

## **Building Digital Capacities and South-South Cooperation for Industrialization in Africa**

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### *Background*

Historically, the global demand for continued raw material supply from Africa and the need to maintain the market for finished industrial goods have meant that the economies of the continent have for a considerable time been unable to participate and compete in global industrialization. Furthermore, Africa's relations within the global economy have consistently undermined the capacity of the continent's leadership to take bold steps toward industrialization. Based on an extensive study, UNIDO in 2016 reported that among others, Africa's inability to compete within the global industrial economy due to high cost of production and limited regional integration have undermined efforts by individual African states to make significant progress with respect to industrialization (Tafirenyika, 2016). Nonetheless, the opportunity and capacity for Africa to industrialize remain promising. Indeed, in recent years, some (especially Eastern and Northern) African states have made significant advancements with respect to stabilizing their economic transformations to sustain their manufacturing sectors (Edwards, 2018 & Gui-Diby & Renard, 2015). Therefore, Africa has high prospects for industrialization especially with the establishment of a Continental Free Trade Area ratified by 44 of its 55-member states on March 21, 2018.

A significant boost in recent efforts draws from the global development paradigm based on sustainability. The attainment of the SDGs in Africa hinges, to a great extent, on industrialization for a number of reasons: industrialization engenders significant job creation, innovation and the development of technological expertise, food security for sustained quality livelihood, which are all essential for the youthful and growing populations of African states. As policy experts have observed, progress on Africa's industrial drive depends significantly on the technological infrastructural base to support manufacturing, intra-continental free trade and movement of expertise, as well the competitive capacity to participate in the global market not only as consumers but more importantly, producers and suppliers of finished goods (Signé, 2017).

A new development partnership has emerged from mostly Eastern and the broad traditional global south. The presence and role of industrial partnerships within the South-South Development Cooperation (SSDC) remain unexplored: the key reason for this is the fact that development agencies of the global south have only recently ventured into industrialization. This new partnership, a key player of which is China and other emerging powers, has played a major role in Africa's recent surge in transportation and communication infrastructure, as well as agrotechnology and agribusiness (Amanor & Chichava, 2016). However, although the role of these new development partnerships in the development of Africa's digital technology has taken shape in some respects, scholarly and policy discussions is still scant on Africa's industrial drive and is

yet to address the significance of the new partnership with respect to the growth and influence of the Industry 4.0 or the fourth industrial revolution, broadly refers to the use of digital technology in modern production, communication and service delivery processes (Schwab, 2016) .

### *Industrialization and Digital Capacities*

Observing potential challenges to Africa's development along the traditional route from agriculture, manufacturing to service delivery in the modern global economy, some policy experts have proposed the need for Africa to adopt an alternative approach through the digital economy (Macleod, 2018). This certainly requires the development of the needed digital capacities, namely, the infrastructure and human resource base necessary to equip, engage, and manage the functionality of industry 4.0 for industrialization in Africa.

A major challenge currently undermining Africa's digital economy and hence its capacity to propel industrialization relates to the technology infrastructure to enhance cyber connectivity (Friedericie, Ojanpera & Graham, 2017). Given the increasing reliance of the global economy on digitization, the availability of efficient digital systems is fundamental in development processes across the various economic sectors to facilitate rapid exchange of information, services and goods. This is especially essential for industrial growth, which requires the swift exchange of accurate information and data for productivity and competitive supply of finished goods to target markets. Digital innovation is essential not only for industrialization but also development broadly in the modern development landscape, which functions on digitization and automation in, among others, service delivery in various sectors, financial transactions, as well as communication. However, the poor state of Africa's digital infrastructure and its attendant long-standing and growing digital divide undermines large segments of Africa's productive population access to high speed internet connectivity and efficient cyber communication (Norton, 2017). This not only precludes the participation of a significant proportion of Africa's active economic population in the global economy, but also undermines the continents efforts and progress with industrialization (Gonçalves, Oliveira & Cruz-Jesus, 2018).

Despite the challenges with cyber access and connectivity, Africa's presence in the digital world is still undeniable: apart from the rising numbers in the use of cellular phone devices for communication (Yinka 2017), the continent has also made a significant input to the digitization of the global financial sector through mobile phone transactions with such mechanisms as Mpesa from Kenya. To properly harness this rising engagement in the global digital economy, it is important to ensure that policy makers have the capacities to access and utilize this resource. This requires the development of technical capacities among policy makers within the region, which in turn requires a careful study and the creation of a knowledge base on the subject.

