

# China's Shifting Labour-Intensive Manufacturing Firms to Africa: A Particular Focus on Ethiopia and Rwanda

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## ABSTRACT

The paper brings attention to the vital phenomenon of China's factory relocation to Africa, with a special focus on Ethiopia and Rwanda. Though the theme of this paper is a bit novel, numerous pioneering surveys have already been made by numerous scholars on Chinese investment activities in Africa mostly through pains-taking field research looking at Africa as the host continent. As for this paper, its purpose is to specifically focus on the relocation of light manufacturing factories from China to Ethiopia and Rwanda as well as find out if there can be any possible shift from Asian to African Geese formation within the context of flying geese (FG) theory of comparative advantage, a framework that is useful in understanding the concept of "catching-up economy," relaying as the paper general analytical framework. The paper asks, can the surge in wages in China decisively lead to the relocation of labor-intensive manufacturing firms from China to Ethiopia and Rwanda on a scale substantially sufficient to kick-start their industrialization? Though China's recently retooled strategy has started to make some impact, the present scope of, and the future prospects for, China's industrial relocation are still limited and constrained, owing to both African nations and China's side factors.

## KEYWORDS

Africa, China, FDI, Flying-Geese Model, Labor Intensive

## 1. INTRODUCTION

According to the old saying "Birds of a feather flock together"; so, too, do investors. As such, nowadays, it seems as if "animal spirits", (the "animal spirits" coined by John Maynard Keynes) is reshaping the patterns of the global economy as well as economic growth.<sup>1</sup> Speaking of "animal spirit" in relations to the geese flying in formation, the successive waves of Asian nations achieving economic takeoff and emerging or developed market status, has been likened to those migratory birds in flight. The "Flying Geese Paradigm" or *ganko keitai* (a flock of flying geese), a phenomenon of industrial development in catching-up economies was first conceived of by Japanese economist, Kaname Akamatsu in the 1930s as a way of clarifying East Asian industrial development. According to Akamatsu, the lead goose in the formation was Japan. The second tier consisted of newly industrialized economies – South Korea, Taiwan Province of China, Singapore, and Hong Kong SAR. Following hot on their tails were the ASEAN nations such as Indonesia, Malaysia, the Philippines and Thailand. The most recent inclusion to the flock are India and China.

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Table 1. Comparisons of Model –Summary Table

	Flying Geese Theory		Product Cycle Theory	Neoclassical Theory	The Economic Geography Approach
	Akamatsu	Kojima	Vernon	(Generally)	Puga & Venables
Main Concept	Linkages at industry and country level	Factors of production at country level	Innovation of resources at firm level	Factors of production at country level	Linkages at firm and country level
Driving Force of Development	Demand	Supply	Supply	Supply	Supply and Demand
Country Development	Dynamic: <i>Changing comparative advantage through industrial upgrading</i>	Dynamic: <i>Changing comparative advantage through changes in factor proportions and specialization</i>	Static: <i>Technological and industrial level are static and exogenously given</i>	Static: <i>Technological and industrial level are static and exogenously given</i>	Dynamic: Forward and backward linkages at firm level interacting and creating dynamics
Product Development	Static: <i>No focus on product innovation</i>	Static <i>No focus on product innovation</i>	Dynamic: <i>Innovation at firm level creates a dynamic product development path</i>	Static: <i>No focus on product innovation</i>	Static: <i>No focus on product innovation</i>
International trade	Moderate protectionism	Free trade	Moderate protectionism	Free trade	Free trade

Source: Mee Lie (2012)

According to this model, economies tend to be leaders or followers in particular parts of global value chains depending on their level of costs and skills (Akamatsu, 1962). The flying geese theory describes the sequential order of the catch-up process of industrialization of latecomer economies. The theory involves a process where one economy can lead other economies towards industrialization, passing older technologies down to the followers as its own incomes soar and as it shifts into newer technologies (Akamatsu, 1962, p.11). More so, the flying-geese theory stresses interactive growth through emulative learning among nations operating at diverse phases of growth along the ladder of economic development – a powerful catalyst for industrial upgrading (Ozawa, 2011). Similar patterns of industrial transformation and formulations are found across theories (see Table 1).

Summarizing major differences and similarities between the four different theoretic models. The main differences lie in dynamic versus static, and demand versus supply driven development

With that said, several developing economies have attempted to catch up with Western economies that took 300 years and Japan less than 100 years to innovate and industrialize but only a handful of economies, mostly East Asian Tigers who took only four decades to catch up have succeeded (Lin, 2011). Entering the 21st century, other emerging economies such as Brazil, India, Indonesia, People Republic of China (PRC) and a number of other large emerging economies attained dynamic growth and emerged as the driver of worldwide growth in a novel multipolar globe (Chandra et al., 2013). Also, there are some list of low-income economies that keep increasing and are about to be part of the ‘club’.<sup>2</sup> Nevertheless, other lower-income economies, with more than one-sixth of humanity –the people referred to as the ‘bottom billion’ a term coined by Oxford economist Paul Collier – continue to be trapped in poverty.

The past decades have seen several notable changes to the Chinese economy. As a result, since the past four decades of China's economic reforms and opening up, the nation has been industrializing at a speedy pace, while at the same time increasing its presence in the Asian economy. Yang and his co-authors assert that by 2000s, China has turned out to be the leading worldwide exporter in 774 items and was ranked among the top five exporting economies for 1,972 other items (Yang et al., 2006). More so, China's manufacturing boom is still unbroken – soaring nearly sixfold between 2004 and 2017 (from US\$625 billion to US\$3,591 billion) and reaching one-quarter of the world's manufacturing value-added (Altenburg, 2019).

Nonetheless, the explosive growth, at least until now, had been motivated primarily by low wage manufacturing of consumer products. However, that is changing because the cost of production in China's coastal factory belt has started to soar. Hourly manufacturing wages have surged by 12 percent yearly since 2001, and productivity-adjusted manufactured wages almost tripled from 2004 to 2014 (Gill, 2017).

As a result of this phenomenon, China will have to move the industrial ladder, like Japan did in the 1960s and Korea did in the 1980s – a “graduation” that will free up large manufacturing employment opportunities for lower-income economies, and mark China's conversion from the flying goose it once was in the footsteps of other Asian economies into a leading dragon in its own right (Lin, 2012). Lin (2011) argues that if China moves up the value chain, it will shed up to 85 million jobs in the manufacturing sector. Lin added that in a similar way, Japan lost 9.7 million jobs in the 1960s and Korea nearly 2.5 million jobs in the 1990s due to soaring wages and production costs. The Chinese economy will undergo the same (but much larger in the figure) procedure.

As such, the Chinese government has to generate an extra incentive as a way of encouraging China labor-intensive firms to start shifting to less competitive locations via the “going out” strategy. This “going out” strategy that has led to Chinese outward investment flow is influenced by the “push factor” in China, plus the surge in actual manufacturing wages. As a result, more ‘mature’ firms in Eastern China, where manufacturing is concentrated and wages are higher are most likely to be among those that start to relocate (Hou et al. 2017). These investments would be ‘resources-seeking’, as they aim to benefit from resources like labor and other inputs, which are available at lower costs in the host economies (Calabrese et al., 2017).

Part of this offshoring could find its way in Africa because the continent is currently seen as a potentially attractive destination due to its largest pool of labor. On top of that, the average monthly worker's wage presently stands at US\$325.24 in China, with a yearly surge in 2014 that topped 20 percent, compared to less than US\$100 for most African nations (Brautigam et al, 2018a). Also, wages for skilled workers in China are set to surge four-fold in a decade. Meanwhile, in order for African nations to capture this opportunity, there is a need for African nations to strengthen their policy agenda that favor the manufacturing sector because a robust and thriving manufacturing sector usually precipitates industrialization which in turn, can solve the unemployment situation African nations are facing. And this is the reason why “industrialization has been identified as one of the pillars that will drive social and economic structural transformation in the next five decades” (Shimeles and Ncube, 2015).

Against this background, a much-polarized debate on how China affects industrialization in Africa has ensued. On the one hand, China is seen as blocking the stepladder to industrial development by outcompeting African manufactured goods (Kaplinsky, 2008). On the other hand, as stated by Justin Lin above, China is seen as a ‘golden opportunity’ for industrialization in Africa as its own industrial upgrading frees up jobs in labor-intensive manufacturing, which – combined with an increasing number of Chinese investments and infrastructure projects in Africa – could ignite local industrialization (Lin, 2012). However, can Chinese investment inject some Asian-tiger vigor into Africa? This is indeed the hope of many – plus former World Bank President Robert Zoellick. In 2008, he urged Chinese firms to invest in Africa's manufacturing base by going beyond infrastructure and resource-extractive projects in which China had already been extensively engaged.<sup>3</sup> As a result,

China's response came in late 2015 during the FOCAC meeting in South Africa when the Chinese leadership mentioned a series of novel inducements to bolster industrial ties with African nations. So, this offers an unprecedented opportunity for African economies to jumpstart their industrialization.

In order for the continent of Africa to make this occur of which Ethiopia, Rwanda and Tanzania are part of, they need to know that the secret winning tactics will be to exploit the latecomer advantage by building up industries that are snowballing dynamically in more developed economies that have endowment structures similar to the diverse economies in Africa. By following carefully chosen lead economies, African economies can emulate the leader-follower, flying geese pattern that has served well for all successfully catching-up economies since the 18th century (Lin, 2011). Africa clearly sees the need for the further development of manufacturing sector because for every manufacturing job generated, 1.6 service jobs follow<sup>4</sup>; this indicates that manufacturing investment has a big multiplier effect that can create a spark to ignite African economies. As such, the paper evaluation is that China will make an important contribution in backing the continent host economies to build desired infrastructure (mostly physical) and establish some labor-intensive factories in a small number of chosen host African economies, but that it will be a long way off to see the viable industrial shoots sprout for sustainable development in Africa.

## **2. HISTORICAL CONTEXT OF CHINESE INVOLVEMENT IN AFRICA'S MANUFACTURING**

Historically, China and Africa have been friends. Friendship at the official level dates back to the founding of modern China. At that time, China cultivated friendships with several African nations and provided moral, financial and political support to them for their liberation struggles and fights for independence. Since then, bilateral relationships between China and Africa have blossomed of which Chinese manufacturing investment is included. The Chinese manufacturing investment that started a long time ago is the best hope that the continent of Africa has to industrialize in this generation.

