



# Global Value Chains and Industrialization in Africa

*Bernard Nguenkeng and Dieudonné Mignamissi*

October 2023 / No.808

## Abstract

The objective of this study is to analyse the main effects of the integration of African countries in the global value chains (GVCs) on their industrialization level. To this effect, we have specified an industrialization equation that considers the economic characteristics of the continent. We have then estimated that equation by the system GMM estimator method on a sample of 51 African countries with panel data spanning the period 1996–2018 sourced from international organization databases. The findings of the estimations are the following: (1) the participation and the position of African countries in GVC positively contribute

to their industrialization. The imports of intermediate goods facilitate the access to foreign machinery and technologies which stimulate local production. Furthermore, the position in value chains that are limited to assembling activities would also allow to achieve significant industrial progress; (2) the main factors influencing the indirect transmission of GVC to industrialization are the human capital and the physical capital; (3) the results are stable as shown by several robustness check tests related to different modalities of integration in GVC, to the conception of a new participation indicator in GVC, and to sub-regional specificities. Based on these results, we recommend policy actions to enhance participation, but also to improve the position in GVC, while at the same time an appropriate strategy would be designed to accumulate human capital and physical capital in the long term.

## Introduction

The industrialization of Africa is part of the five accelerators (named High 5) set up by the African Development Bank (AfDB) to ensure the economic transformation of the continent. Furthermore, according to AfDB et al. (2017), the structural transformation of Africa will not be achieved without industrialization that is considered as the only way to ensure the economic emergence of the continent and promote the convergence of the living standards to that of developed countries. On the factual plan, recent works show that industrialization is a factor that boosts employment creation, increase of productivity, access to capital, and learning and innovation (Alexiou and Tsaliki, 2010; Haraguchi et al., 2017; Szirmai and Verspagen, 2015; Stiglitz et al., 2013). The industrialization reinforces the capacity of countries to export through the diversification of the economies that creates technical spillover effects (Duarte & Restuccia, 2010).

In the light of these theoretical underpinnings, industrialization constitutes a major issue for the African continent. Even though we observe that the economic growth achieved significant performances during the last years in Africa, industrialization remained at poor levels and even dropped sharply in some African countries. For example, up until the 1980s, countries such as South Africa, Morocco, the United Republic of Tanzania, and Zambia were among the most industrialized in the world (UNCTAD [United Nations Conference on Trade and Development], 2011). The end of 1990s and early 2000s were marked by a dramatic change (Szirmai, 2012). The average share of the industrial sector in gross domestic product (GDP) in Africa dropped from 32% in the 1980s to 30% in the 2000s, while the services sector has increased from 43% to 45% in the same period (Szirmai, 2012). Notwithstanding that global downward trend observed in Africa, there is a great deal of variation between individual countries. The Ivory Coast, Egypt, and Ghana registered an upward trend of manufacturing production in the 1980s and 2000s, as the share of this sector increased from 13% to 19%; 12% to 17%, and 8% to 9% in these countries respectively. The share of the

industrial sector in Morocco remained stable, standing at 17% of GDP. However, in many African countries, the industrial production experienced a downward trend. These countries include: Democratic Republic of Congo (from 15% to 7%), Zambia (from 19% to 11%), Tanzania (from 12% to 7%), Nigeria (from 8% to 4%), South Africa (from 22% to 19%), and Kenya (from 13% to 12%).

This tendency to deindustrialization remains a big concern, since, historically, it was observed that deindustrialization occurred only after full development, allowing resources to move to services sector. Various studies (Felipe et al., 2014; Palma, 2005; Rodrik, 2016; UNCTAD, 2003) have shown that, during the last decades, the share of employment and added value in the manufacturing industry reached a peak and started declining to levels of GDP per capita that is lower than in the past. This phenomenon has been called in the literature “premature deindustrialization” (UNCTAD, 2003).

In the face of this declining trend of industrialization, several national, regional, and continental strategies have been set up to counter the deindustrialization in Africa. On the national level, emergence programmes designed in many countries, have assigned an important role to industrialization strategies as the engine of development. On the regional level, for example, the emergence path of the Central African Economic and Monetary Community has been estimated conditioned on two main variables, the power availability, and the manufacturing industrialization rate. On the continental level, the African Union has placed the industrialization on top of its priorities, through its 2063 Agenda (Objective 4 of Aspiration 1).

The efforts made in the conception and the attempts to implement industrialization policies have led to various outcomes. Recent data from the World Bank indicate two evidence. The first is illustrated by regions that experienced a continuous deindustrialization since 2010. It is the case for Central Africa in which the industrialization rate dropped from 36.6% in 2010 to 28.69% in 2020 or for Northern Africa (from 33.57% in 2010 to 27.19% in 2020). The same development is observed in Southern Africa (from 28.51% in 2010 to 25.86% in 2020), where the weight of South Africa could not compensate the weak industrialization rate of the other countries. The second case is observed in the Western Africa, where the industrialization rate increased from 19.79% to 22.38%, while also in the Eastern Africa, performances improved from 19.19% to 21.62%. Due to these muted performances, Africa experienced a fluctuating development, that is, 23.04 % in 2010, 25.18% in 2015, and 27.8% in 2020. The main lesson to be drawn from these fundamental developments trends is that deindustrialization is accelerating more than industrialization, which explains the difficult economic transformation in Africa.

It follows from the above that the current state of the industrialization in Africa remains a big concern, and above all that efforts must be made to increase the

share of industry, which is the engine of a sustained growth in Africa. The causes of that deindustrialization in Africa have been examined in many studies, in which many factors were highlighted, including: poor power infrastructures, transport, and telecommunication (Rodrick, 2015; Rowthorn & Ramaswamy, 1997); poorly designed agricultural policies that are not consistent with a growing industry (Page, 2012); poor production diversification, corruption problems, and credit markets failure (Boillot & Lemoine, 1992). Besides these constraints, the weak level of human capital, the difficult access to new technologies and the scarcity of financial resources are additional obstacles to the industrialization of Africa. At this level, the integration in the global value chains can play a catalyst role.