Apart from or in addition to the low level of digital infrastructural development and poor connectivity to the cyber systems, the technical expertise for maintaining a strong digital presence is also still largely lacking across Africa. The future of the continent's industrialization would remain in the balance without properly resourced, equipped and skilled institutions and agencies, as well as private entities and individuals across the sectors of the economy. The African Capacity Building Foundation (ACBF) is important testament to the significance of developing requisite skills and capacities for the overall development of the continent. Headquartered in Harare Zimbabwe, the ACBF has since its inception in 1991 served as a key continental institution for skills training, guide for the adoption and implementation of regional and national development policy and provision of expertise for management across various key sectors of the African economy. The capacity of individual states and the continent to develop, adapt, utilize and manage modern digital infrastructure is essential for industrialization in Africa.

Some have observed that technology and industrialization in Africa have for a long time remained a preserve of the state through its institutions and sector agencies. Over the last two decades however, renewed commitment to and engagement in the digitization of the African economy for rapid industrialization has opened the space for active non-state and market-based/driven participation in the new digital economy (Irigoyen & Mehta, 2018). Although more is still required to further improve the digitization of Africa's economies, the existing space has enabled the private sector to make considerable inroads into Africa's digital economy. Private and often informal sector actors have used the digital economy to promote service delivery in the financial sector, agriculture and agribusiness, provision of social amenities like portable water among others in various rural African communities (Ndung'u, 2018).

With respect to large-scale industrialization however, focus is still on state-sponsored/led processes, involving such policy measures as import substitution industrialization (ISS) (Nzau, 2010). Yet, the state often lacks adequate essential expertise for efficient operation and management of industrial technology. Despite the relevance of the state in the technology-led industrialization in Africa, emphasis on engaging science and technology needs to address the wider political and economic reality of development in Africa (MacLeod, 2018). Properly harnessing the variety of expertise from new and emerging development actors, especially private and non-state ones, can significantly influence the direction and advancement of industrialization and hence development in the continent. For instance, as many have observed the impact of Safaricom's Mpesa on Africa's financial sector is a significant indication of the key role of private sector engagement in the digital economy (Ndemo & Weiss, 2017). Indeed, not only has the mobile financial economy extended beyond peer-to-peer transactions to include institutions, but also, the facility has consistently increased in scope and size across the entire continent (Disrupt Africa, 2016 & Du Bocher, 2016).

## *The SSDC and Partnerships for Capacity Building*

Whereas individual states champion their respective paths and processes of industrialization, partnerships through intergovernmental, non-governmental and other private sector channels are essential for development broadly. Other (especially private sector) actors have become instrumental participants in modern development processes. In the sphere of digital technology, the private sector has proven the most instrumental in Africa: while state corporations consistently failed at managing and providing efficient communication services, the private sector's entry into the digital communication industry has witnessed a significant rise in service delivery through various vendors, the top five of which as of 2018 are Samsung, Tecno, ITEL, Huawei and Infinix (Yun, 2018). New development, trade and other partnerships have become instrumental in various processes across levels and spaces of engagement through bilateral and multilateral platforms, especially the BRICS – Brazil, Russia, India, China and South Africa.

Although Africa's development partnerships have traditionally been from Western Europe and North America, increasingly, new actors from the Global South have become vibrant participants in national and continental development processes. Forums such as Forum on China Africa Cooperation (FOCAC) and BRICS are important policy platforms for regional development efforts. Through such bilateral and multilateral engagements, African states and citizens have gained access to technology markets especially in China to boost communication and various economic activities (Yun, 2018). Furthermore, the opening provided by these platforms has facilitated private partnerships in various industrial processes, including especially in information technology for communication and financial service delivery. The increasing presence and role of especially Chinese and Indian state and private development agencies within the context of the BRICS and larger South-South cooperation is a key new trend that has significance for industrialization in Africa (Chidzonga, 2016).

However, research on the South-South engagement on industrialization is still limited. The few works have mainly observed or examined the (adverse) impact of China's (or broadly Asia's) industrialization on Africa (Sandrey & Edinger, 2011) and China's foreign direct investment (FDI) on Africa's economic growth (Doku, Akuma & Owusu-Afriyie, 2017), or China's ambitious soft power agenda in Africa (Eisenman, 2015) and policy strategies for managing this new form of global economic engagement (Asongu & Ssozi, 2016). Centering on the new partnerships within the South-South cooperation, further policy research is needed to explore its significance for or contribution to building digital capacities for industrialization in Africa.