Historically, there has been a long history of Chinese engagement in the African manufacturing sector. Brautigam and her co-authors recall how Chinese investment in the manufacturing sector in Africa date back as far as the 1960s, when numerous Shanghai and Hong Kong business families invested in Nigeria shortly after Nigerian independence. The authors added that these Chinese firms later dominated the production of enamelware, plastic sandals, and building material (Brautigam et al., 2018a), and they also provided an avenue for early Chinese investors to enjoy a market with less fierce competition. As for Gu (2009), he discovered that some Chinese private company started with trading and later shifted to established factories for manufacturing. This created a huge opportunity for Chinese investors investing in light and textile industries in Nigeria to establish an early-bird advantage (Song, 2011; Suisheng, 2014). The factor responsible for this move is based on the attraction of African markets and the competitive pressure of the Chinese market.

The front runners of Chinese manufacturing investment in Africa include individual and family entrepreneurs of bamboo capitalism. Their involvement clearly reflects the fact that following the market reform of 1978, China's industrial modernization started with the privatization of business activities in which rural and urban entrepreneurs were permitted to set up their own profit-seeking businesses outside the state-owned system under the slogan of "making money is glorious" (Ozawa, 2015). Private businesses grew like bamboo shoots all over the nation, and recently came to be relocated to the continent of Africa by millions of Chinese migrants and settlers. Most of them belong to the entrepreneurial category of poor individuals who have experienced harsh life in China.<sup>6</sup> In the mid-1950s, each of the Chinese new immigrants that moved to the continent of Africa is an architect helping to shape and promote the Sino-Africa relationship. They were able to accomplish this, in part, by helping to build networks that loop back to their home nation, channeling goods and products and capital via informal circuits that very often escape official control or even accounting. As such,

Ozawa affirms that no wonder during this period, statistics on their investment activities in Africa were so hard to get (Ozawa, 2015).

Apart from individuals and family entrepreneurs' settlers that were the vanguard of China's manufacturing investment on the continent, other early Chinese investors that reshaped the continent's manufacturing sector were from state-owned enterprises (SOEs) that had been engaged in official development assistance projects in the continent but also foreign direct investments (FDI) (Song, 2011; Ozawa 2015; Brautigam et al., 2018a). The experience from Chinese SOEs was of huge assistance to their success in doing business in the continent of Africa. These Chinese firms were more job-intensive, which localize quicker and which have a much larger economic and social impact. Notably, the Chinese family multinationals' phenomenal expansion overseas has happened only recently since emigration restrictions were removed at the end of the 1990s. During this period, the Chinese government started more proactively to engage in extending economic cooperation through concessionary loans for, and state-backed FDI in, resource extraction and infrastructure as the Chinese need for natural resources speedily rose over the course of modernization of its heavy and chemical industries at home. China's engagement with Africa thus turned out to be strongly driven by its own economic interest.

Furthermore, Song (2011) claims that during the 1990s, the numerous Chinese folks from the Northeast of China that moved to the continent of Africa had a strong foothold on the continent mainly through their personal efforts. The author added that this group of Chinese entrepreneurs were very competent and had the influence. Although most of them were only able to speak Chinese, but they had superior business and entrepreneur skills. They had engaged in trading activities between China and Russia and Eastern Europe in the late 1980s and early 1990s after the disintegration of the former Soviet Union and Central and Eastern Europe. When an order was gradually restored in Russia and Eastern Europe in the late 1990s, it was hard for these businessmen and businesswomen to find a long-term foothold there, so some of them went to Europe and North America, while others went to Africa, particularly South Africa, Zimbabwe, and Nigeria. Presently, these Chinese family multinationals make up the majority of Chinese businessmen and businesswomen in Africa in terms of total figures.

At the turn of the 21st century, a novel generation of Chinese private enterprises started to invest in the continent of Africa. This was an era in which private enterprises from the Chinese mainland moved to Africa. The first wave was the traders from Zhejiang and Jiangsu Province motivated by the Sino-African trade. The second wave includes several manufacturing enterprises. Finally, the most recent group were the enterprise encouraged by the China-Africa summit in 2006.

As stated earlier, most of the Chinese who went to the continent of Africa in the 1980s were individual businessmen and businesswomen. Some of these recent Chinese businessmen and businesswomen and their local production in Africa is a calculated move to take advantage of the preferential trade programs that permit the continent to export apparel, duty-free, to the European and the United States market (Ozawa, 2015). The world investment report (UNCTAD, 2010) notes: "This [strategy] has been the case especially in the textile and clothing industries, with [multinationals] from China, Hong Kong (China), Singapore and Taiwan Province of China are among the most active investors" in the continent (UNCTAD, 2010, p.34).<sup>7</sup> For example, there are some proofs that in the past, ethnic Chinese served as catalysts for industrialization in Mauritius and Nigeria (Brautigam, 2003). Rauch and Casella (2003) claim that the ethnic Chinese networks surge bilateral trade between China and Africa economies, with a large effect on trade in diverse goods. Additionally, the authors offer a theoretical model in which social or ethnic networks, by information-sharing, can advance the allocation of resources and surge the volume of trade under incomplete information.

In Africa, information sharing and contract enforcement are even more vital, since African economies' regulations, language and customs are little known in China, and official channel to get such information are very limited (Song, 2011). As such, the overseas Chinese network and other networks can be anticipated to play a very vital role in the investment of private companies in Africa. As a result, there was an ethnic connection between the Chinese and Chinese-Mauritians whose

ancestors had immigrated a long time ago.<sup>8</sup> Chinese-Mauritians had been instrumental in persuading the government to established Export Processing Zone (EPZ) in the first place,<sup>9</sup> by moving to Asia, inviting co-ethnics from Taiwan, Hong Kong, and Malaysia to establish a joint venture together.

These ethnic Chinese businessmen and businesswomen from Singapore, Hong Kong, and Taiwan invested heavily in the textile industry in Mauritius and were attracted to export targeted production in the host economy's successful EPZ, particularly during the 1980s (Alter, 1991). Ethnicity-based business links are clear evidence as all these Asian economies organized Chinese ethnicity-based commerce in Africa (Ozawa, 2015). From Brautigam perspective, these investments exposed Mauritians (both Chinese and non-Chinese) to the intricacies of worldwide production and export processes, leading to dynamic, export-oriented manufactured expansion. She added that in the case of Nigeria, Nigeria businessmen in the eastern Nigeria town of Nnewi used their links to Chinese trading networks (mainly Taiwan) to help in the transition from importing auto spare parts, to producing them, generating a small industrial accomplishment. She concluded that in both cases, local business networks forged connections with the network of Asian capitalists, leading to the speedy establishment of a vigorous local manufacturing base (Brautigam, 2003). The Mauritians and Nigerian cases signify that significant, positive externalities can result from linkages made possible when Chinese business networks link with the business network in Africa, or with Chinese who have made Africa their home.

These ethnic Chinese investments had been prevalent and dominant before they were joined by mainland Chinese investments after the “going global” strategy that was adopted in 1999. Nonetheless, in fact, the latter overtook the former sometime in the year 2001–2015, initially supported by the Chinese government. Due to the “going global” strategy, Chinese companies have been establishing manufacturing companies in Africa. Chinese economic development particularly the development of the manufacturing sector, has offered not only a good training base for the Chinese enterprises to build up their own advantages, but also a robust backdrop for their outward investment (Song, 2011), this has propelled the Chinese investment in the manufacturing sector in Africa.

Data from Song (2011) shows that between 2006 and 2008, 41 Chinese companies were investing in Zimbabwe, Zambia, Nigeria, South Africa, Ghana and Congo, and 29 of them were recognized as solely owned private manufacturing companies and 8 joint ventures. Almost all the companies that were established were producing for domestic markets: “bags, medical saltwater, textiles and clothing, building and construction materials (such as doors, steel, and windows), and beverages” (Song, 2011). In late 2010, Chinese firms were assembling sewing machines in South Africa, motors in Angola, batteries in Mozambique, manufacturing plate glass in Ethiopia and Zimbabwe, producing polythene bags in Ghana, and ethyl alcohol in Benin (Brautigam, 2009). These are all instances of industries aiming at domestic and regional markets. Brautigam (2009, p.58–59) gave a good illustration of how Chairman Li Peng sent 125 Chinese business delegation to Mauritius in 1999 as a way of building a closer business network between the two nations.

In another incident, Brautigam discussed how a Chinese firm known as Shanxi Province Tianli Group, Limited invested over US\$10 million to open a cotton yarn spinning in Mauritius to supply export firms with locally made raw material in 2000. Also, a private Zhejiang company, Hazan Shoes, set up a novel factory in Lagos in 2004 with a US\$6 million investment; large Chinese tanneries opened in Uganda and Ethiopia. Brautigam asserts that by 2005, there were 45 percent of Chinese companies willing to invest in Africa manufacturing. Brautigam and her co-authors recall that by 1999 China has started investing in the light industry, but there were also significant concentrations in electric appliances and spinning and weaving. Also, the market for black and white televisions in South Africa was dominated by Chinese products assembled locally by a Chinese company, Shanghai Guangdian firm.

Brautigam and her co-authors added that before the current boom precisely between 1979 and 2001, there was already a significant mainland Chinese presence across the continent of Africa. These Chinese companies had already established 230 manufacturing investment (plus North Africa). The

African economies where these investments were located are Mauritius who received 20 investment projects, Nigeria received 33 investment projects, Ghana received 17 investment projects, Zambia received 17 investment projects, Kenya received 21 investment projects, and South Africa received the main share of 83 investment projects. More so, the Zhejiang-based Yuemei Group, a private textile manufacturer established 10 clothing factories and sales offices in Cameroon, Mali, Senegal, Tanzania, and Togo (Yuemei Group, 2014). Nonetheless, in 2000, the firm eliminates its intermediaries and establish its own office, China-Nigeria Textile Company Limited, in Lagos, Nigeria.

The move gave the firm access to Nigeria's enormous textile market and its profit margin surged from 5 to 40 percent in a single year (Shen and Zhang, 2009). Chinese firms from Guangdong Province produced ethyl alcohol in Benin, sewing machines in South Africa, motors in Angola, and batteries in Mozambique. A Zhejiang-based company, Hassan Shoes, has produced a quarter of its output in Nigeria since 2006, and a Chinese factory is producing paper in Tanzania. The pioneering Chinese white products company Haier produces household appliances in Angolan factories with 700 employees. Since 2005, investors from Henan Province have filed the Guoji [international] Industrial Entry Zone in Sierra Leone, where factories produce mattresses, roofing tiles, and hair lotions in a factory zone jointly established by the local government and Henan Gouji Industry and Development Corporation (Brautigam, 2009, p.54-55). The numerous instances compiled above by the various experts, therefore, display how actively Chinese investment in Africa has been shifting towards the manufacturing sector for the decades.

