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### **Building Knowledge Economies in Africa: An Introduction**

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**Abstract**

Knowledge has emerged as a fundamental driver of economic growth and development by *inter alia* improving the effectiveness and efficiency of economic projects and boosting the process of finding new avenues of addressing developmental policy syndromes. Recent evidence suggests that Africa is on the threshold of significant and sustainable economic growth if its human and material resources can be effectively mobilised to support the process (Kuada & Mensah, 2017; Asongu & Tchamyou, 2019). Consequently, the World Bank's Knowledge Economy Framework aims to explore and support the extent to which current policies in African countries affect the knowledge development process (and thereby competitiveness) on the continent. A knowledge economy is an economy in which economic prosperity largely depends on the accessibility, quality and quantity of information available, instead of the means of production (Asongu, 2017a, 2017b). This themed issue of *Contemporary Social Science*-'Building Knowledge Economies in Africa' - consists of papers that focus on, but are not limited to, the four dimensions of the World Bank's Knowledge Economy Index. These are: information and communication technology, education, economic incentives and institutional regime, and innovation (Tchamyou, 2017). The themed issue engages with high quality contributions which, taken together, address the drivers towards knowledge-based economies. This introduction provides a context for understanding the importance of building knowledge economies in Africa and summarises the main contributions to the themed issue. The paper ends by advising scholars and policy makers regarding the risks associated with a colonial view of knowledge- notably the importance of proposing knowledge-based policies while avoiding hegemonic paradigms and hierarchical constructs. In summary, the issue consists of a set of theoretically informed, empirically robust, policy-relevant and accessible articles for both specialists and non-specialists.

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*Keywords:* Knowledge economy; Development; Africa

## **Introduction and context**

Africa is lagging behind with regards to its knowledge economy (KE) compared to other regions of the world, particularly in terms of education, innovation, institutions, information and communication technology (ICT) and economic incentives (Anyanwu, 2012; Asongu & Odhiambo, 2019a; Tchamyou et al., 2019a). This represents a challenge to doing business in the continent, especially for external businesses/economies outside of Africa (Amankwah-Amoah et al., 2018; Asongu & Odhiambo, 2019b) and considerably diminishes prospects of African countries catching-up with their more economically developed counterparts. As the contemporary development literature highlights, 21<sup>st</sup> century economic prosperity is largely centred on knowledge-based economies (KBEs) and, by extension, the ability of countries to effectively generate and optimally diffuse knowledge for economic and human developments in the context of globalisation (Amavilah et al. 2017; Asongu, 2017a; Asongu & Tchamyou 2019; Karakara & Osabuohien, 2019; Tchamyou, 2017). In order for African countries to brace this contemporary challenge, relevant KE policies are essential for Africa to have the opportunities to catch-up with more economically advanced continents of the world (Asongu, 2017b). With this context in mind, this themed issue is timely for informing African scholars and policy makers on the development of Africa's KE.

## **Building knowledge economies in Africa**

In the light of the importance of financial access and welfare in Africa's development (Kuada, 2015, 2016a, 2016b; Tchamyou&Asongu, 2017; Tchamyou, 2019), especially in the dynamic character of openness (Asongu & Minkoua, 2018) in inclusive development (Asongu & Nwachukwu, 2017), Tchamyou (2018) assessed the relevance of financial access in moderating the influence of education and lifelong learning on inequality in 48 African countries from 1996-2014. The Generalised Method of Moments (GMM) was used as empirical strategy for examining inequality. Lifelong learning is understood as the combined knowledge gained by an individual in three levels of education, namely: primary, secondary and tertiary. Financial access is evidenced by dynamics of depth, efficiency, activity and size while inequality measures used are the Gini coefficient, the Atkinson index and Palma ratio. Using three indicators of inequality is important because the Gini coefficient does not capture extreme points of the income distribution. Hence because the investigated linkages can be sensitive to outliers of inequality, the Atkinson index and the Palma ratio are used for robustness purposes because they capture the extremely poor and extremely rich of the

income distribution. Tchamyou (2018) found that primary school enrolment is complemented by all engaged financial variables to reduce the Gini coefficient while lifelong learning is complemented by financial efficiency and depth for negative net impacts on the Gini coefficient. However, other educational levels did not interact with financial dynamics to significantly affect inequality. These findings, which are consistent with Meniago and Asongu (2018), can be partly explained by the relevance of primary education (compared to higher levels of education) in socio-economic development where economies are at early stages of industrialisation (Petraakis & Stamatakis, 2002; Asiedu, 2014; Asongu & Nwachukwu, 2018; Tchamyou et al., 2019b).

