linear models and providing a framework that accounts for the dynamic and multifaceted nature of entrepreneurial learning.

Contributions

This study makes three key contributions. First, it advances theoretical understanding by explaining how SREL fosters EC through metacognitive regulation and self-reflection. While previous research has acknowledged the relevance of self-regulated learning processes (Bellwald, 2024a), it has largely overlooked the distinct cognitive and reflective mechanisms that mediate this relationship. Moving beyond simple linear models, this

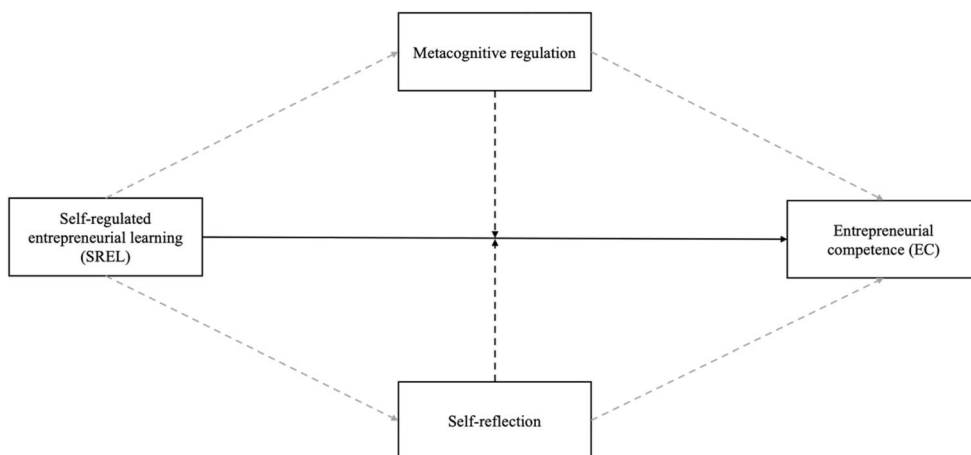


Figure 11. Self-regulated entrepreneurial learning and competence development model (SREL – EC model) © 2025 by Noah Bellwald is licensed under CC BY 4.0 <https://creativecommons.org/licenses/by/4.0/>.

study offers a differentiated view of entrepreneurial learning processes that deepens and extends existing theory.

Second, the study introduces a conceptual framework that integrates these mediating mechanisms, providing a novel perspective on the dynamics of competence development, particularly in African entrepreneurial ecosystems. This contribution is especially important given that African entrepreneurs frequently operate under high uncertainty and face limited access to formal education and mentoring (Eniola et al., 2022; Naudé, 2011). The framework thus offers a context-sensitive theoretical contribution that addresses the realities of resource-constrained and volatile markets (Neck & Corbett, 2018; Shepherd & Patzelt, 2018).

Third, this study delivers actionable insights for entrepreneurship education and training. Identifying metacognitive regulation and self-reflection as core mechanisms, it points to specific areas where educational programs can intervene to enhance learning effectiveness. This is particularly relevant in African countries, where traditional training approaches often fail to align with the dynamic and iterative nature of entrepreneurial learning (Bruton et al., 2008). Integrating SREL-based strategies into entrepreneurship education can equip entrepreneurs with the tools to build sustainable businesses and effectively address the pressing challenge of youth unemployment (World Bank, 2023).

This study fills a critical research gap by presenting a structured, theory-driven model that explains the SREL – EC relationship, strengthens the conceptual foundations of entrepreneurial learning, and offers practical guidance for fostering EC in African contexts.

Future Research

Future research should empirically test the proposed model, examining metacognitive regulation and self-reflection as mediating and moderating mechanisms. In particular, studies should investigate under what conditions these mechanisms exert stronger or weaker effects, helping to unpack the dynamic nature of the SREL – EC relationship. Research

should also explore how SREL fosters EC across diverse African contexts. Cross-regional comparisons could assess the influence of factors such as market maturity, educational systems, and cultural norms. Given the heterogeneity of entrepreneurial environments in Africa, such studies are crucial for identifying context-specific drivers and barriers.