However, there are divergence views regarding the relocation; on the one hand, optimists maintain that the unparalleled scale of relocation of Chinese manufacturing could foster economic structural transformation on the African continent and in other parts of the developing world, as a surging youth population enters their labor market (Lin, 2011). Sceptics, on the other hand, contended that relocating manufacturing jobs from China to the continent of Africa will not happen unless roads, power supplies, and ports are adequate. Also, they contended that relocation to low-wage developing nations like African nations is unlikely to happen unless there are political stability and policy consistency. Without putting in place this soft and hard infrastructure, low-wage developing nations like African nations might lose the opportunity of industrial upgrading and economic transformation. Hence, realizing this great potential requires effective policy levers to put the right conditions in place. Therefore, based on this divergence views and by employing the FG theory of comparative advantage the paper asks: can we clarify the emergence of a Chinese manufacturing operation in the continent of Africa, with China as the "leading goose" and African economies as its "follower geese"? It is in this context we offer an overview of the flying geese theory, the paper general analytical framework.

## 2.1. Theoretical Framework

Since this paper is mainly theoretical, it adopts the flying geese theory as its framework of analysis. It has been considered fitting and suitable for the subject under investigation due, basically, to the fact that a 'flying geese' model talks about how a more advanced nation (the 'lead goose') opens the market space, transfers capital, technology, and management skills to a less developed nation (a 'follower goose') and so facilitates their economic structural transformation which is in line with the theme of this paper. Also, since the paper does not use experimental designs, it, therefore, relies on information based on archival materials and theory. Therefore, documents related to the relocation of China's FDI in low skill-manufacturing to Africa are important for this study to come to sound conclusions.

Notably, since 2000, particularly at the onset of the 2000 global financial crisis, the global economy has entered a new era with the rise of contending centers of economic and political powers. Within the confines of the theory, over the past decades, the concept of Kaname Akamatsu Flying Geese (FG) theory of comparative advantage has become a popular analytical framework that postulates a multi-tier hierarchical pattern to describe how industrialization spreads. The major driver in the model is the technological development due to increasing labor costs that make the "leader's

imperative for internal restructuring” (Kasahara, 2004, p.10) as its own income rise and it moves into newer, more capital-intensive, technologies. This is the process by which technology and know-how become obsolete and are passed down the chain of latecomers’ economies.

The FG pattern centers on three dimensions of stages: (i) the intra-industry dimension, (ii) the inter-industry dimension, and (iii) the international division of labor dimension. As for the third stage, the stage specifically considers the sequential transformation of economic activities that involves the process of relocation of industries across economies, from industrialized nations to less-industrialized nations through the snowballing role of transnational corporations (sub-contracting, licensing pact, joint venture, FDI etc.) in parallel with the dynamic shifting in comparative advantage pattern, during the later process of convergence.<sup>10</sup> A prominent feature of this stage is that exports of consumer products start deteriorating and economies start to export their capital products. In this stage, a group of economies advanced together through emulation and learning-by-doing.

As for the sequential transformation of economic activities, Ozawa (1991) affirms three kinds of orderly sequencing of economic activities – multi-sequential – within and among a group of national economies (as summarized by Kasahara (2004). Product sequencing of a particular product (or a product group) is the first kind (see Widodo (2008) for details). Industrial-cycle sequencing of economic development is the second kind. The continuing development of industries together with the national economy’s changing factor and technology endowments affect the nation’s comparative advantage. It also means that the nation changes its production activities (and export), from the lower value-added, more labor-intensive and less capital industries, to the higher value-added, less labor-intensive and more capital-intensive industries. The shift from consumer goods to capital goods reveal a signal of the structured and orderly process to generate self-sustaining and self-propelling forces along the dynamic path of comparative advantage. Inter-economy sequencing related to the orderly transfer of industrial activities among national economies along the regional hierarchy is the third kind. These industrial transfers will be done in those following economies that have attained the resources and technological capacities most suitable to the transfers.

The FG pattern was able to assist Asian economies specialized in the export of goods in which they enjoy comparative advantages through FDI and other outsourcing activities from higher-developed Asian economies to lower-developed ones down to the East Asian hierarchy of economies (Kwan, 2002). Bearing in mind, each round of this comparative advantage relaying brings about the kick-starting of local industrialization – by way of step-up labor-intensive production for export that was followed by a sharp rise in labor costs and currency appreciation, which in turn induced factories to relocate overseas.

The idea of FG pattern that was also viewed as the economic theory of an essential Japan’s (a lead goose) economic assistance to developing economies (follower geese - newly industrializing economies (Hong Kong, South Korea, Taiwan Province of China, and Singapore) and then the Association of Southeast Asian Nations – ASEAN-4 (Thailand, Malaysia, the Philippines, and Indonesia) (Okuda, 2002) first emerged as a manufacturing power in the 1960s, when Japan started exporting electronics and consumer goods, followed by the Asian NIEs. Notably, Akamatsu formulated the paradigm based on Japan experiences in catching up with the Western nations. Similar to the lead goose in a V-shaped formation, Japan was the first nation to launch late industrialization and hence became the most advanced economy in the region. It occupied the highest end of the regional supply chain, while other nations took on lower-level production. In exchange, lead economies transferred capital and technology to laggard economies, thereby assisting them in the process of industrial catch-up. In other words, the flying geese model describes a division of labor that can generate mutual benefits among unevenly endowed nations.

With that said, by the 1980s Japanese firms were building plants across Southeast Asia. China became the most attractive location of the Factory of Asia since its implementation of opening up and reform in the late 1970s. Asia’s contribution to the global manufacturing output surged from 26.5 percent in 1990 to 46.5 percent in 2013. Among which, China accounts for half of Asia’s manufacturing



output. In the meanwhile, Asia's share of the worldwide trade in intermediate inputs – the goods that are eventually assembled into final products for exports to the advanced Western market – rose from 14 percent in 2000 to 50 percent in 2012 (The Economist, 2015).

However, since 2000, the low-end manufacturing in China has been deteriorated by the aforementioned soaring labor costs in China. Apart from the increased wages, China has also seen a number of its other operational cost rise, making basic manufacturing less attractive financially. China has a vast buildup of low-wage factories, and is even known as 'the workshop of the world'. As of 2019, the labor force of China, which refers to the population aged 16 and over and capable of working, stood at about 811 million,<sup>11</sup> the largest in the world. China has the most extensive experience in the world in low-cost production. But surprisingly China has been experiencing labor shortages, rising wages which has caused firms to move or relocate inland or to neighboring nations as China's comparative advantage in low-end manufacturing gradually wanes (Ozawa, 2015).

Chinese migrating "geese" shifting out of an increasingly high-cost environment could be a novel generation of the "flying geese" or even, as Justin Lin Yifu puts it, "leading dragon" (Lin, 2012). If China moved 10 percent of its low-end industrial activities to SSA, 16 million jobs will be generated, kicking regional growth similar in fashion to what occurred in China (Ozawa and Ballak, 2011). If the right policies are implemented, this kind of employment generation and industrialization notion from Justin Lin Yifu would have a phenomenal impact on the host African nations and continent at large.

The FG model is vital in modern thinking about industrialization in two ways: (1) it emphasizes the role of FDI in capital development in developing nations; (2) it highlights the possibilities for industrial interlinkages between advanced and advancing nations in such a way that developing nations are not just confined to raw material exports. How about African economies that are growing because of either commodity exports or debt-fuelled government consumption? To answer this question, Munyi claims that Africa growth through commodity export or debt-fuelled by government consumption cannot be sustainable unless the capital accumulation leads to upgrades in the export structure – industrialization (Munyi, 2020). As UNCTAD's key statistics and trends in international trade reveals, numerous African nations display either a strong decline (5–50 percent) or a very strong decline (over 50 percent) in their export sophistication (UNCTAD, 2020a, 20).

Furthermore, Munyi contended that since the flying geese model is a geographically contiguous theory, one might have expected Africa to have been the biggest beneficiary of Europe's low-level manufacturing FDI transfers, as represented mostly by textile manufacturing. However, if one takes textile and apparel manufacturing as an example of low-level manufacturing technology, it seems that either Europe has an enormous frontier within itself for transfer of low-level production, or European low-level manufacturing flies over Africa to Asia, mainly to China. The author added that due to China's overwhelming attractiveness, Africa has not been a contiguous beneficiary of European low-level manufacturing. Rather, the geese keep flying over the continent of Africa. Also, owing to the general Chinese domination of FDI coupled with an emerging reluctance or slowdown in developed nations' transfer of low-level manufacturing, African economies might continue to be heavily dependent on commodities exports, which suggests little actual structural transformation (Munyi, 2020).

No doubt that the continent of Africa is heavily reliant on commodities exports making the entire continent stuck with low-level industrialization. The African Union (2014) cited from Ozawa (2015) emphasizes on this fact:

*Africa's industries remain the world's least competitive and productive. The Manufacturing Value Added (MVA) as a percentage of GDP, the measure of the contribution of the manufacturing sector to GDP, remains very low in Africa between 12-14 percent. As regards to the percentage of World Manufacturing Value Added, Africa stands at 1.5 percent compared to East Asia, 17.2 percent; Latin America, 5.8 percent; North America, 22.4 percent; Europe, 24.5 percent [No] nation or region*

*globally has attained prosperity and decent socio-economic conditions for its people without the development of a strong industrial sector.*

And this is the very reason why “industrialization has been recognized as one of the pillars that will drive social and economic structural transformation in the next five decades (African Union (2014, p.2). The continent of Africa clearly sees a need for the further development of the manufacturing sector. Therefore, as China tries to relocate its labor-intensive manufacturing firms from China to Africa, can China use this opportunity to change African commodity reliance syndrome and use its FDI in low skill-manufacturing to trigger Africa industrialization takeoff?

As such, another vital question is whether China’s shifting into Africa’s manufacturing, if it happens on a significant scale, will it be another similar outcome of the sequence of cross-border industrial relocation East Asia has gone through in the past, and substantial enough, and in such expeditious a manner, to trigger an industrial takeoff? Above all, have they actually started to spark local industrialization in any African host economy? It is in this context the paper finds out in section 3 and 4 of the remaining part of the paper.

