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Global China and Africa's industrialization aspirations

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This article by Carlos Oya explores the implications of Global China's overseas emergence in the last two decades for Africa's industrialization journey and aspirations, noting the significant impact of Chinese engagement on infrastructure and manufacturing, while emphasizing the crucial role of African policy agency in overcoming structural challenges for sustainable development.

By Carlos Oya

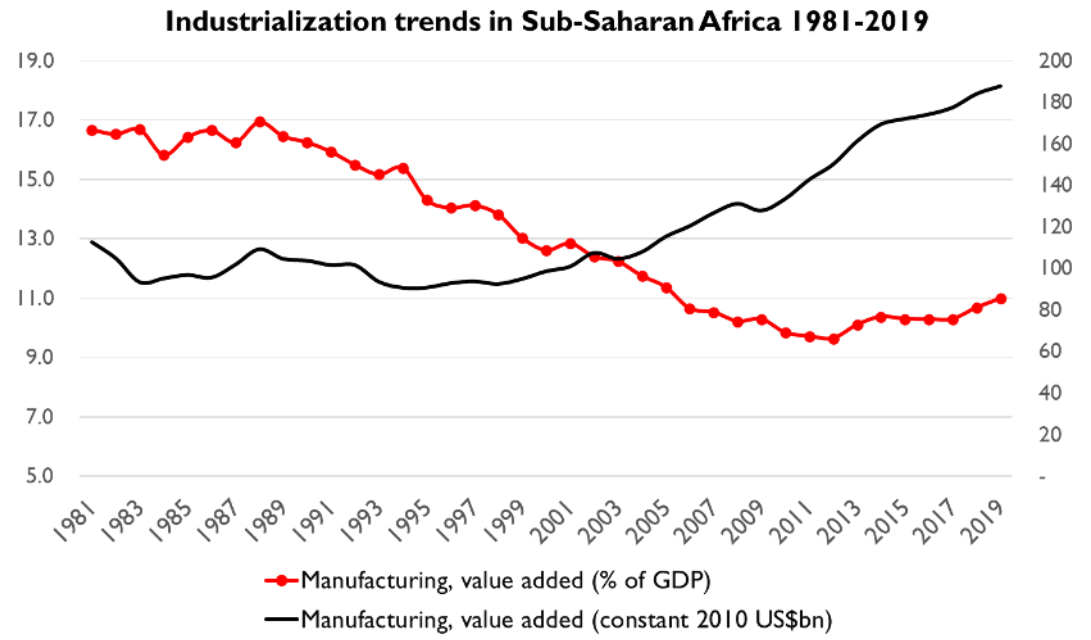
Different perspectives provide different narratives of Africa's industrialization trajectory in the postcolonial period. The conventional wisdom shaped by dominant narratives is that there has been no or very limited industrial development in African countries with the exception of South Africa. There are different interpretations of this sluggish path of structural transformation. Some consider that most African countries do not yet meet the basic structural conditions conducive to sustained industrialization, i.e. a sufficiently educated workforce, low fertility rates (hence higher domestic savings), access to cheaper electricity (Robertson 2022). In Robertson's view, earlier experiences of industrialization in Africa were therefore 'premature'. Other interpretations point to 'premature deindustrialization', as a post 1980s phenomenon after some

promising efforts in the 1960s-70s, driven by premature exposure to global markets, and especially Chinese goods imports, through liberalisation and unmanaged globalization, courtesy of economic policy reforms linked to the Washington and post-Washington consensus, leading to 'reverse structural change', i.e. primary or informal service sectors growing their shares in the economy (Rodrik 2016). Finally, some see African experiences of industrialization as 'thin' in the sense of some success achieved in some countries but primarily at lower-end manufacturing and specific tasks within global production networks for those exporting, and in domestically-oriented subsectors subject to less competition and constrained by small domestic markets (Page 2012). Arguably, the realities of industrialization in African countries are characterised by a bit more variation that these general characterizations suggest (Cramer et al 2020). This variation across countries and over time, suggests some 'bias for hope' a la Hirschman (1971) is warranted, and a need for greater emphasis on the power of policy agency to overcome the classic obstacles to industrialization that most African economies have historically faced (Cramer et al 2020).