The global value chains (GVCs) refer to the set of activities undertaken by entrepreneurs to process a product or a service from its conception to final use (AfDB, 2013). This process is illustrated by the exchanges of intermediate goods which registered a strong increase in the world during the last two decades. The main players in this trade are in Eastern Asia, Europe, and Northern America (Baldwin, 2012), with a participation of around 85%. Despite a modest increase of around 1.4% and 2.9% between 1995 and 2020 (UNCTAD, 2021), Africa is lagging far behind. And yet, as paradoxical as it may seem, Africa shows a higher integration to GVCs than other regions (notably Latin America and the Middle East). However, Africa has experienced more a downstream integration than an upstream integration (AfDB, 2018).

The participation of African countries into GVC may be an opportunity to boost industrialization for many reasons. First, in the past, industrialization was conditioned by the capacity to participate in all the important steps of the value chains of complex manufactured products. Today, by integrating an international production network, countries can create one part of the value chains, without having the required upstream capacities (Cattaneo et al., 2013; Gereffi & Lee, 2012; OCDE, 2013). Africa, in which most of the countries are far away from the technology frontier, will not need to control the whole production process of a product. For its export basket to include high technological products, it is no more necessary to have the whole set of industrial capacities, only the capacities linked with the specialization area are needed (Baldwin, 2012).

Different African countries can be in upstream or downstream of GVC, depending on their specialization, and their situation can change over time. It follows that these countries can integrate into GVC by specializing in activities related to assembling of final products; they can further increase their participation by creating a competitive procurement base of intermediate goods (in developing relationships) and in improving the quality of their exports. More precisely, countries like Cameroon, Congo, and Gabon, which are well-endowed in wood resources, participate in furniture production by engaging in partial transformation before exporting. Ivory Coast is a similar case for cocoa. The cases of cotton, coffee, and hevea sectors have also to

be mentioned. The next step for these countries in the transformation process may relate to assembling electronic components, household appliances, and vehicles. After a successful integration in GVC through a downstream participation, the industrialization of African countries can be reinforced if local firms improve their position in GVC through the following channels (Humphrey, 2004; Humphrey & Schmitz, 2002; UNCTAD, 2013a): (i) modernization of products: companies develop more finished products with higher value-added; (ii) modernization of production process: local firms introduce new technologies or organizational innovations to produce more efficiently; (iii) functional modernization: companies engage in more elaborated processes (and more skill-intensive) in the chain (for example, advancing from assembling tasks and production of normalized inputs to the processing of high technology components and to conception); (iv) advancement in the chains: the enterprises use the acquired skills in a chain to have access to another chain. For example, the manpower used in assembling electronic devices can be utilized in automobile industry.

The industrialization can also originate from regional value chains (RVC). According to Banga et al. (2015), the latter constitute a way for firms to become competitive globally, as they allow them to accumulate capacities and enhance their competitiveness. According to the links theory of Hirschman (1977), those linkages may be classified in three categories: (i) the upstream linkages, for example, which can be established between forestry (for countries like Cameroon, Congo, Gabon etc.) and the exploitation materials (made in South Africa); (ii) the downstream linkages which can be observed between wood industry, sawmills and furniture manufacturing or between cotton production and tissue and cloths production. It would be the same case for cocoa, fuel, and hevea sub-sectors etc.; (iii) lastly, the horizontal linkages which can be materialized by the adaptation of the forestry exploitation equipment (in Cameroon) to cocoa culture (in Ivory Coast).

For the impact of GVC and RVC on industrialization to be effective in Africa, it is necessary to focus on a well elaborated industrialization policy. According to UNCTAD (2016), there is no universal recipe guaranteeing the success of an industrialization policy. Each country must conduct its own experience and learn by doing through the implementation of its own industrialization policy. Even though disparities can be observed between African countries, some measures supporting successful policy may be highlighted. These measures include: the establishment of industrial duty-free zones and special economic zones. Thanks to these zones, African governments can offer high quality infrastructures to enterprises, notably providing reliable power, communication channels, fast internet connections and various other fiscal incentives aiming to compensate for potential difficulties that may result from their installation. In the technology area, industrial policy instruments should facilitate the assimilation of foreign skills by supporting extension programmes and technology transfer.

From the above considerations, it seems that the African integration in GVC did not result in the expected industrialization level. The question is to know whether the integration model into GVC is appropriate. To this effect, we agree that the high specialization in the production of primary products explains the weak contribution of GVC to African industrialization. We show that evidence by considering the integration in GVC through the participation. To illustrate, we refer to the distinction made between the upstream and downstream participation to GVC. Our core assumption is that a better participation of African countries to GVC significantly improves the industrialization. Our main objective is to determine the effects of the integration into GVC on the industrialization of African countries. More specifically, we intend to evaluate the effects of the participation and position in GVC (upstream and downstream) on the industrialization of those countries.

The motivation of this study is manifold: first, on the logical level, the situation of deindustrialization is a matter of concern, because industrialization is a key determinant of economic emergence (Hugon & Marquez-Pereira, 2011). Given the new paradigm in exchanges prescribing the integration into GVC, we find it relevant to highlight their contribution to the industrialization of African countries. Second, on the practical level, the study attempts to analyse the issue from a new perspective, since the question is no more to examine the exchanges considering finished products, but rather considering the level of the value-added. By highlighting the role of GVC in the industrialization, this study will contribute to the literature by examining the specific case of African countries. Based on the findings of this study, we want to provide African decision-makers with recommendations on the issues related to the content and composition of the external trade.

We adopt a methodological approach in three steps to test our hypothesis. First, we capture industrialization by means of a composite indicator that we constructed using its main determinants. Further, to measure the integration into GVC, we use the participation and position indicator proposed by Wang et al. (2017b) which provides a refined measure of total participation of a country in GVC. The sensitivity analysis is performed using the upstream and downstream participation in GVC. Lastly, we use recent estimation methodology based on the Generalized Method of Moments (GMM) that is adapted to the analysis of panel data. More precisely, we estimate a two-stage system GMM model. This approach allows controlling for potential endogeneity problems and considers the specific country unobserved effects as well as the time invariant effects. Lastly, the empirical results will be submitted to various robustness tests.

## **The effects of integration into GVC: Findings from the literature**

In the new image of the globalization based on the integration into GVC, firms and countries take place in the international trade through specialization in specific tasks of GVC, rather than in goods and services. The effects of those GVC on industrialization have been examined in many studies. It emerges from the literature that GVC affect the industrialization directly and indirectly.