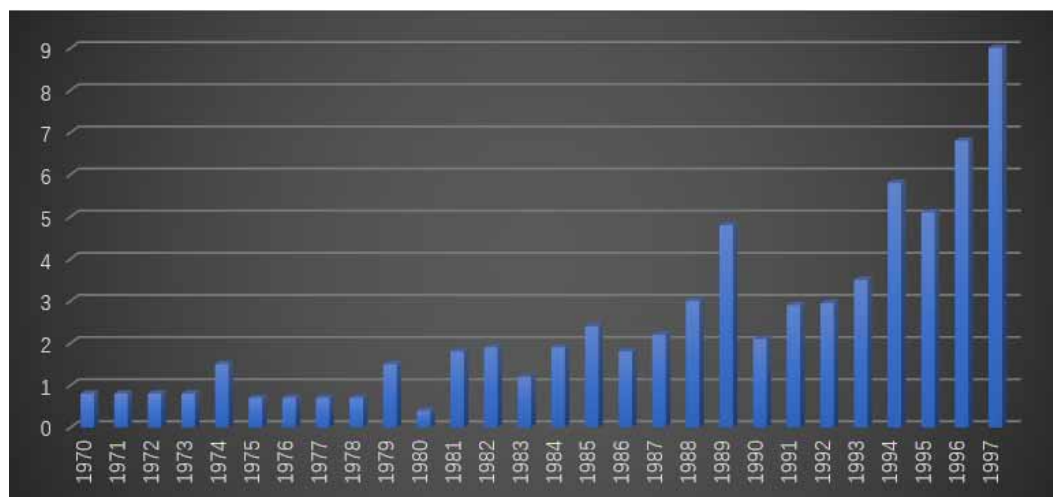
### **3. CAN CHINA’S FDI IN LOW SKILL-MANUFACTURING TRIGGER AFRICA’S INDUSTRIAL TAKEOFF?**

The part of the paper tends to find out if the Chinese method of shifting manufacturing firms to the continent of Africa will take a similar form as that of the East Asian method that created a structural booster and helped East Asian economies experience a move from a ‘frog-style jump’ to a leopard-style leap transformation. Confirming this, Ozawa (2015) affirms that the relocation of labor-intensive firms (e.g., textile and sundries, and more recently, assembly of consumer electronics products) has led to the quick surge in the share of industry GDP that led to a sequential pattern of growth spread across the East Asian economies.

As for the continent of Africa, over the past decades, Western economies have made a significant amount of FDI across the continent of Africa – still without triggering a decisive industrial takeoff or economic growth in Africa. Economic growth in Africa has been low, as the real gross domestic product (GDP) per capita surged by an average of only 1,5 percent a year during the 1980s and by 0.4 percent a year between 1990 and 1994 (UNCTAD, 1999a).<sup>12</sup> Growth for the whole of Africa has lagged behind that for other developing regions, with economic stagnation or even decline of output characterizing the experience of several African economies. From 1990 to 1994, for instance, 15 African economies had a negative average rate of growth (UNCTAD, 1999a, p.1). In spite of a certain stabilization of inflows since 1994 at the highest level than at the beginning of the 1990s (see figure 1), Africa is still struggling to make up for the ground it lost during much of the 1970s and 1980s.

Traditional Western investment did not trigger decisive industrialization takeoff and economic growth maybe because traditional Western investments in Africa are mostly of the colonial genre that is envisioned to extract natural resources and exploit local markets for Western nations goods and services – and purposely to discourage industrialization for the fear of competitors overseas (Ozawa, 2015). Simultaneously, China’s economic engagement has been equally criticized as no dissimilar from the past Western colonialism. With China relocating its low skill-manufacturing, African nations now have a crucial opportunity to attract investment in the higher value-added, export-led manufacturing that is essential for their industrialization and development. Nonetheless, the question is whether this novel wave and focus of China’s FDI in low skill-manufacturing can trigger the continent’s industrialization takeoff or can we see a leading-dragon follower-goose formation in Africa-China cooperation or we are going to witness another Western scenario that could not trigger industrialization takeoff for the continent?

Figure 1. FDI flows into Africa, 1970-1997



Source: UNCTAD, (1999a)

As the US-China trade war intensifies and relations between other liberal democracies and Beijing deteriorate due to everything from intellectual property (IP) theft to human rights violations in Xinjiang and the eroding away of Hong Kong's autonomy, many globally-renowned companies are deserting China. Coronavirus-related sales slumps and supply chain disruption, as well as rising production costs, have also hastened the exodus. Speaking of rising wages, rising wages for unskilled workers and ageing in China signals that low-cost manufacturing may begin to lose its competitive limit<sup>13</sup> Both foreign multinationals located in China and Chinese manufacturers that are engaged in labor-intensive production in China are therefore pushing for a dramatic wave to relocate to new low-cost destinations. The relocation formed part of what is frequently referred to as China's "economic rebalancing". However, the net effect of this shift on the prospects for a new wave of labor-intensive, manufacturing-led development in Africa, a continent with plentiful labor supply and cheap wages, is that it will open up new development pathways for Africa structural transformation and industrial takeoff (Wenjie et al., 2016).

From oil to cocoa, cotton to vanilla, Africa is rich in natural resources but its heavy dependence on commodity exports means it has yet to take full advantage of the added value that processing raw materials and manufacturing can bring. The last decade has seen progress, with manufacturing growth in Africa outpacing the global growth rate. In 2019, Africa's industrial GDP expanded by 17 percent to \$731 billion (in 2010 dollars), with the value-added of manufacturing surging by 39 percent (AfDB, 2020). But Africa's industrialization is geographically limited, with around two-thirds of value-added manufacturing taking place in just five nations: Algeria, Egypt, Morocco, Nigeria, and South Africa. In 2020, progress has been reversed by the COVID-19 pandemic, which has upended economic growth, disrupted trade and financial flows and triggered losses of millions of jobs. The economic and social impact of the pandemic has injected more urgency into the drive to industrialize Africa, just as the African Continental Free Trade Area is set to reshape the continent into a singular market of 2.5 billion people by 2050 (AfDB, 2020).

Structural change is a prerequisite for economic development. Climbing the ladder up from agriculture to manufacturing and service industries is what pulls countries out of poverty (McMillan et al. 2014: 11). Shifting resources from low productivity to high productivity is a key driver of economic growth (Page 2012), especially in Africa where there still lies high growth potential in such shifts. It is the speed of structural transformation which differentiates successful from unsuccessful nations

(McMillan et al. 2014: 11). The shift of industry from high income to developing nations was one of the most significant changes in the world economy within the last decades. China has highly profited from investment from developed nations that acted as a booster for the nation's industrial takeoff.

The 1999 World Investment Report (UNCTAD, 1999b) points out that FDI is of major importance to economic development.<sup>14</sup> FDI provides financial resources and links to export markets. Furthermore, an inflow of foreign capital may contribute to the upgrading of both managerial and technological effectiveness and improve human capital. This way FDI may trigger industrialization in developing nations. Albeit a significant FDI inflow is no necessary condition for economic growth, the theory is borne out by actual facts. Some of the newly industrialized countries in South East Asia, like Malaysia, Indonesia, Singapore, as well as Hong Kong experienced significant economic growth along with relatively high inward FDI levels during the 1990s. The same did Argentina, Brazil and Poland. Unfortunately, the theory is also supported by a dearth of growth on the African continent in combination with the lowest FDI levels.

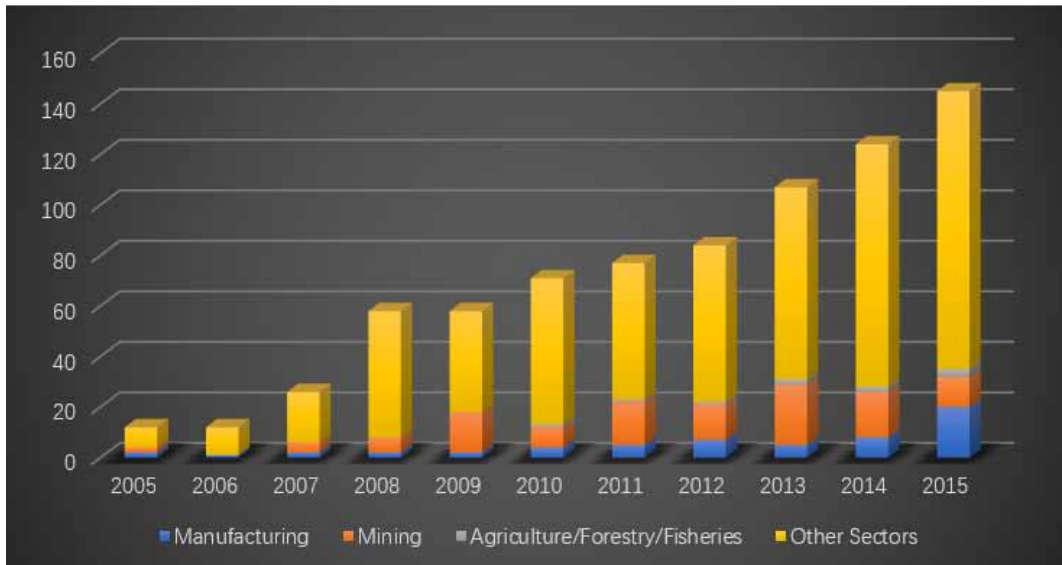
It is worth mentioning that the experiences of the various nations listed above, the lack of growth on the African continent and the 19th century industrial growth in Europe, as well as in the United States, described industrialization as a regional phenomenon. So, while globalization has offered industrialization opportunities to Asia and Latin America, in the 1980s and 1990s Africa suffered the most severe process of deindustrialization in the developing world (Lall and Wangwe, 1998). The Structural Adjustment Programmes implemented in the 1980s and 1990s largely achieved macro-economic stability but did not enable African nations to adopt export-oriented policies designed to enhance firm capabilities, which was exactly what the Asian nations were doing in the new era of globalization. Africa's marginalization in manufacturing Global Value Chains (GVCs) is evidenced by its trade patterns of commodity export-oriented. This has a huge negative effect in unlocking Africa's "value-added" industrial potential.

As such, there is a need for an urgent policy that will help African nations to change this trade pattern. As a result, policies to promote value addition need to be implemented together with policies to raise productivity and product quality in the natural resource sector. Raising the output of the commodity sector enabled the processing industries to reach adequate economies of scale, and governments to sustain investments in ancillary research and technological upgrading (Reinhardt, 2000). Expansion of natural resource is thus part of the industrialization effort. This is because the industry is supposed to be the leading driver of structural change processes in both theory and history.