Using the term 'contingent industrialization' I refer to the industrialization efforts of African states in the 1960s-70s, characterized by the imperative of reducing external dependence through Import Substitution Industrialization (Lawrence 2020), as well as of the past 30-40 years, when some countries found windows of opportunity to integrate into global production networks (e.g Mauritius, Kenya, Madagascar, Ethiopia) contingent on specific national and global dynamics. This happened at a time when hegemonic neoliberal discourses and practices by powerful Western aid institutions typically reduced the policy space of most African governments, in a way that was especially detrimental to industrial policy. These contingencies, combined with some limited policy agency, would partly explain the significant variation across countries as well as the lack of sustained industrial transformations across the continent.

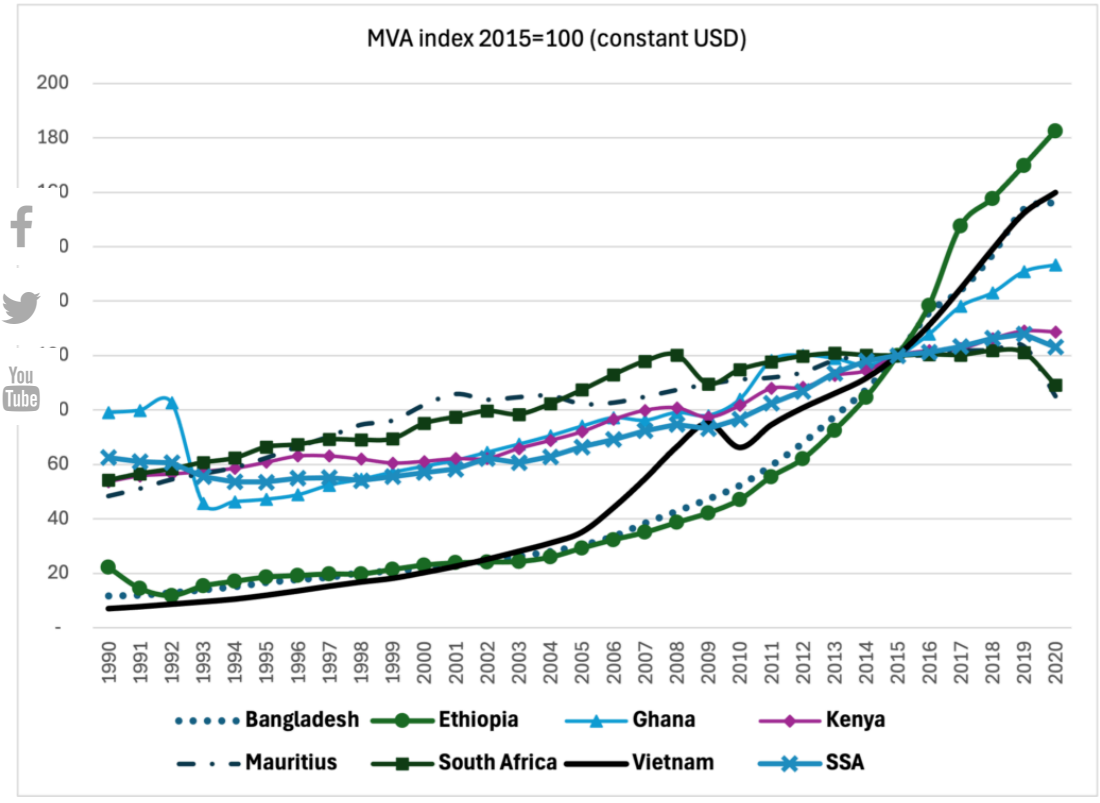
e recently, from the late 1990s onwards, the narrative of industrialization has vacillated veen the opposing lenses of the glass half-full vs. glass half-empty. The chart below trates this apparent contradiction. For example, for Sub-Saharan African economies as a le, from the early 2000s there was stagnation in the manufacturing share of GDP (glass -empty). Yet, during the same period, there was a clear recovery and growth in manufacturing value added in real terms (Figure 1). This aggregate picture masks significant variation across countries. The following chart (Figure 2) illustrates the importance of this variation, with Ethiopia standing out compared to other African countries.