### **The direct effects of GVC on industrialization**

The direct effects of GVC on industrialization can be positive or negative. Regarding the negative effects, Altomone et al. (2012) claim that the participation into GVC implies higher vulnerability to the demand induced by the global economic cycles. According to Staritz (2011), this tendency is more pronounced in the upstream than in the downstream integration and persists in the developing countries, as the lead firms pass on the uncertainties to small sub-contractors and their employees. Likewise, GVC negatively affect industrialization following the risks linked to relocation and investments. In case these transaction and production costs are higher in developing countries than in industrial countries, the firms will decide either to repatriate the part of production that was previously relocated (Cattaneo et al., 2013; Olney, 2013) or to deal with producers or suppliers in other countries (Plank & Staritz, 2013). The strong specialization in GVC is also the cause of that negative effect. Indeed, the skills needed in some GVC cannot be used in other activities or employed to upgrade in higher value chain (Kawakami & Sturgeon, 2011) Organisation for Economic Co-operation and Development [OECD] et al., 2013).

Participation in GVC could also stimulate industrialization. Piermartini and Rubínová (2014) show that, the integration into GVC open countries to trade and foreign investment, which encourages the transfer of technologies and knowledge. According to the WTO, those transfers are influenced in two ways by the participation in GVC: first, the skills in production techniques are transferred through the exchanges of intermediate products which create spillovers; second, technology can also be transferred when foreign firms invest directly in the economy of a country. According to Keller (2000), the spillovers are more important when imports come from developed countries; for Acharya and Keller (2009) and Blacklock and Gertler (2008), the imports of equipment goods, machinery and ICT products also generate spillovers. Likewise, the integration to GVC allows firms to get new capacities that stimulate up-grading. In this way, firms can gain a higher share in GVC and consequently improve their competitiveness (Gereffi et al., 2005; Humphrey & Schmitz, 2002). The industrialization process can also be intensified through the upgrading strategy, notably the “processes upgrading” (Maertens



& Swinnen, 2014; Javorcik & Spatareanu, 2009; Schmitz & Knorringa, 2000 the “functional upgrading” (IMF, 2013; Navas-Alemán, 2011; Gereffi & Memedovic, 2003), and the “inter-sectoral upgrading” (Draper & Lawrence., 2013; Giuliani et al., 2005; Reardon & Berdegué, 2002).

## **The indirect effects of GVC on industrialization**

Besides those direct effects, other studies show that GVC affect industrialization indirectly through different transmission channels, notably: those linked to development strategies (UNCTAD, 2015), conducive environment for business (UNCTAD, 2013b), national capacities to produce (UNCTAD, 2013b), and environmental, social, and governmental challenges (Kozul-Wright & Fortunato, 2012).

Regarding the first policy action, since GVC lead to specialization in activities rather than in products and services, the subsidies intended to develop a vertically integrated sector or the restrictions imposed to essential imports for export activities, are inefficient (Milberg et al., 2014). The retention of foreign direct investment (FDI) becomes a necessity. In this respect, the commercial and investment policies can promote a conducive environment for investment by stimulating long-term partnerships and collaboration between foreign and local firms, and by creating a local group of secondary suppliers (UNCTAD, 2011, 2013b). Beyond the retention of foreign direct investments (FDI), the characteristics of the private sector in developing countries, the prevailing entrepreneurial spirit in the local economy, and the governance structure of GVC improve the industrialization level and development (Gereffi, 2014, 2015; Gereffi et al., 2005; Farfan, 2005; Humphrey & Schmitz, 2002). For example, the size of the firm is important to realize economies of scale and establish relationships with lead firms worldwide, and its real capacities which determine the potential of productivity growth and modernization to higher value-added activities and more sophisticated products (Farfan, 2005).

By contrast, if asymmetries in power and skills are very pronounced in a value chain, between lead firms and firms in developing countries, the damage incurred by the latter may be substantial. The lead firms in downstream activities can reduce the margin of upstream firms due to imposition of trade restrictions, customs duties, and other taxes. They also have the possibility to hamper the technological development and the entry in downstream activities by limiting the transfer of skills and technologies or by imposing standards in the commercial and investment agreements (Milberg & Winkler, 2013). To overcome these challenges, developing countries can help local firms in the negotiation of contracts with foreign firms, by encouraging long-term contracts; for example, by supporting collective negotiations through the association of producers, or by providing training in negotiation and drafting of contracts (Milberg et al., 2014; UNCTAD, 2011, 2013b).



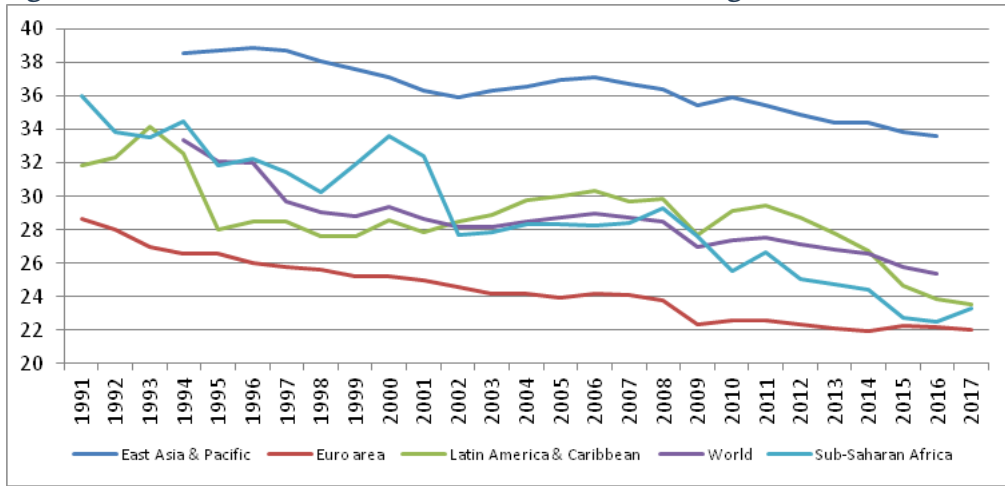
Regarding the second policy action based on the creation and maintenance of a conducive environment for business, UNCTAD (2013b) underscores the importance of facilitating trade, for example, by rationalizing customs duties and port procedures, encouraging investments through the rationalization of entry procedures and creation of firms with foreign capital (registration, providing licenses, access to land, personnel recruitment, and fiscal regime). Concerning the third action, linked to the enhancement of national production capacities, several measures have been identified: (i) the creation of groups and linkages to encourage competitiveness through a good knowledge of competitors, suppliers, and clients; (ii) the support to science and technology, to improve the quality of products and productivity, and the design of an efficient framework of intellectual property to enhance the confidence of lead firms in the use of advanced technologies; (iii) the creation of services dedicated to the development of firms through specialized bodies and capacity enhancement structures; (iv) the promotion of entrepreneurship through firm incubation centres, training and support in capital-risk; and (v) the access of small and medium-sized enterprises (SMEs) to finance in order to support the development of national capacities and allow the SMEs to grow and reach a minimum volume of production.