In economic statistics as well as in the popular imagination, manufacturing is often associated with industrialization (Page 2012: 8). The objective of industrial policy is to change a nation's economic structure in order to support the manufacturing sector. But why is manufacturing worth supporting at all? A long tradition in economics argues that the manufacturing industry plays a critical role in growth, especially in low-income countries. The historical pattern for poor nations has been that the share of manufacturing rises rapidly as workers move out of agriculture and growth occurs (Weiss and Jalilian 2016: 26). The Hungarian economist Nicholas Kaldor has described the manufacturing sector as the engine of growth due to three laws: 1) the manufacturing sector is the engine of GDP growth, 2) Productivity drives the growth of the manufacturing sector and 3) productivity of the nonmanufacturing sector is positively related to the growth of the manufacturing sector.

Therefore, as Africa faces a double blow of the coronavirus pandemic and low commodity prices, it needs Chinese investment most especially in the manufacturing sector in the post-COVID-19 era to bounce back. Before COVID-19 pandemic, Chinese investment in manufacturing expanded from textiles and apparel to industries such as auto, home appliances, and building materials. Also, before COVID-19, Chinese FDI annual flows to Africa, also known as OFDI ("Overseas Foreign Direct Investment") in Chinese official reports, have been increasing steadily since 2003. From 2003 to 2019, the number has surged from US\$ 75 million in 2003 to US\$ 2.7 billion in 2019 (SAIS-CARI, 2021). As for Chinese investment stock in manufacturing, as of the end of 2011, China's cumulative investment stock in the manufacturing sector in Africa grew 10 percent year-on-year to US\$2.4 billion,

Figure 2. Chinese Annual FDI Outflows by Productive Sector (Manufacturing, Mining, Agriculture and “Other”), US\$ billions.



Source: Brautigarn et al (2018b)

and by the end of 2012, Chinese FDI in manufacturing in Africa amounted to US\$3.43 billion, with over a third of this invested between 2009 and 2012 (Brautigam et al., 2018b) (see figure 2 of the breakdown on sectors of foreign investment). In 2013, China Council for Promotion of International Trade (reported by Xinhua news) mentioned that Chinese firms manufacturing investment in Africa “accounts for over 30 percent of the entire Chinese investment”, almost double the investment in the mining sector.”<sup>15</sup>

In another study conducted in 2014, out of the seventy-five Chinese companies operating in Kenya, the study counted in five manufacturing companies. In terms of greenfield projects from 2003-2014, both the largest share of Chinese capital investment, and the largest number of projects were in manufacturing. Investment in manufacturing by privately owned Chinese firms has surged from only 2 in 2000 to over 150 in 2016 (Irene, 2017). For the first time, a 2016 official report published data on the sectoral breakdown of Chinese FDI in different regions, which proposes that manufacturing is presently the third largest sectors of Chinese FDI in Africa (see table 2), accounting for 13.3 percent of Chinese total FDI stock in Africa, or US\$4.63 billion in stock values (Brautigam et al., 2018b). About a third of the 10, 000 Chinese firms operating in Africa are involved in manufacturing, with a breakneck growth rate of 40 percent (Sun. Jayaram and Kassiri, 2017). Investment by the Chinese in Africa has usually been associated with natural resources or services but with manufacturing now being more prevalent industrialization might be a growing possibility.

The above data reveals that Chinese investment in Africa has been mounting, nevertheless, the pandemic has put a temporary hold on that affecting the general FDI flow to the continent. According to UNCTAD (2020b), FDI flows to the continent are forecast to contract between 25 percent and 40 percent based on gross domestic product (GDP) growth projections as well as a range of investment specific factors. Manufacturing industries intensive in global value chains are also strongly affected, a sign of concern for efforts to promote economic diversification and industrialization in Africa. So, for nations like Angola and Gabon, which sell more than one-quarter of their total national exports to China, diversification is key. On the other hand, for African nations that want to industrialize but are short of electricity supply but rich in renewable energy potential, China’s Green New Deal may be an opportunity for a timely and sustainable win-win – and one that helps African nations industrialize

**Table 2. Top Five Sectors of Chinese FDI in Africa, in Terms of FDI Stock in 2015**

Sector	FDI Stock (US\$ Million)	Percentage in Total FDI Stock
Mining	9,540	27.5
Construction	9,510	27.4
Manufacturing	4,630	13.3
Financial Services	3,420	9.9
Science, Research, and Technology Service	1,460	4.2
Total	28,560	82.3

Source: Brautigam et al., 2018b

and leapfrog the world's earlier dirty model of development. For Africa's net resource importers, China's increasing loss of low-wage labor over the coming years may be better news especially for those on the coast, like Kenya – that are best positioned to push forward their own industrial sector, alongside services and agriculture.

Indeed, with a new set of conditions and challenges, there will also be new opportunities. Therefore, with the introduction of the Chinese Belt and Road Initiative (BRI) and the current five-year plan that will create a new flying geese pattern, China is interested to invest in Africa's manufacturing sectors through its relocation of more labor-intensive – and capital-intensive industries to some nations along the BRI of which Africa is part of over the next decade, upgrading their industrial structure and improving their level of industrialization along the route. As a result, a new flying geese pattern will be established, but this time with China in the lead of the flying V-shaped formation. This will help China completely exploit “economic complementarities” of nations along the BRI route in the process as it establishes supply, industrial and value chain that promotes trans-Asian, trans-Europe, and trans-Africa economic integration.

Based on the above analysis, it is worth mentioning that in the era of globalization that involves interdependence and convergence, emerging economies are compelled to interact, for the reason that the interaction among people, firms, and the government of diverse economies are unavoidable. This is because the channel of interaction can create opportunities for synergistic growth. In that case, if this opportunity is seized through the channel of interaction by African economies, they could well be on the cusp of a 20-century style industrial revolution – generating substantial employment opportunities, fostering the inflow of technological and financial resources which will eventually help the host African nation's industrial transformation and economic take-off. The question now is, how can Africa grasp this opportunity to trigger the continent's industrial takeoff?

Africa is a vast continent with vast and rapidly increasing population estimates of over 1.2 billion which will double by the year 2050 (United Nations, 2017), which is an expected growth of 42 million people. This is an enormous advantage for Africa in terms of bolstering the continent labor-intensive sector. However, many African nations are not well equipped to take such a Chinese investment even if it were on offer. This is because, even though labor is frequently considered as one of the motivating factors of industrial relocation. However, labor is not the only factor these Chinese migrating geese are seeking; other inputs also make an investment destination attractive. Such inputs are what Africa is lacking. For instance, African nations rank low on a number of other factors that influence investment, such as the overall cost of doing business affected by the quality of roads and ports, the reliability of electricity infrastructure, the degree of political instability, and the level of excessive bureaucracy and corruption. For instance, in Ethiopia, high labor turnover and public protests are already challenging the success of the novel export industries. All these challenges are forcing Chinese firms to choose factory locations in the host nation that are politically stable with less challenges and nations that are

friendly to them. As a result, the Chinese firms automatically concentrate their new manufacturing FDI in only a few host economies because the potentially promising locations are presently limited.

Davis (2015) affirms that Africa has not lay similar foundations for industrialization that its Asian counterparts did in the 1970s and 1980s. The Asian economies lay a good foundation by adopting both pro-growth and pro-poor policies and established suitable institutional setups to attain equality, as epitomized in the practice of “shared growth” (Ozawa, 2005). As for Africa, the “latecomer challenge” now lies in building the necessary infrastructure, institutions and skills-based to attract the investment. Bearing in mind that African economies did not foresee the China-driven commodity super-cycle of the past decade and therefore did not completely leverage the opportunity it presented for its resource sectors. This clarifies why foreign multinational enterprises, let alone China, have not yet seriously advanced into other African economies apart from few African economies China has moved to in search of low-cost labor.

Apart from the above factors, Ozawa and Ballak (2011) cast doubt on China relocation to Africa because of China-side factors. Some of the China-side factors they talked about include the fact that they think China’s own hinterland is large and still relatively poor, which means factories seeking lower-cost destinations can find them inland, before leaving to look overseas. They added that China’s own vast interior appears more attractive than any other new destination they might relocate to. As such, they think the Chinese government seems not to be in a hurry to give up labor-intensive industries to African nations or any other nations due to the Chinese government policy of restraining its currency’s appreciation against the dollar and the Chinese government feels the dismantling of labor-intensive industries to other location might still be useful to solve the unemployment problem in China. Making a similar statement, Gill (2017) affirms that we should not bet on seeing China giving out manufacturing jobs any time soon. He claims that the only way China can relocate its manufacturing will be under the condition that manufacturing wages in China rose to the level close to those in high-income economies. Gill concluded that this would also likely mean that Chinese output must have increased drastically, and under plausible assumptions, that in turn it, would mean that much fewer manufacturing workers would be required to fulfil worldwide demand for manufactured products.

Based on the above claims by experts and since China is in its early stage of relocation, will it be capable of replicating the same feat as Japan? Notably, in spite of the importance of China in Africa and its intention to relocate its labor-intensive industries to low-cost destinations like Africa, Chinese firms’ investments alone obviously cannot organize a flying geese formation for Africa. Other nations’ participation - especially foreign multinational enterprises from advanced nations’ - need to be secured. After all, China’s own initial FDI-driven growth in low-skill manufacturing itself was made possible by the massive inflows of FDI and outsourcing operations from foreign multinational enterprises in advanced nations, notably the ethnic-Chinese Asian NIEs (concentrated in labor-intensive production), Japan, the United States and Europe (not just in low-end but also in high-tech sectors).

Sure, some of these foreign multinational enterprises from advanced nations began to relocate their business activities overseas from China - but not much yet to Africa. On the other hand, ethnic-Chinese Hong Kong, Singapore, and Taiwan’s multinationals have been active in Africa, helping mainland China’s firms set up and run factories in the course of building supply chains in textiles and apparel. Nevertheless, the world’s largest contract manufacturer, Foxconn (a subsidiary of Taiwan’s Hon Hai Precision Industry Company) employs as many as one million Chinese assembly workers for Apple, Sony, Microsoft (XBox), H.P., the United States teleconferencing platform Zoom that has skyrocketed in popularity during coronavirus pandemic and other major consumer electronics firms has not yet shown any sign of relocating their factories to Africa, even though the kind of jobs most of them offer (i.e., assembly works) is exactly what low-wage African hosts need and have a comparative advantage in.

