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## Meeting the 21st century challenges of doing business in Africa

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## ABSTRACT

This concluding piece to the special issue outlines how nations and firms can capitalise on their resources and capabilities towards meeting the 21st century challenges of doing business in Africa. The paper outlines key requirements, including human capital formation, technology transfer, frugal innovation and learning from other nations. We also examine the mechanisms through which technology can be harnessed to help facilitate economic development and enhance Africa's competitiveness.

## 1. Introduction

The link between entrepreneurship and macroeconomic growth has been explored for decades, going as far back as the 1940s with Schumpeter (1964) notion of “creative destruction”. In parallel, it has been argued that entrepreneurship offers a platform to facilitate new technology adoption, innovation and sustainability (Danquah and Amankwah-Amoah, 2017; Kiggundu, 2002). For developing nations, one of the main challenges in this area revolves around connecting technology adoption and diffusion to entrepreneurship to help foster development. Towards achieving this, many African countries experimented with the structural adjustment programmes (SAPs) motivated by the World Bank. Thirty years have passed since the ushering in of the SAPs in the 1980s, which emphasised the privatisation of government-owned businesses, liberalisation of markets and scaling back the role of the state (Amankwah-Amoah, 2017; Kiggundu, 1989). This yielded little fruitful outcome and therefore there is a need chart new terrains towards meeting the future challenges.

Technology is one of the several possible terrains that could be exploited for overcoming the challenges of economic development. In fact, since the SAPs, we have witnessed unprecedented changes in technological breakthroughs and development, ranging from advances in computing to alternative energy sources. These offer considerable opportunities for latecomer countries to leapfrog and learn to innovate on their path towards development. For instance, Pfeiffer and Mulder (2013) anticipated that at the inception of the 21st century, many countries in the developing world would introduce and utilise new technologies including renewable energy technologies as an impetus for development. However, many developing nations have failed to exploit

recent technological advances as a vehicle for economic development.

Since the early post-colonial phase of development in many African nations, no decade witnessed more significant progress in terms of economic advancements than the early 2000s. In recent years, many African countries have ushered in a period of economic growth and political stability more conducive to entrepreneurship (Kiggundu, 2002). Although the reliance on the bureaucratic state and state-owned enterprises has been curbed, often private sector competitions have been minimal allowing large firms to dominate and charge exorbitant prices to consumers. The magnitude of changes in the global environment including rising living standards in Africa and technological improvements have ushered in a new environment more conducive to technology adoption. To meet these challenges, tapping renewable sources of energy for economic development is essential. For firms in Africa, adopting and utilising latest technology and information are critical to succeeding in an intensely competitive global business environment. This is also essential in addressing the current situation in industries such as airlines, where many African firms are uncompetitive on the global stage (Amankwah-Amoah, 2017).

In this concluding piece, we capitalise on the key themes of this special issue to outline some of the possible routes for African nations to meeting the 21st century challenges of harnessing technology for doing business. As the reader will recall, this special issue set out to integrate recent research on current challenges and opportunities of doing business in Africa, with a focus on the role of technology. The collated body of research has raised specific points, including human capital development, fostering innovation, entrepreneurial development, infrastructural development and technology diffusion. Our analysis in this concluding paper aggregates these points and closes this special issue

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by setting out possible directions for future research.

## 2. Harnessing technology for the development of the private sector in Africa

### 2.1. Human capital development

Beginning in the mid-1950s and the early 1960s, much of sub-Saharan Africa started witnessing the first and second waves of independences culminating in different political regimes (Amankwah-Amoah, 2016a). Although the paths towards obtaining independences were different for countries, the transition to self-rule also proved equally difficult partly to do with lack or different level of human capital including knowledge of how to run government and public administration. This lack of quality human capital left a vacuum for mismanagement and policy errors in countries such as Ghana and Tanzania approaches to emerge in much of post-colonial Africa (Amankwah-Amoah, 2017; Debrah and Ofori, 2005, 2006). To many these changes also ushered in the era of “Africa’s big men” in politics, who were hardly questioned and ruled by the iron fist (Gibbs, 2014; Lonsdale, 2015). Many could not be questioned largely because they led their nations to independences, an achievement which could not be match by any other citizen and hence justify their stay in power.