The environmental, social, and governmental challenges constitute the fourth channel. In this respect, the working conditions in firms participating in GVC have been a matter of concern when the FDI are seeking cheap labour in countries having relatively weak regulatory frameworks. Global value chains have even the ability to facilitate the relocation of pollutant production processes in developing countries (Kozul-Wright & Fortunato, 2012). In this respect, governmental policies of public purchases can impose the respect of international labour standards, human rights, and environment. Furthermore, the duty-free zones for export industry can help in matters related to labour, to inform firms on appropriate regulations and provide supporting services. Lastly, regarding good governance, some cases of repatriation of part of profits by branches of foreign firms have been observed, leading to the inability of government in hosting country to use the value-added in the country. The public authorities have been setting up more and more restricting regulation frameworks in the area, by inflicting fines and sanctions to breaching firms.

## **Industrialization in Africa: Some stylized facts**

We first present a comparative evolution of industrialization in Africa and other regions in the world, and then we highlight the differences existing between the different sub-regions in the African continent. It may be observed in Figure 1 that industrialization, represented by the share of the industrial sector in GDP, registered a declining trend between 1991 and 2017. However, this development is not unique to Africa, as the other regions witnessed the same trend. We also observe that Africa is not the worst ranked, because even though Africa is the worst performer compared to Asia and Pacific, the performances realized in Africa are far better than those observed in Europe and Latin America, and higher than the world average.

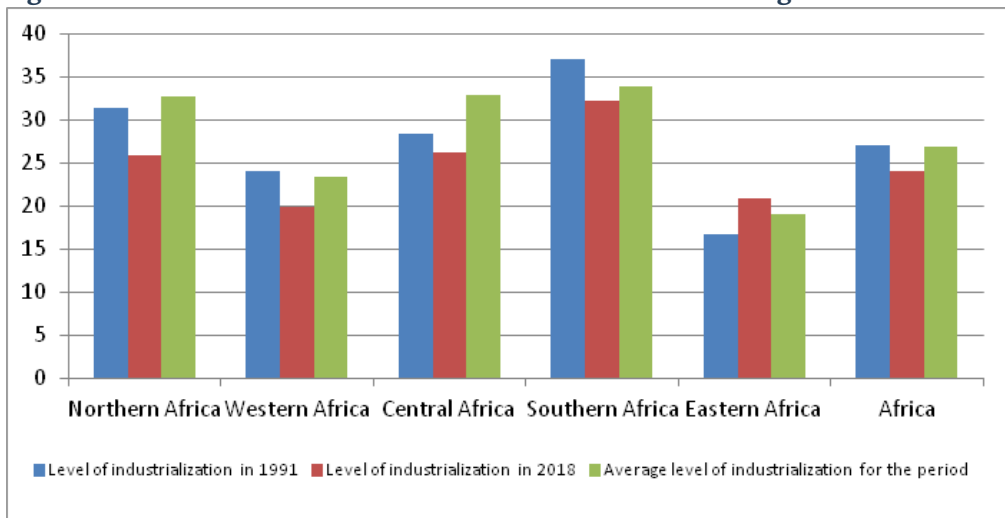
**Figure 1: Evolution of the industrialization in different regions of the world**



Source: Authors' own construction based on the World Development Indicators (WDI) database (World Bank, 2021).

Figure 2 presents a comparison in the development of the industrialization level (as a percentage of the value-added of the manufacturing sector in GDP) between the African sub-regions and the average level for the whole period. This development may be subject to different interpretations. First, we observe that the general average of the industrialization in Africa is relatively weak (exactly 26.9%). For most of those sub-regions, the trend is declining, that is, the share of the industrialization has declined between 1996 and 2018, except for the Eastern Africa, which registered an upward trend (rising from 16.32% to 20.98 % in the same period). The Southern Africa is the most industrialized sub-region. This development may be explained by the presence of South Africa which is the engine of development, not only for that sub-region, but also for the continent.

**Figure 2: Industrialization level between the different sub-regions**



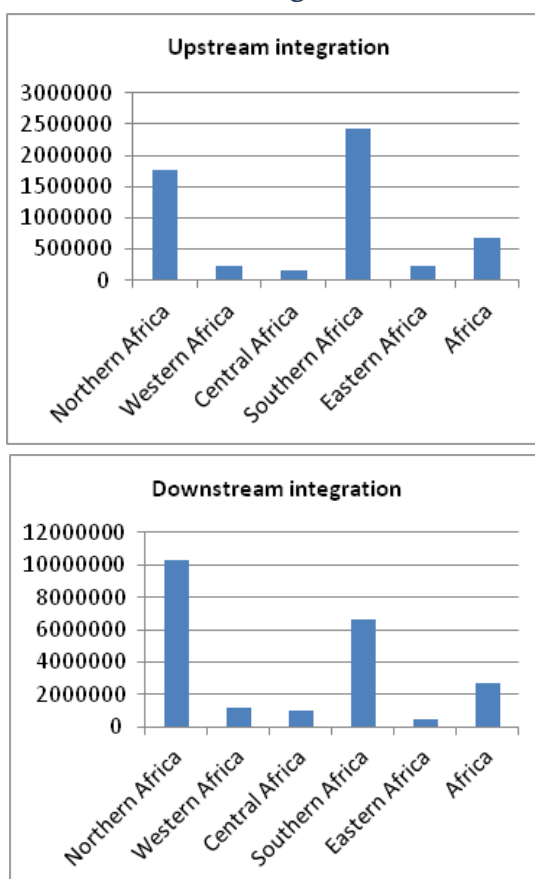
Source: Authors' own construction based on the WDI database (World Bank, 2021)

## Stylized facts on the participation of Africa in GVC

Two main facts may be highlighted. The first is that Africa integrates into GVC more through downstream than upstream participation. The second refers to the different developments observed in the specific sub-regions.