True, there are sporadic media reports that foreign multinational enterprises from advanced nations are increasingly setting up shop in Africa. Several major manufacturing brands like H&M, Coca-Cola, GE, Pepsi, Nestle, Toyota, Ford, Hyundai Mobis, Hyundai Motor, Kia Motors, Mercedes

Benz, and Renault, along with major IT firms like Microsoft and Google, are already noticeable in Africa. These are eye-catching developments as they are reported in the media, but have hardly sparked local industrialization. They are mostly intended to capture local markets, not manufacturing for export. In other words, they promote consumerism, but not much industrialism, and are basically of the market-seeking kind - and actually the wrong kind for the initiation of an FG-formation in Africa.

Therefore, as a follower-geese, it is imperative that Africa now identify the upcoming shift driven by market forces in China's manufacturing sector to give impetus to African industrialization and beneficiation ambitions. Africa ties with China should no longer just be about attracting state capital but also about private investment, especially in manufacturing under the relocation of the light manufacturing process. This main point should increasingly inform the policy of those African economies that seek to move beyond resources and diversify their economies by building nascent industries and manufacturing sectors. This will help the continent of Africa to be well prepared not only in accepting new industries transferred from China, but also being left by industries, which might be reallocated to the next follower geese.

The key success in attracting novel industries and keeping established industries operating in the domestic economy is by creating more comparative advantage than the other nations. It relates with how nations prepare and invest where it counts most, such as high-end power system to power infrastructure and industries, high skills and education, health services, large-scale investments that count like smart infrastructure, taxation, industrial cluster, create low cost in doing business, provide competitive factor prices, a better quality of factors (including human resources) and other aspects of human capital like research, development and extension. All these need to be targeted and complemented by tailored strategies and policies to lead to inclusive and sustainable industrial development. Nevertheless, as China's own experience displays, overseas investment is one way that economies learn to produce the goods that will eventually permit them to shift to leading positions in value chains. As such, the vital question is whether this novel and focus of China's FDI in low skill-manufacturing have happened substantially enough, and in such expeditious a manner, to trigger an industrial takeoff. Have they really started to spark local industrialization in any African host economy? It is in this context we turn to section 4.

## **4. CASE STUDY DISCUSSIONS**

### **4.1. Any Substantial Evidence In Any African Nation?**

The important policy question in this context will be to see if Chinese manufacturing firms have started relocating to Africa. The continent of Africa's recent strong economic growth has been matched by economic and social transformation, keeping the continent commodity-dependent and reliant on the informal sector for jobs, with high inequality and poverty (ECA, 2014). Volatility in the prices of natural resources and agricultural commodities has put at risk the economic and fiscal plans of many resource-dependent governments. As envisaged by recent Africa-wide strategies, the economic structural transformation would permit a shift of resources into higher value activity – strengthening linkages with research and development and reinforcing regional integration – in a manner that supports manufacturing. This is because manufacturing has the highest multiplier effect of any sector. For instance, for every dollar spent in manufacturing another US\$1.81 is added to the economy, and for every manufacturing worker, there are another four employees hired elsewhere.<sup>16</sup> In recent data, manufacturing contributed US\$2.33 trillion to the United States economy in the first quarter of 2018.<sup>17</sup> Indeed, shifts in manufacturing can affect the larger economy significantly. As such, higher value manufacturing is the clearest route for African economies to pursue job-generating growth and modern agriculture and services, which would bolster continental integration and promote sustainable development.



Research indicates that premature deindustrialization is prevalent in developing nations, due to the failure of some economies inability to develop their manufacturing sector (Dasgupta and Singh, 2006; Amirapu and Subranmanian, 2015; Rodrik, 2015; Ghani and O'Connel, 2014). As such, for any nation to develop, investment in the manufacturing sector is very important to create a higher standard of living as well as make industrialization a possibility. Most of Africa's raw minerals (plus petroleum) are exported, without any refining or smelting, to higher income economies where capital and energy-intensive processing takes place (Fessehaie et al.2016).

To significantly transform African economies from the current low-income level to middle-income status, value addition must be imperative to Africa's large reservoirs of natural and agricultural resources via processing and manufacturing activities – implicit in the transition process from predominately agrarian to industrial economies. Speaking of agrarian, the African agrarian sector has grown around 4-5 percent over the last decade, but this growth is largely derived from an area expansion, rather than a productivity improvement (Xiaoyun, 2014). This is due to the absence of significant industrialization in much of the continent of Africa, and it has led to the continent's missed opportunity for more robust, diversified and sustainable economic development. As such, it will be better for Africa to engage with stakeholders and link with policymakers, development agencies, business communities and other key parties, globally, regionally, and nationally, to share the vision and the approach for capturing Africa's window of opportunity to industrialize. Africa's window of opportunity to industrialize can be seen from the case of snowballing cost of labor in emerging economies, particularly China.

Speaking of China, China has a vast buildup of low-wage factories; its rise as a “world factory” since the late 1970s has been attributed to the strategic coupling of local assets, particularly the low-cost labor in the coastal regions, namely, Pearl River Delta (PRD) and Yangtze River Delta (YRD) in the Global Production Networks (GPNs) driven by transnational corporations (TNCs)'s a cross-border investment. Since 2000, these export-led regions have encountered unprecedented challenges, especially the rising cost of labor, land, shortage of labor, policy changes, and shrinking market demand of western advanced economies, which have engendered the relocation of labor-intensive manufacturing firms from China to lower-cost locations.

Having itself been a “follower goose”, China has started to graduate to higher-value industrial production and will relocate both inside and outside the nation, low-wage manufacturing as it strives to move up the ladder of economic development and become a “leading dragon”. Africa stands to benefit from the outsourcing of lighter manufacturing businesses from China to African Special Economic Zones (SEZs). Global Value Chains (GVCs) and Special Economic Zones (SEZs) could improve Africa chances to win a fair share of the several jobs that need to be relocated from China and reverse Africa's declining share in manufacturing.

Irene (2017) believes that Chinese investment could assist Africa to industrialize and lift some African economies out of poverty. This is because the West has been sending aid to Africa for years with uncertain impacts on per capita income (Moyo, 2009), but the numerous Chinese migrating “geese” that are setting up manufacturing firms in the continent of Africa, could have a transformative impact on the continent per capita income. Brautigam and her co-authors discovered that these Chinese investors have started moving to some African nations such as Rwanda and Ethiopia. The authors affirm that these Chinese firms do fit the model of Akamatsu's “flying geese” – large, export-oriented firms looking for a novel environment for manufacturing as part of global networks and value chains (Brautigam, 2018a).

The promise of Chinese manufacturing relocating to Africa increasingly appears like a real possibility. Chinese car factories assemble in South Africa. Mainland footwear firms have expanded into Ethiopia. Chinese entrepreneurs have opened textile plants in Rwanda and other operations across the continent (Irene, 2017). But it may be too soon to proclaim Africa the world's next factory. According to a new study by researchers at Peking University's Center for New Structural Economics and the Supporting Economic Transformation program at the Overseas Development Institute in

London<sup>18</sup>, few Chinese manufacturing firms are relocating abroad. And if they are relocating abroad, for instance, Africa, is there a preferred destination? Notably, some Chinese entrepreneurs are already migrating to Ethiopia and Rwanda. So, if they are already in these African nations, then, it is in this context the remaining part of this paper specifically focus on the relocation of light manufacturing firms from China to Ethiopia and Rwanda and find out if there can be any possible shift from Asian to African Geese formation.

Notably, this case study is limited to Chinese FDI in the manufacturing sector in Ethiopia and Rwanda because, Rwanda and Ethiopia are among the numerous African nations to receive a significant amount of Chinese FDI in the manufacturing sector and they are placed among the leading hosting nations in Sub-Saharan Africa (SSA). Also, Chinese FDI in Rwanda and Ethiopia has become by far the prime source of external investment, outpacing the traditional investor of the United States (EOM, 2018; Tadesse, 2015). In addition, over a decade, Chinese firms have been the leading source of development projects in Rwanda and Ethiopia; hence, in 2018, approximately 1239 Chinese projects were registered by the Ethiopian Investment Commission (EIC), among which 70 percent were concentrated in the manufacturing sector (Zhang et al., 2018). As for Rwanda, investments from China were worth \$59 million in 2018, and the government is aiming to increase it to at least \$100 million<sup>19</sup>.

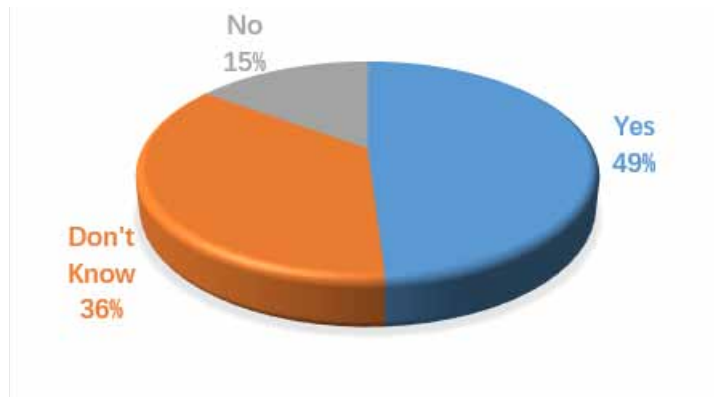
In March 2017, there were 45 registered Chinese investments in Rwanda and since then, many more Chinese firms have invested in Rwanda. Some of these firms are stationed in the Kigali Special Economic Zone (KSEZ), one of which is the Chinese Candy & Helen (C&H) Garments (“China’s Xi Jinping,” 2017).<sup>20</sup> Consequently, some scholars and World Bank proposed that FDI flows into developing nations such as the recent wave of some medium and small private Chinese firms becoming the leading investors in Rwanda and Ethiopian manufacturing sector have an imperative for sustainable development through improving industrialization in the manufacturing sector (World Bank, 2016; EOM, 2018; Megbowon et al, 2019). However, there is uncertainty about their impact on Rwanda and Ethiopian economies i.e., whether the Chinese firms create jobs and transfer skills to locals. Therefore, an investigation is worthwhile.