Asongu and Tchamyou (2018) considered all dimensions of the World Bank's Knowledge Economy Index (KEI) in a comparative analysis between Africa and South Africa. The research focused on knowledge creation, human capital, knowledge diffusion, innovation, economic incentives and institutions. The empirical evidence is based on cross-country catch-up and the findings intend to provide policy makers with contemporary and non-contemporary insights into South Korea's KBE policies. Accordingly, building on the South Korean experience, the study suggested compelling KE development strategies for African countries.

Ejemeyovwi and Osabuohien (2018) focussed on the dimension of information technology of KE by assessing the relevance of mobile technology on inclusive growth in West Africa. Using the GMM estimation strategy and data from 2004 to 2014, they found, perhaps surprisingly, that mobile phone penetration usage had a statistically insignificant impact on inclusive growth in a panel of 15 sampled West African countries.

In another study on economic growth, Oluwatobi, Olurinola, Alege and Ogundipe (2018), investigated the knowledge capacity of Sub-Saharan Africa as well as its effect on economic growth. Using GMM on a panel of 32 countries over the period 1996-2012, they found that institutions and human capital weaken the relevance of innovation on economic growth. Hence, human capital and institutions are necessary but not sufficient conditions for complementing innovation to drive growth.

The environmental dimension was addressed by Kuada and Mensah (2018) who examined knowledge transfer in the emerging solar energy sector in Ghana. They explored how processes of knowledge transfer within the attendant solar industry in the country are complemented with the development of a new energy sector. The authors built on the thesis that such complementarity is required via cross-border and inter-organisational collaboration. Twelve solar energy users and 12 solar energy firms were interviewed and the corresponding

qualitative data were analysed. The study found that a growing number of firms are entering the industry due to an increasing demand for energy in the solar sector. Moreover, there was some evidence of eagerness among firms and individuals to acquire new knowledge and skills from foreign firms. While such knowledge acquisition was favoured by social connections, workers' inter-firm mobility was limited and not enough effort has been devoted towards generating and disseminating knowledge to aid the development of the solar industry.

In another study on knowledge transfer, Asongu and Odhiambo (2019c) assessed the role of information diffusion on remittances for industrialisation using a panel of 49 African countries for the period 1980 to 2014. The authors concluded that significant linkages between ICT, remittances and industrialisation were more apparent when initial levels of industrialisation were taken on board in the estimation technique. Hence, when assessing the underlying linkage, researchers should make distinctions between countries with low, intermediate and high levels of industrialisation in order to avoid misplaced policy implications. These findings confirm the caution that knowledge and policies from developed countries should not be applied in developing countries without incorporating specificities of developing countries. We argue that the colonialism of knowledge has led to lost decades of economic development in Africa owing, in no small part, to unsound prescriptions from the Washington Consensus based on hegemonic paradigms and hierarchical constructs (Fofack, 2014; Asongu & Acha-Anyi, 2019).

### **Final thoughts: Be cautious of coloniality of knowledge**

The primary objective of this themed issue is to showcase interdisciplinary research in the field of knowledge economy, with the perspective of inspiring and educating policy makers and scholars on the critical relevance of knowledge-based economies as part of contemporary economic development in Africa. It is our hope, as guest editors, that this themed issue will nonetheless encourage other academics to undertake more studies on the opportunities and challenges of knowledge-based economies. We encourage researchers to be wary of the traps associated with the 'coloniality of knowledge' as part of this process.

According to Escobar (2007) and Ndlovu-Gatsheni (2013), coloniality of knowledge tackles the epistemological questions of contemporary neo-colonialism when it comes to interfering with African modes of seeing and knowing, knowledge production, social meaning-making and imagining. Eurocentric epistemologies are often seen as objective, universal, neutral, scientific and superior knowledge. Indeed, as documented in Quijano (2000), since the time of European Enlightenment and Renaissance, Western thinkers have

worked relentlessly to make other cultures understand their knowledge is the only universal and truthful knowledge and in so doing, have appropriated and displaced existing African knowledge. Hence, in the process of building knowledge-based economies that are indispensable for economic development in the 21<sup>st</sup> century, concerned African scholars and policy makers should implement knowledge-driven policies by adapting them to local realities, cultures and epistemologies. These insights, represent a springboard for future research but let us avoid the promotion of hegemonic paradigms and hierarchical constructs of “*superior and inferior knowledge, and thus, of superior and inferior people around the world*” (Grosfoguel, 2007, p. 214).

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