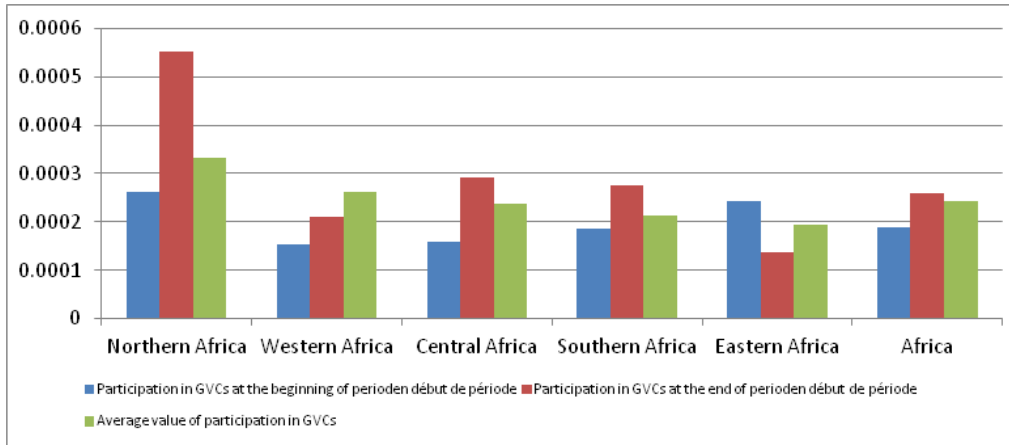
Figure 3 presents the upstream and downstream participation of the different African sub-regions in GVC. It shows that the downstream participation is stronger than the upstream participation. More precisely, the foreign value-added in the exports of sub-Saharan African (SSA) countries is lower than the value-added of those countries in the exports of other countries. This is explained by the fact that Africa, which is endowed with abundant natural resources, exports these natural resources more than it imports intermediate goods. In the different sub-regions, it is the Southern African sub-region that has the strongest upstream integration, with South Africa exhibiting the best score. Northern Africa has the best downstream performance. Central Africa registers the least upstream integration, while Eastern Africa exhibits the lowest performance for the downstream integration.

**Figure 3: Upstream and downstream integration of African sub-regions in GVC**



Source: Authors' own construction based on the UNCTAD-Eora Global Value Chain Database (2022).

**Figure 4: Participation indicator of African sub-regions in GVC**

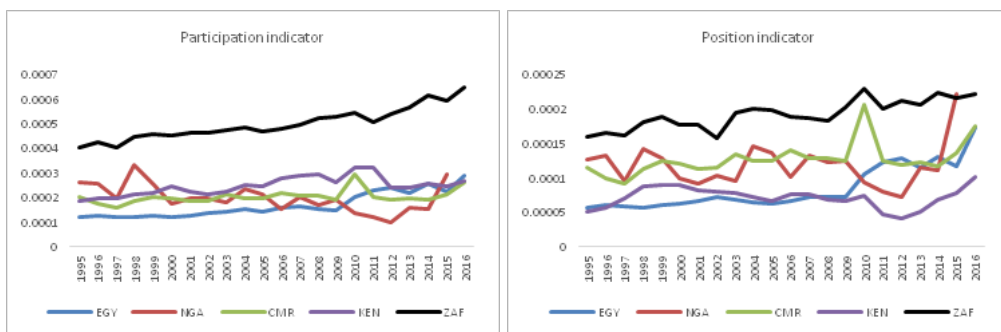


Source: Authors' own construction based on the UNCTAD-Eora Global Value Chain Database (2022).

Figure 4 presents the participation indicator of the African sub-regions in GVC. This indicator accounts for the upstream and downstream participation. It represents the sum of foreign value-added in gross exports (upstream participation) and the local value-added in the form of intermediate inputs in gross exports of other countries (downstream participation). We note that Africa in general, and the sub-regions in particular, have registered an increasing trend of this participation during the period between 1996 and 2018. Northern Africa is ranking first in this participation, while Eastern Africa exhibits the worst performance.

Concerning the dynamics of GVC indicators by country, Figure 5 shows an ascending trend in general, even though it is not significant in several sub-regions or in the included countries. As regards the participation in GVC, countries that recorded the most significant performances between 1996 and 2018 are Egypt and South Africa, with respective growth rates of 144.23% and 60.86%. Countries such as Cameroon (30.8%) and Nigeria (12.3%) recorded low progress, while Kenya registered a median performance with a score of 45.27% during the same period.

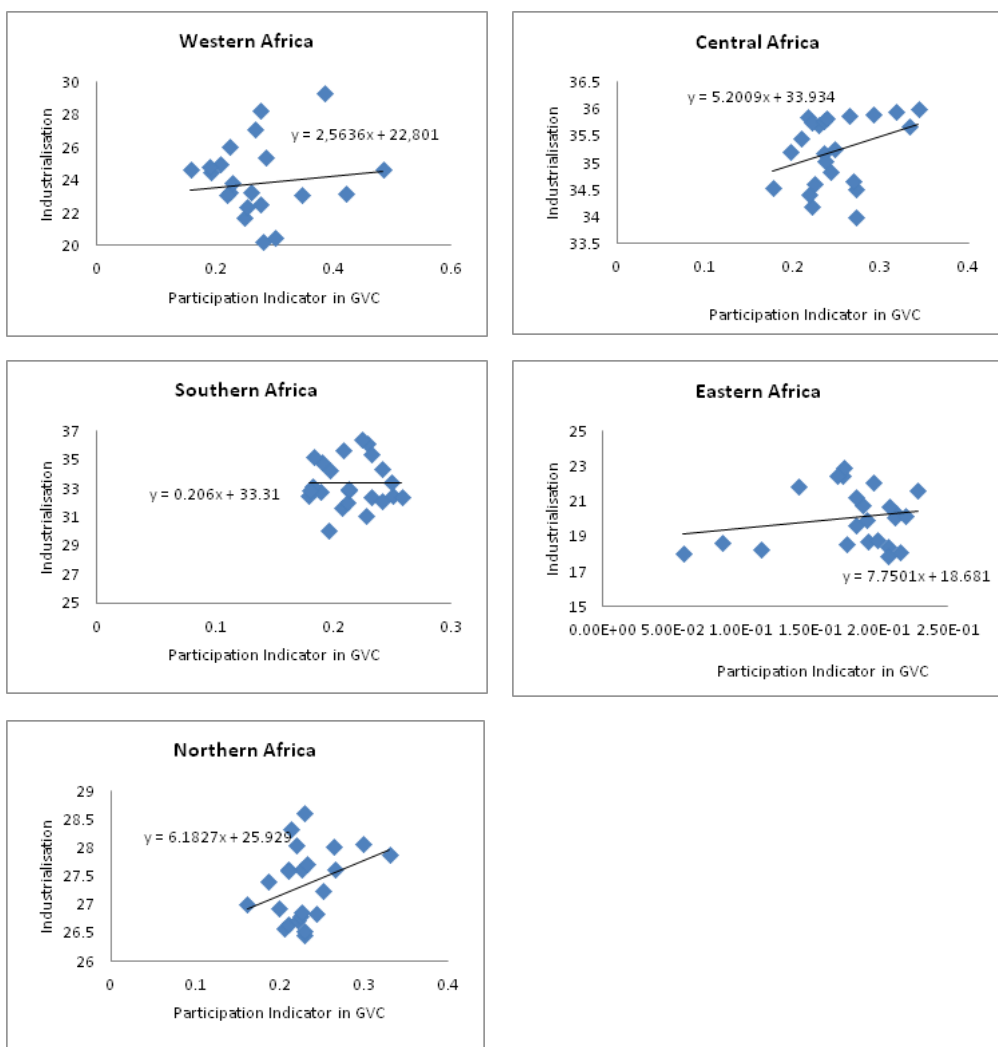
**Figure 5: The dynamics of GVC indicators in some countries (1996-2018)**