## Ethiopia

In March 2014, *Time magazine* published an article entitled ‘Forget the BRICS: Meet the PINES’. PINE is an acronym for the Philippines, Indonesia, Nigeria, and Ethiopia, accounting for over 600 million persons. The author notes that for the last fifty years the continent of Africa has generally stood on the sidelines as the continent of Asia and others in the developing world have made enormous welfare gains. Nowadays, at last, Africa is beginning to make gains. And nowhere is this truer than in Ethiopia. Once synonymous with impoverishment, the nation has enjoyed strong management and maybe on a novel course. The author concludes by musing whether we are not seeing the emergence of Lion economies in the continent of Africa, the equivalent of Asia’s Tigers of the late 20th century. Ethiopia is Africa’s second most populous nation and it occupies a highly sensitive geopolitical position. It is worth mentioning that since the 2000s, the nation’s distinctive development path has made it emerged as one of the fastest-growing economies in the continent of Africa. With the nation’s spectacular leaps on multiple development fronts, its economic performance does indeed deserve attention. Nevertheless, as for the manufacturing sector, the nation’s manufacturing sector is still far from being an engine of growth and structural transformation.

The nation’s manufacturing sector plays a marginal role in employment generation, exports, output, and inter-sectoral linkages. In order to reverse this, the Ethiopian government thinks attaining *Vision 2025*, a plan to make Ethiopia the leading manufacturing hub in Africa that requires a yearly manufacturing growth rate of 25 percent and a surge in manufacturing’s share of GDP to 20 percent by 2025 (Oqubay, 2018) is imperative. Against this backdrop, Ethiopia, with dreams of being a textile and apparel manufacturing hub, has striven to attract FDI to the nation, since it brings much-needed financial capital, efficient technology, and managerial expertise that could improve the productivity

Figure 3. Planning to stay in Ethiopia for the next ten years and more



Source: Derived from World Bank and cited from Jabson, 2019

of local firms in the form of spillover effects in particular and sustainable wealth in general. This is timely, knowing that Chinese manufacturers, facing rising costs at home, are well aware of Ethiopia's intention and advantages: cheap labor and land leases; low-cost and reliable electricity in Addis Ababa, where most manufacturing is sited (with more to come soon as a series of hydroelectric dams turns the nation into an exporter of electricity); easy access to cotton, leather, and other agricultural products; and proximity to key markets in Europe and the United States.

This elucidates why there is a small but significant sample of Chinese migrating "geese" that have moved their labor-intensive activities such as garment and shoe production to Ethiopia, planning to stay in Ethiopia for a decade or more, increasing their investment in Ethiopia (see Figure 3 and 4) and focusing more on the manufacturing sub-sectors in Ethiopia (see Figure 5). Notably, due to its labor-intensive nature, garment production for export is normally one of the earliest activities to offshore when labor costs start to soar during structural transformation. So, garment producers are the first Chinese migrating "geese" to migrate overseas. In this regard, Ethiopia is one of the brightest spots that has succeeded in attracting China's manufacturing FDI in labor-intensive shoe production for export. In fact, Brautigam is quoted as saying in 2014 that "Ethiopia could turn out to be the China of Africa".<sup>21</sup> Undoubtedly, Ethiopia displays an early sign of success in attracting China's FDI – and

Figure 4. Planning to increase investment in Ethiopia

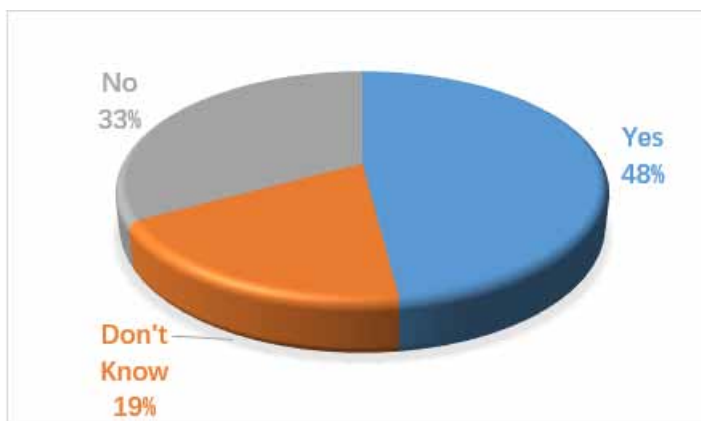
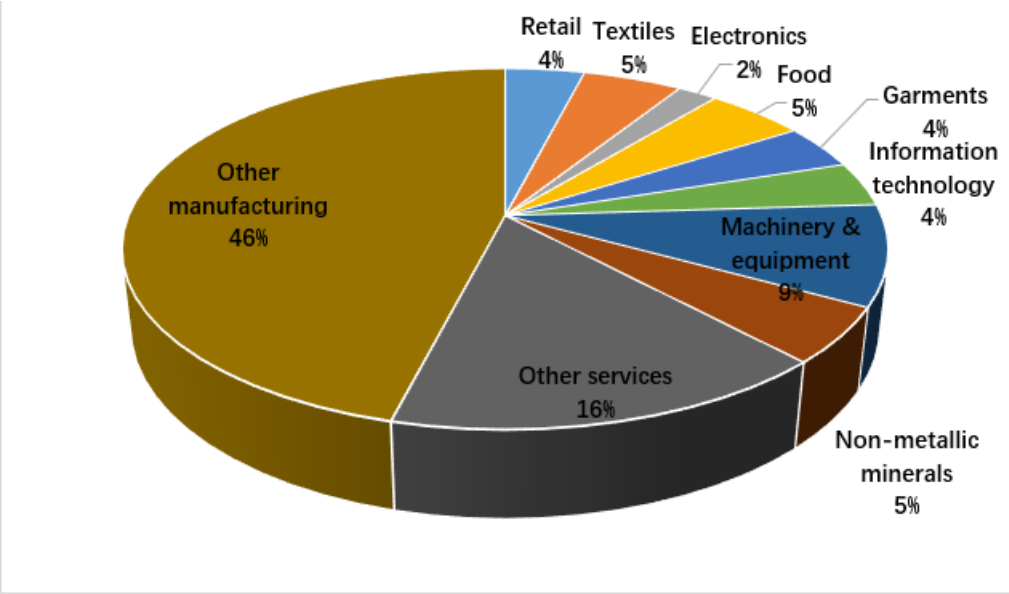


Figure 5. Manufacturing and service sub-sectors of Chinese firms in Ethiopia, excluding construction firms



Source: Derived from World Bank and cited from Jabson, 2019

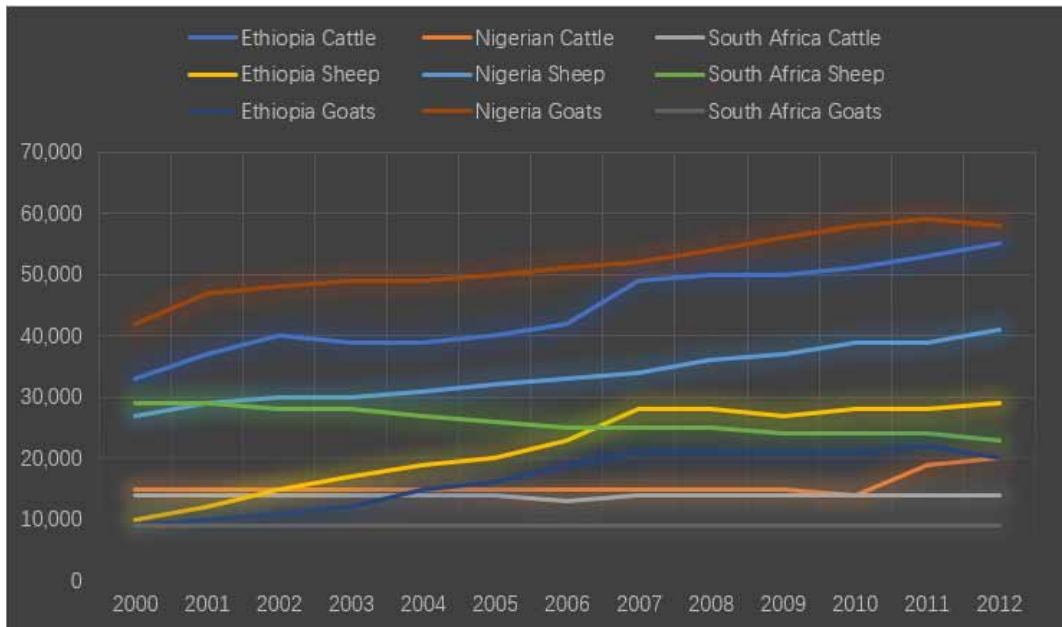
in this sense, the nation’s recent FDI situation is similar to China’s in the early 1980s immediately after China’s reform and opening up period.

The reason why Chinese firms are moving their labor-intensive activities such as garment and shoe production to Ethiopia is that they aim to benefit from resources like labor and other inputs such as raw materials, which are available at lower costs in Ethiopia. Ethiopia is highly endowed with livestock populations; ranking top ten nations in the world, and ranking first in Africa (See figure 6). It has over 55.03 million heads of cattle, over 27.35 million sheep, and over 28.16 million goats (CSA, 2013). Ethiopia goat and sheepskins are well known for their superior quality. On top of that, Ethiopia wage rate of the footwear industry is an eighth to a tenth of that in China, about one half of them in Vietnam, while its labor productivity is about 70 percent of that in China (nearly like Vietnam), as such, Ethiopia is highly competitive in the footwear and garment (Ozawa, 2015).

Ozawa added that in 2010, employment in the footwear industry was 19 million in China, 1.2 million in Vietnam, and 8,000 in Ethiopia. Informed by the findings, late Ethiopia Prime Minister Meles Zenawi went to Shenzhen in August 2011 to invite Chinese footwear manufacturers to invest in Ethiopia. A Huajian designer visited Addis Ababa in October 2011, convinced by the opportunity and opened a shoe factory in the Oriental Industrial Park near Addis Ababa in January 2012. The firm vision is bold. As such, within one year of inception, Huajian had more than doubled Ethiopia’s footwear exports. The firm now employs 2,500 people in the nation, 90 percent of who are local (Jobson, 2019).

Huajian started building its light industrial park in 2015 because of China’s Belt and Road Initiative, which has been hailed by the Ethiopian government as farsighted with global significance. Today, the two Huajian factories together offer direct employment to over 7000 Ethiopian people (Xinhua, 2018). Unlike other shoe manufacturing FDI, Huajian group puts great effort in training local staff. New workers without experience in manufacturing industries need to participate in the pre-work training programme, and regular on-the-job training sessions are provided to employees. In addition, the firm also regularly selects a group of young Ethiopian university graduates (normally

Figure 6. Trends of Livestock Population



Source: Fitawek and Kalaba, 2016

several hundred) and sends them to the headquarter in Southern China for training. Back in Ethiopia, some of them will also have the opportunity to take managerial positions in the firm. It is believed that such forms of on-the-job training are important in removing cultural barriers, conveying corporate culture, as well as upgrading local technological and managerial capabilities (Tang, 2019).