Moreover, longitudinal research is needed to track SREL's long-term impact on EC development, capturing how learning processes unfold and evolve over time. Finally, intervention-based research, such as randomized controlled trials, could rigorously evaluate the effectiveness of SREL-driven training programs in improving entrepreneurial outcomes. Addressing these gaps will advance theoretical understanding and optimize the practical application of SREL in supporting entrepreneurial success.

CONCLUSION

By Susan Müller, Nathaniel Boso, Pascal Dey, Nadine Gurtner, Sebastian Gurtner

This multi-voice article is intended as a call to action and a joint collaborative platform for new African context-specific insights on entrepreneurship and innovation for sustainable development. The contributions in this multi-voice article illustrate how promising theoretical approaches in the fields of innovation and entrepreneurship, if properly contextualized, can become instrumental in advancing knowledge creation and theorizing while promoting sustainable development in Africa. *Macro-level* theoretical foundations such as transformative social innovation or the entrepreneurial ecosystem framework, *meso-level* concepts such as social entrepreneurship and affordable innovation, and *micro-level* theories such as self-regulated entrepreneurial learning offer the potential for impactful research. The essays thus show how research on innovation and entrepreneurship holds promise for addressing sustainability challenges such as inequality, limited access to finance and education, and youth unemployment, and for contributing to sustainable development in areas such as agriculture, energy, and healthcare. This research brings to the surface the currently untapped potential for innovation and entrepreneurship research in Africa and shows that research rooted in context is necessary to address the challenges of sustainability.

At the same time, the authors are united in the conviction that it would be wrong to simply transfer Western theories to the African context. They all provide concrete recommendations on how such theoretical approaches and concepts can be used, adapted, or redesigned for that context. Contributions from Africa have long been "written out" of management theory but need to be "written back in" to enrich the discipline's knowledge (Zoogah, 2023). This article therefore calls for more balanced research on innovation and entrepreneurship that takes greater account of African countries, leaving behind Western-developed and ethnocentric theories in favor of more Southern and context-appropriate approaches to sustainable development. A key message that this multi-voice article tries to convey is that the African context is characterized by specific historical, cultural, socio-economic, institutional, and organizational conditions that

research must take into account. As sustainability challenges do not stop at geographical borders, innovation and entrepreneurship research insights regarding sustainable development must be valid in different contexts – otherwise they only capture a small part of the challenge and cannot offer adequate solutions.

Joint, equal, and mutually supportive research collaborations between Western and African scholars – such as the one undertaken for the present article – are a valuable step in this direction and make it possible to gain mutual insights into the contextual particularities of our theories. Such collaborations enable scholars to tackle (sustainability) challenges *together*, using both contextual and theoretical knowledge to bring research in and with Africa to the fore in the currently heavily Western-oriented literature on innovation and entrepreneurship. As Wickert et al. (2024, p. e2) put it, “Research across management and organization studies continues to suffer from the untapped potential of non-Western research contexts for theorizing, and underrepresented voices of researchers from that context as those who theorize.” Joint research collaborations make it possible to address this problem by enabling Southern scholars to gain confidence in publishing context-specific data, increase their visibility, and showcase contributions from Africa in innovation and entrepreneurship research (Littlewood et al., 2022). Such research can “‘link’ ‘Western’ management theories with Africa’s indigenous knowledge systems, methods and practice” (Africa Journal of Management, n.d.), but should not stop there. Rather, it should go beyond enriching Western theories with context boundaries and also promote new theories in African contexts that extend the generalizability of innovation and entrepreneurship research findings.

Note

1. “Leapfrog” in the context of this essay refers to the ability of African countries to bypass traditional, incremental stages of development by adopting advanced technologies and innovative solutions. Instead of following the historical industrialization trajectory of developed nations, Africa can accelerate its progress by directly implementing cutting-edge advancements, such as mobile banking, renewable energy, and digital infrastructure. See Swartz et al. (2023) for a more detailed discussion.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Notes on Contributors

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