Source: Authors' own construction based on the UNCTAD-Eora Global Value Chain Database (2022).

The visual inspection of the correlations (Figure 6) reveals the existence of a positive relationship between the participation in GVC (participation indicator in GVC) and the industrialization (relative change of employment in the industrial sector) in Africa as well as in the sub-regions. The interventions of this part of Africa in the international process of goods production through the imports and exports of intermediate goods contribute to the improvement of the structural transformation.

**Figure 6: Correlations between industrialization and participation in GVC in SSA**



Source: Authors' own construction based on the UNCTAD-Eora Global Value Chain Database (2022) and WDI (2021).

## Conclusion and policy recommendations

The objective of this study was to evaluate the effects of integration of African countries into GVC on industrialization. To this effect, we have specified an industrialization equation that takes into account the characteristics of the continent. We have then estimated that equation by the system GMM estimator and the following results were obtained: the participation and position of African countries in GVC contribute positively to industrialization in Africa. The imports of intermediate goods are instrumental in having access to foreign machinery and technology, which stimulate local production. Furthermore, the position in those chains that is limited to assembling activities would also lead to significant industrial advancements. It was also found that the main factors influencing the transmission of indirect effects of GVC to industrialization are human and physical capital. The results obtained are stable as shown by the different robustness check tests on different specifications related to the integration into GVC, to the conception of a new participation index, and to sub-regional characteristics.

Based on these results, we make the following general policy recommendations: African leaders should focus on a strong industrial development. This can be possible, only with more skilled labour and a sizable investment in infrastructures. On the other hand, we make the following specific recommendations: following the observation that the integration into GVC stimulates industrialization and knowing that almost all African countries are weakly integrated into those GVCs, efforts should be made, not only to enhance their participation, but also to improve their position. For the resource-rich countries, actions should be taken to limit the exports of raw materials. Actions to ensure initial transformation of those resources should be encouraged. Countries that are weakly endowed with natural resources, in which industry is based on products related to electrical components, mechanical, electronics, automobile, and aeronautic should specialize more in these activities, and above all upgrade from the activities of assembling components to the next stage of processing them.

## References

- Acharya, R.C. and W. Keller. 2009. "Technology transfer through imports". *Canadian Journal of Economics/Revue canadienne d'économique*, 42(4): 1411–48.
- Altomonte, C., F. Di Mauro G. Ottaviano, A. Rungi and V. Vicard. 2012. "Global value chains during the great trade collapse: A bullwhip effect?" ECB Working Paper No. 1412. European Central Bank, January.
- Amiti, M., & Konings, J. (2007). Trade liberalization, intermediate inputs, and productivity: Evidence from Indonesia. *American Economic Review*, 97(5), 1611–1638.
- Babalola, S. and W. Shittu. 2020. "Foreign aid and economic growth in West Africa: Examining the roles of institutions". *International Economic Journal*, 34(3), 534–52.

- Baldwin, R.E. 2012. *Global Supply Chains: Why they Emerged, Why they Matter, and Where they are Going*. CEPR Discussion Paper No. 9103. Centre for Economic Policy Research, London. [www.cepr.org/pubs/dps/DP9103.asp](http://www.cepr.org/pubs/dps/DP9103.asp)
- Banga, R., D. Kumar, and P. Cobbina. 2015. *Trade-led Regional Value Chains in sub-Saharan Africa: Case Study on the Leather Sector*. Commonwealth Trade Policy Discussion Paper No. 2015/02. Commonwealth Secretariat, London.
- Barrios, S., H. Görg and E. Strobl. 2005. "Foreign direct investment, competition and industrial development in the host country". *European Economic Review*, 49(7): 1761–84.
- Barro, R.J. 1996. "Institutions and growth, an introductory essay". *Journal of Economic Growth*, 1(2): 145–48.
- Blacklock, G. and P.J. Gertler. 2008. "Welfare gains from foreign direct investment through technology transfer to local suppliers". *Journal of International Economics*, 74(2): 402–21.
- Boillot, J. J., & Lemoine, F. (1992). Le financement de l'industrialisation. *Economie Perspective Internationale*, 50, 67–98.
- Cattaneo, O., G. Gereffi, S. Miroudot and D. Tagliani. 2013. "Joining, upgrading and being competitive in global value chains: A strategic framework". Policy Research Working Paper No. 6406. The World Bank, Washington, D.C., April.
- Chandra, R. 1992. *Industrialisation and Development in the Third World*. London: Routledge.
- Clark, C. (1957). *The Conditions of Economic Progress* (3rd ed.). London: MacMillan & Co Ltd.
- Daude, C. and E. Stein. 2007. "The quality of institutions and foreign direct investment". *Economics & Politics*, 19(3): 317–44.
- Davenport, R.J. 2020. "Urbanization and mortality in Britain, c. 1800–50". *The Economic History Review*, 73(2): 455–85.
- Di Maio, M. 2009. "Industrial policies in developing countries: History and perspectives". In M. Cimoli, G. Dosi and J.E. Stiglitz, eds., *The Political Economy of Capabilities Accumulation: The Past and Future of Policies for Industrial Development*. New York and Oxford, UK.: Oxford University Press.
- Dollar, D., & Kidder, M. (2017). Institutional quality and participation in global value chains. *Global value chain development report: Measuring and analyzing the impact of GVCs on economic development*, 161–173.
- Draper, P. & R. Lawrence (2013), "How should Sub-Saharan African countries think about global value chains?", *Bridges Africa Review*, 2(1).
- Duarte, M., and D. Restuccia. 2010. "The role of the structural transformation in aggregate productivity". *The Quarterly Journal of Economics*, 125(1): 129–73.
- Farfan, O. 2005. "Understanding and escaping commodity dependency: A global value chain perspective". Paper prepared for the Investment Climate Unit, International Finance Corporation. The World Bank Group, Washington, D.C.
- Felipe, J., A. Mehta, and C. Rhee. 2014. "Manufacturing matters... but it's the jobs that count". ADB Economics Working Paper No. 420. Asian Development Bank, November.
- Fernandez-Stark, K., Bamber, P., & Gereffi, G. (2011). The offshore services value chain: upgrading trajectories in developing countries. *International Journal of Technological Learning, Innovation and Development*, 4(1/2/3).
- Gereffi, G. 2014. "Global value chains in a post-Washington consensus world". *Review of International Political Economy*, 21(1): 9–37.