Figure 1. Industrialization trends in Sub-Saharan Africa 1981-2019



Source: Own elaboration from World Development Indicators (World Bank)

Figure 2. Variation in manufacturing growth performance across countries



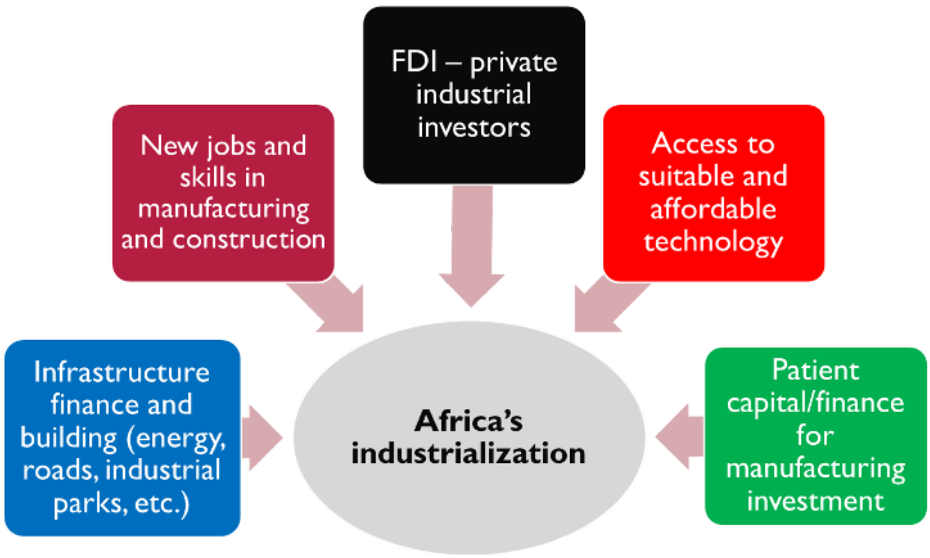
Source: Own elaboration from UNIDO statistics

Global China's contributions to Africa's industrialization

Given the coincidence between this revival of industrialization and industrial policy and the rapid expansion of China's engagement in African countries, it is worth asking whether the two may be somehow related. In other words, has China's engagement contributed to these renewed while limited industrialization efforts across SSA since 2000? To answer this question, we must take into account the significant variation noted above, and the potential vectors of Africa-China

relations that may have contributed to these new trends, particularly visible in some countries. The diagram below summarises these channels.

Figure 3 Key channels of Global China's contributions to Africa's industrialization



Source: Own elaboration

Let's focus here on two of these, namely (a) contributions to infrastructure development, which include the role of new development finance and the rise of Chinese contractors; (b) new FDI to manufacturing sector and related business services, such as logistics, which also come with access to suitable and affordable technology and job and skills creation. It is also important to e these vectors interact with and reinforce one another.

astructure building and development finance

hard not to emphasise the centrality of basic economic infrastructure in any ...dustrialization effort, but particularly three aspects. First, any industrialization process is electricity-hungry. From the first industrial revolution to the last, the availability and use of cheap energy has been a foundational factor. Investments in power generation that result in both lower electricity costs and secure reliable supply to factories are necessary conditions for well-run factories at competitive costs, especially when competing in global markets. Second, lower transport and logistics costs are especially important for exports, given their impact on competitiveness, but also necessary for the development of more integrated supply chains within a country. Investments in expanding the road network, railway, ports, and logistics operations are central to the building of industrial eco-systems, in the past and now. Third, the experience of industrialization in East Asia has reminded us of the importance of industrial hubs. In particular, dedicated industrial hubs/parks to ensure agglomeration economies, intra- and inter-sector linkages and reduce the cost of accessing basic infrastructure also contribute to sustained industrialization efforts. Industrial hubs may also contribute to a more effective management of migrant workforces in a context of rapid social and labour market changes.

Chinese engagement in this area has been undeniable, whether in the form of patient finance dedicated to the development of basic economic infrastructure or as direct contribution to the building and development of strategic infrastructure projects. Chinese contractors' revenues rose from less than US$2bn before 2003 to over US$50bn in the period 2015-2020 before a decline in 2021-22 (https://www.sais-cari.org/data-chinese-contracts-in-africa). This mirrored

trends in Chinese official finance, although Chinese contractors also obtained a rising proportion of their projects from non-Chinese finance institutions (Zhang 2021). The proportion of loans going to power and transport/logistics was close to 65% for the accumulated period 2000-22 https://www.bu.edu/gdp/2023/09/18/a-new-state-of-lending-chinese-loans-to-africa/) . Chinese contractors accounted for over 60% of Africa's construction and infrastructure market by 2019, up from only 10% in 2003, reflecting a dominance that emerged in record time (Zhang 2021).