The case of Ghana helps to exemplify this. When Kwame Nkrumah led Ghana and ushered in the first sub-Saharan African country to gain independences in the late 1950s, signs of African self-rule and booming confidence of future prosperity were seemingly everywhere across the continent (Agyemang et al., 2016). Yet, the challenge of managing post-colonial administrative systems proved far beyond the capabilities of many post-colonial freedom fighters culminating in decades of underdevelopment and economic mismanagement. By the end of the 1960s, political instability and political overthrows have started gaining roots in the country. By the turn of the 2000s many African nations had tuned the corned and cemented in a degree of stability and economic development. Since then, democracy has taken root in most nations on the continent but the issue of human capital development remain a challenge. To meet this challenge, national investments in education and training remain essential. This means expanding and improving quality of education as the basic level as well as at higher education. For most African nations with abundance of nature resources, decades of experience have demonstrated that these resources by themselves do not deliver competitive advantage on the global stage. Therefore, creating and sustaining competitive advantage may be more predicated in developing and harnessing highly skilled individual to utilise the natural resources to champion economic development.

### 2.2. Formal and informal institutional constraints

In light of the foregoing, many countries have now shifted from the post-colonial authoritarian regimes to more stable democracies is allowing individuals to establish private enterprise. In spite of these progresses, government intervention and protectionism and nationalism in some countries continue to pose challenge to how businesses are conducted and firms ability to flourish. One unintended outcome of this was that the promotion of state-ownership, employment in the public sector and bureaucratic work environments in many ways subdued the entrepreneurial spirit that had existed prior to the end of colonial rule (Amankwah-Amoah, 2016b). In addition to this, bureaucracy and red tape continue to suffocate new business formation (Acquaah, 2007). Furthermore, weak intellectual property rights have posed particular challenges to technology entrepreneurs and their ability to succeed (see North, 1990; Zoogah et al., 2015). To meet this challenge, developing and strengthening formal and informal institutional environment which includes legal enforcement is essential (Zoogah et al., 2015).

As governments policies towards harnessing renewable energy

including hydroelectric power, solar and biomass continues to evolve encompassing more on the private sections and entrepreneurial efforts, attentions has also been directed towards quality of national policies (Amankwah-Amoah, 2015). One of the “original” policies in post-colonial era was the shift to “Africanisation” where some nations including Ghana and Tanzania opted for localisation of government agencies, employees of state-owned enterprises and above all socialism (Amankwah-Amoah and Debrah, 2014). These in many ways reverse the shift to market based economy and undermine private sector development and new business formation. These also created over dependence on the state. For sectors such as aviation and electricity, this could mean liberalising and regulating industries to create condition for foreign investments and easing regulatory bottlenecks to allow innovation and entrepreneurship to thrive. Entrepreneurial development and new business formation have gathered steam in nations such as Nigeria and South Africa and therefore represents a very good model which can be replicated elsewhere.

### 2.3. Technology adoption and diffusion

Technology adoption and diffusion has emerged as a central pillar in Africa’s 21st development. Transition from old technologies to new ones has historically been punctuated by lack of finance, incompatibility and immature technology. There is a long tradition of research technology in developing countries. In light of increasing trend towards capturing value from new technologies such as mobile telephony and smart technologies, there has been renewal call among developing nations to find the best ways to capture technology to power economic development and facilitate a shift from poverty to prosperity. In this direction, capturing best practices is essential in helping to avoid costly mistakes.

Although many countries faces pressure to scale-up solar technology, the financial constraints and political barriers have exerted pressures on nation to create policy framework the foster individual independence in accessing and generating energy for use (see Amankwah-Amoah (2015) on solar energy). In the wake of these pressures and poor connectively of national grid systems, an increasing number of individuals have invested self-generated energy sources. The ability to recognise the potentially profitable of renewables-related businesses would incentivise individuals to enter the sector. As the forces of free market expand, it is expected that entrepreneurial awareness and can foster the development and scaling up of solar PVs.

### 2.4. Adaptation and emulation

For most intents and purposes, innovation is adequately defined as “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations [...] The minimum requirement...is that the product, process, marketing method or organisational method must be new (or significantly improved) to the firm” (OECD, 2005, p. 46). In the context of developing countries innovation has been described as a process by which firms master and implement the design and production of goods and services which are new to them, irrespective of whether they are new to their competitors—domestic or foreign (Mytelka, 2000). The process defined here is not limited to technical functions but also includes organisational and marketing functions (Ernst, 2007; UNU-INTECH, 2004). This offers a more complete picture of the innovation landscape.

An important message from the above is that for African firms, attempting to extend the frontiers of knowledge and technology is not necessarily a superior strategy to copying and emulating what has been done elsewhere. In fact, as some of the studies in this special issue show, adaptation and emulation are often as important as any other set of activities in innovation. Many countries that have today become technology leaders in certain sectors followed this trajectory. In this regard,

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