- Gereffi, G. 2015. "Global value chains, development and emerging economies". UNIDO Research, Statistics, and Industrial Policy Branch Working Paper No. 18/2015. United Nations Industrial Development Organization, Vienna, November.
- Gereffi, G. and J. Lee. 2012. "Why the world suddenly cares about global supply chains". *Journal of Supply Chain Management*, 48: 24–32.
- Gereffi, G., & Memedovic, O. (2003). *The global apparel value chain: What prospects for upgrading by developing countries* (pp. 2009-12). Vienna: United Nations Industrial Development Organization.
- Gereffi, G., J. Humphrey, and T. Sturgeon. 2005. "The governance of global value chains". *Review of International Political Economy*, 12(1): 78–104.
- Gimet, C., B. Guilhon and N. Roux (2010). 'Fragmentation and Immiserising Specialization: The Case of the Textile and Clothing Sector', Working Paper 1003, Groupe D'Analyse et de Théorie Economique Lyon – St Etienne. March.
- Giuliani, E., Pietrobelli, C., & Rabellotti, R. (2005). Upgrading in global value chains: lessons from Latin American clusters. *World development*, 33(4), 549–573.
- Gollin, D., R. Jedwab and D. Vollrath. 2016. "Urbanization with and without industrialization". *Journal of Economic Growth*, 21(1): 35–70.
- Grossman, Gene, and E. Rossi-Hansberg. 2008. "Trading task: A simple theory of offshoring". *American Economic Review*, 98(5): 1978–97.
- Haraguchi, N., Cheng, C. F. C., & Smeets, E. (2017). The importance of manufacturing in economic development: has this changed?. *World Development*, 93, 293–315.
- Hugon P., and Marques Pereira J. (2011). Introduction à l'économie politique tricontinentale : les nouveaux paradigmes Suds-Suds. *Revue Tiers Monde*, 4, 7–26.
- Humphrey, J. 2004. "Upgrading in global value chains". ILO Policy Integration Department Working Paper No. 28. International Labour Organization, Geneva.
- Humphrey, J. and H. Schmitz. 2002. "How does insertion in global value chains affect upgrading in industrial clusters?" *Regional Studies* 36(9): 1017–27.
- Humphrey, J., & Schmitz, H. (2000). *Governance and upgrading: linking industrial cluster and global value chain research* (Vol. 120, pp. 139-170). Brighton: Institute of Development Studies.
- IMF (2013). 'Trade interconnectedness: The world with global value chains', available at <http://www.imf.org/external/np/pp/eng/2013/082613.pdf>
- Javorcik, B. S., & Spatareanu, M. (2009). Tough love: do Czech suppliers learn from their relationships with multinationals?. *The Scandinavian Journal of Economics*, 111(4), 811–833.
- Kaplinsky, R. (1998). *Globalisation, industrialisation and sustainable growth: the pursuit of the nth rent*. Institute of Development Studies.
- Kawakami, M., & Sturgeon, T. J. (Eds.). (2011). *The dynamics of local learning in global value chains: Experiences from East Asia*. Springer.
- Keller, W. 2000. "Do trade patterns and technology flows affect productivity growth?". *World Bank Economic Review*, 14(1): 17–47.
- Koopman, R., Z. Wang, and S.-J. Wei. 2014. "Tracing value-added and double counting in gross exports". *American Economic Review*, 104(2): 459–94.
- Kummritz, V. 2016. *Do Global Value Chains Cause Industrial Development?* The Graduate Institute of International and Development Studies, Centre for Trade and Economic Integration.