Access to finance is a basic condition for the development of basic infrastructure needed for industrial revival. In this regard, the first order priority is access to long-term credit lines at favourable terms. This has broadly been the case for much of Chinese finance, coming from institutions like EximBank or CDB. Although not strictly speaking always concessional, there has consistently been significant debt relief, debt management flexibility and adjustment in loan conditions (Acker et al 2020). However, the decline in the volume of funding since 2018 is noteworthy. Maintaining sustained levels of "patient finance" remains critical for Africa's industrialization prospects, because the development of industrial capabilities in contexts of multiple constraints requires decades not years. In this sense, the recent decline in Chinese loans is concerning, even after accounting for debt stress situations. However, even with declining access to Chinese loans, the rapid growth in infrastructure finance and Chinese infrastructure contractors may have laid some foundations for further structural transformation, and indeed contributed to create conditions for local construction material manufacturing to arise as well as to induce further investments in these sectors. The linkages between basic economic infrastructure and industrial development are strong.

Manufacturing FDI

ıese FDI (flow) in Sub-Saharan Africa has shown robust growth in the past two decades, easing from only US$75 million in 2003 to over US$5 billion in 2021 (Data: Chinese stment in Africa — China Africa Research Initiative (sais-cari.org)). In value terms, although struction and mining attracted the bulk of Chinese FDI to Africa, manufacturing accounted a stable and respectable 14% between 2013 and 2021. This is remarkable given that extractive and financial sectors typically account for more than 80% of total FDI in most African countries (Calabrese and Tang 2023). In terms of numbers of investment projects, different studies have suggested the proportion into the manufacturing sector is higher, around 30-40% depending on the country (Calabrese and Tang 2023; Sun 2017; Shen 2015). In Ethiopia, if we consider Chinese firms investing from tax havens (and thus not officially "Chinese") or Hong Kong (sometimes reported separately) the share of manufacturing may go up to 80%. In terms of the type of investors, most studies suggest a majority of Chinese investors target the domestic market rather than relocating to export to global markets (Calabrese and Tang 2023). This is despite expectations that the saturation of China's low-technology labour intensive manufacturing could result in 85 million labour-intensive manufacturing jobs relocating to other LMICs, with the African region as a potential host (Lin and Xu 2019). The 'flying geese hypothesis' (Akamatsu 1962), i.e. when countries are leaders (lead goose) or followers in particular segments of global value chains according to their competitive advantages, is however yet to materialise in African countries, with the exception of cases like Ethiopia, Mauritius or Madagascar, due to relatively low productivity (and higher unit labour costs), high inputs and logistics costs, and variable wages across countries (Jenkins 2019; Brautigam et al., 2018; Altenburg et al 2020). There is clearer positive link between the infrastructure construction boom, partly driven by Chinese finance and contractors, and the growth in local building material industries, including many Chinese manufacturers who saw opportunities and

moved from import business into direct manufacturing production (Wolf 2023). This kind of spillover effect is important insofar as the building materials industry can generate positive linkages with other economic activities and further contribute to economic transformation.

Therefore, the dynamic of Chinese FDI has been a second key vector contributing to *some* development of industrial capabilities and manufacturing growth in the continent. Both FDI into manufacturing and construction, which account for a large share of Chinese FDI, potentially contribute to industrial development, directly or indirectly. Flows have been uneven and not always sustained, given the difficult economic and political environment found in a number of African countries, but a very significant and growing number of countries have received such flows in different measure. When FDI flows into barely developed manufacturing sectors, much depends on the type of activity and company. Key expected contributions include spillover effects, development of manufacturing export capacity, development of local supply chains, creation of industrial jobs, skill development in manufacturing work, and incorporation of new technology and organizational capabilities to the host countries. The strength of each of these vectors hinges on whether firms invest to produce for the domestic market or global markets, whether the activity is labour or capital intensive, whether it requires locally sourced inputs, and if there is enough manufacturing experience and emerging industrial eco-systems in the host country or not. There is a significant variety of Chinese investors across sectors and within manufacturing, and different 'varieties of capital' in this process eventually affect the resilience or not of ongoing industrialization efforts and their associated productive and employment dynamics (Calabrese and Balchin 2022, Lee 2017, Chen 2021). The evidence so far suggests that some of these contributing vectors are either weak or in their very early stages and that a sustained growth in manufacturing investments over a longer period, supported by coherent and forward-looking industrial policies are needed (Calabrese and Tang 2023; Oya and Schaefer 9; Jenkins 2019). In some countries, unsurprisingly, Chinese (and other foreign) ıufacturers have struggled to expand their local supply chains and have remained ıewhat dependent on Asia's production networks, especially when exporting for global kets (Whitfield and Zalk 2020). In the building materials industry, the lack of a strong ugh industrial base has also meant that imports have often fiercely competed with local luction, as in Angola in the early postwar period (Wanda et al 2023). However, there are signs that new eco-systems have begun to emerge, and supportive policies and market dynamics are forcing new investors to make efforts to strengthen linkages, spillover effects and skill development of African workers (Oya and Schaefer 2019; Xia 2021). The arrival of Chinese industrial machinery may also gradually contribute to industrialization efforts through more affordable and suitable technology and capital equipment for emerging small and medium-scale manufacturers in labour-intensive sectors (Chen et al. 2016; Jenkins 2019).