- Lectard, P. 2017. "Chaînes de valeur et transformation structurelle soutenable". Working Paper Series No. 292. African Development Bank, Abidjan, Côte d'Ivoire.
- Maertens, M., and J. Swinnen. 2014. "Agricultural trade and development: A supply chain perspective". WTO Working Paper No. ERSD-2015-04. World Trade Organization, Geneva.
- Milberg, W., and D. Winkler. 2013. *Outsourcing Economics: Global Value Chains in Capitalist Development*. Cambridge, UK: Cambridge University Press.
- Milberg, W., X. Jang, and G. Gereffi. 2014. "Industrial policy in the era of vertically specialized industrialization". In J.M. Salazar-Xirinachs, I. Nubler and R. Kozul-Wright, eds., *Transforming Economies: Making Industrial Policy Work for Growth, Jobs and Development*, pp. 151–78. Geneva: International Labour Organization.
- Navas-Aléman, L. 2011. "The impact of operating in multiple value chains for upgrading: The case of the Brazilian furniture and footwear industries". *World Development*, 39(8): 1386–97.
- Organisation for Economic Co-operation and Development (OCDE). 2013. "Économies interconnectées: Comment tirer parti des chaînes de valeur mondiales". Publication de l'OCDE, Paris. <http://dx.doi.org/10.1787/9789264189560-en>
- Ouyang, P., & Fu, S. (2012). Economic growth, local industrial development, and inter-regional spillovers from foreign direct investment: Evidence from China. *China Economic Review*, 23(2), 445–460.
- Page, J. 2012. "Can Africa industrialize?" *Journal of African Economies*, 21: 86–125.
- Palma, G. (2005). Four Sources of "De-Industrialisation" and a New Concept of the "Dutch Disease". In JA Ocampo (ed.), *Beyond Reforms: Structural Dynamics and Macroeconomic Vulnerability*. New York: Stanford University Press and World Bank.
- Piermartini, R. and S. Rubínová. 2014. "Knowledge spillovers through international supply chains". WTO Working Paper No. ERSD-2014-11. World Trade Organization, Geneva.
- Plank, L., and C. Staritz. 2013. "'Precarious upgrading' in electronics global production networks in Central and Eastern Europe: The cases of Hungary and Romania". *Capturing the Gains Working Paper No. 31*. The University of Manchester, Manchester.
- Rabb, T.K. and R.I. Rotberg (eds.). 2014. *Industrialization and Urbanization: Studies in Interdisciplinary History*, Vol. 560. Princeton, New Jersey: Princeton University Press.
- Rees, J. 2016. "Industrialization and urbanization in the United States, 1880–1929". In *Oxford Research Encyclopaedia of American History*.
- Rodrick, D. 2015. "Premature deindustrialization". NBER Working Paper No. 20935. National Bureau of Economic Research, Cambridge, MA, February.
- Rodrik, D. 2016. "Premature deindustrialization". *Journal of Economic Growth*, 21(1): 1–33.
- Rowthorn R.E. and K. Coutts. 2004. "De-industrialisation and the balance of payments in advanced economies". *Cambridge Journal of Economics*, 28(5): 767–90.
- Rowthorn, R.E. and J.R. Wells. 1987., *De-industrialization and Foreign Trade*. Cambridge (Cambridgeshire), New York: Cambridge University Press.
- Rowthorn, R.E. and R. Ramaswamy. 1997. "Deindustrialization: Causes and implications". IMF Working Paper No. 97/42. International Monetary Fund, New York, April.
- Staritz, C. 2011. *Making the Cut? Low-Income Countries and the Global Clothing Value Chain in a Post-Quota and Post-Crisis World*. Washington, D.C.: The World Bank.
- Stiglitz, J. E., Lin, J. Y., & Monga, C. (2013). Introduction: the rejuvenation of industrial policy. In *The Industrial Policy Revolution, I* (pp. 1-15). Palgrave Macmillan, London.

- Szirmai, A. 2012. "Industrialisation as an engine of growth in developing countries, 1950–2005". *Structural Change and Economic Dynamics*, 23(4): 406–20.
- Szirmai, A., & Verspagen, B. (2015). Manufacturing and economic growth in developing countries, 1950–2005. *Structural change and economic dynamics*, 34, 46-59.
- UNCTAD (2003). Trade and development report, 2003 capital accumulation, growth, and structural change. United Nations. New York and Geneva.
- UNCTAD (2021). Trade and development. Report 2021 - From recovery to resilience: the development dimension. United Nations Publications, 405 East 42<sup>nd</sup> Street, New York, New York 10017, United States of America.
- UNCTAD (2021). Trade and development. Report 2021 - From recovery to resilience: the development dimension. United Nations Publications, 405 East 42<sup>nd</sup> Street, New York, New York 10017, United States of America.
- UNCTAD (2022). UNCTAD-Eora Global Value Chain Database. Available at <https://www.worldmrio.com/unctadgvc/>
- UNCTAD 2003. Trade and development report, 2003 capital accumulation, growth, and structural change. United Nations. New York and Geneva.
- UNCTAD 2011. Economic Development in Africa Report 2011. Fostering Industrial Development in Africa in the New Global Environment. United Nations. New York and Geneva, 2011.
- UNCTAD 2011. World Investment Report. Non-equity modes of international production and development. United Nations. New York and Geneva, 2011.
- UNCTAD, (2011). World Investment Report. Non-equity modes of international production and development. United Nations. New York and Geneva, 2011.
- UNCTAD. (2015). Global value chains and South–South trade: economic cooperation and integration among developing countries. UNCTAD Geneva.
- United Nations Conference on Trade and Development (UNCTAD) 2013a. *World Investment Report 2013: Global Value Chains: Investment and Trade for Development*. Geneva and New York: United Nations.
- United Nations Conference on Trade and Development (UNCTAD). 2013b. *Trade and Development Report 2013: Adjusting to the Changing Dynamics of the World Economy*. Geneva and New York: United Nations.
- United Nations Conference on Trade and Development (UNCTAD). 2015b. *Trade and Development Report 2015: Making the International Financial Architecture Work for Development*. Geneva and New York: United Nations.
- United Nations Conference on Trade and Development (UNCTAD). 2016. "La Transformation Structurelle et la Politique Industrielle". L'Institut virtuel de la CNUCED (<http://vi.unctad.org>).
- Wang, Z., S.-J. Wei, X. Yu, and K. Zhu. 2017a. "Characterizing global value chains: Production length and upstreamness". NBER Working Paper No. 23261. National Bureau of Economic Research, Cambridge, MA, March.
- Wang, Z., S.-J. Wei, Xinding Yu and K. Zhu. 2017b. "Measures of participation in global value chains and global business cycles". NBER Working Paper No. 23222. National Bureau of Economic Research, Cambridge, MA, March
- World Bank (2021). World Development Indicators. Available at <https://databank.worldbank.org/source/world-development-indicators>.



## Mission

To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

Bringing Rigour and Evidence to Economic Policy Making in Africa

- Improve quality.
- Ensure Sustainability.
- Expand influence.

[www.aercafrica.org](http://www.aercafrica.org)

## Learn More



[www.facebook.com/aercafrica](https://www.facebook.com/aercafrica)



[www.instagram.com/aercafrica\\_official/](https://www.instagram.com/aercafrica_official/)



[twitter.com/aercafrica](https://twitter.com/aercafrica)



[www.linkedin.com/school/aercafrica/](https://www.linkedin.com/school/aercafrica/)

## Contact Us

African Economic Research Consortium  
Consortium pour la Recherche Economique en Afrique  
Middle East Bank Towers,  
3rd Floor, Jakaya Kikwete Road  
Nairobi 00200, Kenya  
Tel: +254 (0) 20 273 4150  
[communications@ercafrica.org](mailto:communications@ercafrica.org)