Industrial policy framework

Overall, the combination of infrastructure financing and provision, and Chinese FDI has likely contributed to better conditions for Africa's manufacturing revival, but the long-term impact of these engagements is largely mediated by African agency (Mohan and Lampert 2013), or, more specifically, the existence of a coherent and ambitious industrial policy framework (Whitfield and Zalk 2020). How and what does this mean? The contrast between Angola and Ethiopia is illustrative in this regard. Ethiopia experienced a 'golden' period of industrial policy development and experimentation between the mid-2000s and 2020, which consisted of a number of policy ingredients (Oqubay 2019): (a) a conducive political settlement, with a strong central leadership intent on trying to solve common coordination failures; (b) capacity to discipline sources of finance and steer funding towards priorities set out in various operational plans, e.g. channelling

domestic and external development finance towards industrial hubs and infrastructure for industrial development; (c) focusing on ambitious employment and forex targets while avoiding a 'race to the bottom' (like new "sweatshops"); (e) the latter relied on the capacity to target and discipline investors through reciprocal control mechanisms, and to 'build verticality' by luring large global production network anchor firms (large retail brands in garment, for example) to persuade their top suppliers to invest in Ethiopia; finally, (d) dynamics of policy learning and experimentation before and during the process of policy design, formulation and implementation. Angola, in contrast, did not meet most of these requirements for industrial policy success (Lippolis 2022). In fact, very few countries have managed to even get close to delivering on one or two of these conditions. The history of industrial policy in SSA is one marked by half-hearted attempts, lack of continuity, coordination failures, political obstacles, external hindrance, and weak capacities (Chitonge and Lawrence 2020). While colonial legacies played a role in terms of discouraging manufacturing development, the two decades of neoliberal structural adjustment reforms in the 1980s and 1990s were particularly damaging, halting and reversing incipient efforts to industrialize in several African countries. Even in contemporary Ethiopia, the fragile political settlement since 2020 has put in doubt the viability of the current industrialization model, with or without China's engagement (Lavers 2023).

Furthermore, the process of building an industrial workforce in countries lacking industrialization experience faces multiple obstacles and contradictions, and is likely to be more uneven and slower than expected, despite industrialization's promise to generate large numbers of decent jobs (Oya 2019). Employment dynamics and outcomes depend largely on the particular nature of industrial sectors and their linkages with global production networks. Therefore, the kind of investment and employment dynamics and outcomes associated with Chinese-driven FDI and infrastructure development are very different in Angola and Ethiopia, two
ntries where China's engagement has been particularly intense since the early 2000s (Oya
Schaefer 2019).

clusion

rts to industrialize or to achieve any form of sustainable structural transformation in Africa have met countless obstacles since through the colonial and postcolonial eras. Variation in outcomes, performance, and trajectories, has also been substantial. There is not one single trajectory. This variation also characterizes the relative contributions of Chinese engagements in SSA to industrialization prospects since the early 2000s. It is undeniable that the rapid development of basic infrastructure in power and transport/logistics, and the relatively large share of manufacturing in Chinese FDI have generated positive effects and contributed to creating some basic conditions for initial and further industrial growth. However, available evidence suggests these are still early days, and the process is highly contingent on African policy agency, and on the different economic and political obstacles that continue to hinder further economic transformation.

Carlos Oya is a development economist by training, working on labour relations and employment, economic transformation, development policy, poverty, and research methodology. Carlos recently led a project on structural transformations and employment outcomes in infrastructure construction and manufacturing sectors in Ethiopia and Angola, with a special focus on Chinese firms (www.idcea.org).

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