The firm is keen on taking full advantage of the opportunities Ethiopia affords. Therefore, Huajian, which produces shoes for Guess, Tommy Hilfiger, Naturalizer, and other Western brands at its Dukem factory, hopes within a decade, Ethiopia will become a global footwear industry hub. As such, the firm feat in writing the 'Africa-China relations narrative is by no means an accidental opportunity. Changing 'Made in China' to 'Made in Africa' needs multiple supporting factors, including the inputs supply and competence of the firm, as well as the commitment from both Chinese firms and the host government. Nowadays, together with the China-Africa Development Fund, a private equity facility, Huajian has committed to invest \$2 billion over the next decade to create a "shoe city" that will accommodate as many as 200,000 people, as well as factory space for other footwear, handbags, accessories and components producers. The firm thinks that this will make Ethiopia the future manufacturing hub of the world and a base for exports to North America and Europe"<sup>22</sup>. They intend to do this by creating a 341-acre light manufacturing industrial zone (with a new shoe plant, apartments for workers, a "forest resort" district, and a technical school) that can provide jobs for around 100, 000 Ethiopians with the firm itself giving about 50, 000 jobs in Addis Ababa folks by 2022 (Hamlin et al., 2014).

Since 2014, Ethiopia has open four giants, publicly owned industrial parks, with several others in the pipeline. In the coming years, the nation plans to have built 30 more industrial parks (Altenburg, 2019). Meanwhile, the China-Africa Development Fund is a co-investor in the various industrial parks.<sup>23</sup> Chinese manufacturing venture such as Huajian is not really the kind of firm that is organized by individual migrating entrepreneurs or family multinationals independently. Rather, they are established by large well-established Chinese firms and usually subsidized by the Chinese government (for example, through credit at home) as the *new* genre of China's manufacturing FDI

that is intended to improve its prevailing unfavorable image and to make itself acceptable for the African host economies. Also, as wages increased in China, New Wing from Hong Kong and George Shoes, whose owner is from Taiwan but with operations in China, opened a new production base in Addis Ababa in 2014. The two factories coupled with Huajian export to the United States through international shoe agents like Solano and Brown Shoes. Brown Shoes was particularly influential in assisting to pull the above two companies to Ethiopia (Brautigam et al., 2018b).

As for Huajian company, its success has had an increasing effect in attracting FDI to Ethiopia. The twenty-two factories units in Bole Lemi, a novel industrial park, were leased out in just three months in 2013. The Ethiopian government's proactive approach and interventions to establish the Economic Cooperation Zones (ECZs) designed to offer adequate infrastructure in selective locations in attracting foreign direct investment bore further fruit. Phillips-Van Heusen Cooperation (PVH), the second-largest apparel firm globally, select Ethiopia as the base for its novel business model of a completely vertically integrated, from the ground to finished product, socially responsible supply chain. PVH came to lead a group of its top suppliers to build factories and a fabric mill in Ethiopia's Hawassa Industrial Park (HIP). The construction of HIP began in July 2015 and the park was inaugurated on 13 July 2016. Within a year, on 4 March 2017, one of HIP's tenants had exported HIP's first dress shirt (Mihretu and Llobet, 2017). Ethiopia has shared its pioneer experience with Rwanda, Tanzania, and Senegal. Delegations from other African nations have also visited to learn from Ethiopia's experience.

## **Rwanda**

Rwanda is one of Africa's "rising stars". The nation has enjoyed remarkable economic performance over the last two decades, growing at an average rate of 8 percent annually. A large part of its economic feat has been a result of the proactive policies put in place by the Government of Rwanda (GoR) in facilitating a good domestic investment climate, which has been conducive to strong rates of growth in FDI. In spite of the nation feats, although, developments in manufacturing have not been as encouraging: the sector's share of the economy, and its exports, remains small. As such, the nation's national strategy underlines the importance of FDI to boost its manufacturing sector, which indeed has often been critical for the development of non-traditional exports in Africa.

Speaking of manufacturing, Rwanda manufacturing experience is different from Ethiopia's experience. In 2016, Rwanda and other East African Community (EAC) members – Burundi, Kenya, Tanzania, and Uganda – moved to ban all imports of clothes and shoes by 2019. Accordingly, the value of Rwandan imports of second-hand clothing declined by 35 percent from US\$27 million in 2015 to US\$17 million in 2016.<sup>24</sup> The EAC members argued that local textiles factories are "vital for employment generation, poverty reduction, and advancement in technology and capacity" and bolstering of local manufacturing; boosting local textile factories could help EAC members compete with imported clothes.<sup>25</sup> In response, following a complaint from Secondary Materials and Recycled Textiles (SMART) Association, a United States trade group, alleging that the ban would be detrimental to the United States clothing industry, the Office of the United States Trade Representative threatened to suspend East African benefits under AGOA, a trade agreement that offers duty-free access to the United States market for African goods.<sup>26</sup>

Based on this threat from the office of the United States Trade Representative, other EAC nations backed down, but Rwanda did not, maintaining its surged tariffs on second-hand clothing and shoe import. Given that the Rwanda government's desire to boost local manufacturing capacity led to the trade tensions between Rwanda and the United States under the African Growth and Opportunity Act (AGOA). On July 30th, 2018, the United States suspended duty-free benefits for all imports of Rwandan apparel into the United States. The Rwandan government has continued arguing that refusing hand-me-downs is necessary to build its domestic manufacturing capacity and announced plans to support firms by the AGOA suspension by setting up the facility to pay the taxes imposed on exports.<sup>27</sup>

The decision demonstrates Rwanda increasing focus on generating a manufacturing base to support its changing needs. As such, the diplomatic statements between President Paul Kagame and President Xi Jinping may initiate a move towards building Rwanda domestic manufacturing capacity. This is because, in March 2017, when Rwandan President Paul Kagame visited Beijing to meet with the Chinese President, he elucidated, “A vital component of our economic growth strategy is manufacturing. We wish to cooperate further on industrial development and encourage Chinese firms to invest in Rwanda’s manufacturing sector”.<sup>28</sup> When President Xi Jinping visited Rwanda in July 2018, he referred to C&H’s role in snowballing Rwandan manufacturing capacity: “The garment factory that a Chinese entrepreneur has established in response to President Kagame’s ‘Made in Rwanda’s development initiative’ is playing a positive role in soaring Rwanda’s manufacturing sector”.<sup>29</sup> Based on the ‘Made in Rwanda’s development initiative’ to push into worldwide textiles, Rwanda presently aims to surge the nation’s local manufacturing, and this single move led to the negotiation of a memorandum of understanding (MoU) with C&H. C&H garments investment is named after the co-founders, Candy Ma and Helen Hai. The firm has been so unique in the Rwanda context for its focus on labor-intensive manufacturing.

The firm has turned out to be one of the first factories to be encouraged by the Rwanda government to meld an emerging focus on manufacturing that benefits Rwandan workers. This is a testament to how African governments can exert agency on their path to structural transformation, assisting to jumpstart industrialization of their economies (EOM, 2018). C&H produces a wide range of apparel products, including sportswear, army uniforms, T-shirts, polo shirts, and safety garments, mostly export to the European and United States markets but also sold domestically. By 2015, C&H had reached the capacity to produce approximately 15,000 branded polo shirts per month; by June 2018, this capacity had surged to 70, 000 pieces of clothing per month. According to EOM (2018) study, in 2015, when C&H officially opened its doors in the Kigali SEZ, the factory trained 300 Rwandans, of which two-thirds were women, who would go on to form the factory’s core production team.

In February 2016, the factory implemented the training and hiring of 600 more Rwandans under a contract signed between the Workforce Development Authority (WDA) of Rwanda and C&H worth nearly US\$515,000, with costs covered by the Rwandan Ministry of Education; approximately 30 trainees would also be sent to China to acquire specialized textiles training with a focus on meeting local and international quality standards (EOM, 2018). Half of these trainees would be trained in garment manufacturing, while the other half would be trained in embroidery. After training, employees can go on to work at C&H or be hired by other firms. Although the factory is presently operating below capacity, by 2017, the firm has confirmed plans to build a new C&H factory and employ 5, 000 workers in the Senegalese Diamniadio industrial park (EOM, 2018). In spite of the dearth of a manufacturing base, the Rwandan government’s guarantee to co-fund training programs has been vital to attracting C&H to Rwanda.

Nonetheless, the critical question again is: will this lead to a decisive industrial takeoff in Ethiopia and Rwanda and/or a decisive industrial rejuvenation? Lin and Wang (2014) affirm that this turn of event is a promising sign of industrial transmigration, since labor-intensive production is the right type of FDI African nations need from China. African economies can experience similar success as China if the continent can grab the low-hanging fruit by putting the ‘right’ government interventions into the right sectors and spaces. The quick success of Huajian in Ethiopia and C&H in Rwanda, provides a convincing instance for this approach. With the current push for industrialization in Africa, the continent’s industrialization strategy should not only look at the conditions inside Africa, but also needs to see how their strategies can reflect how to engage with other emerging actors.

## 4.2. Any Possible Shift From Asian To African Geese Formation?

With the rise of Japan and its speedy transition from labor-intensive manufacturing to capital-intensive high-tech products, East Asia’s miraculous development started. Results show that as the leading regional economy in the 1970s, Japan not only loses its comparative advantage in traditional sectors

over time but also in high-tech industries, whereas the newly industrialized economies (NIEs – Hong Kong, Singapore, South Korea and Taiwan) have gained competitiveness in both sectors. The third tier of Asian geese includes Malaysia, Thailand and Vietnam, which are losing comparative advantage in traditional products but gaining in high-tech industries creating the process of “industrial shifting” which is central to the flying-geese pattern. Some studies (Radalet and Sachs, 1997; Ozawa, 2015) declare that a flying-geese formation presents one paradigm of catch-up industrialization, which has already been efficaciously played-out and well-tested for its effectiveness in East Asia, and which is, therefore, more catch-up conducive than other major paradigms, like the “big push” (Stalinist Soviet) approach and the “import-substitution” (Latin American) paradigm.

In Africa, if we apply the flying-geese model, can we begin to identify the economies that might become the leading geese on the continent? Nigeria and South Africa are the biggest and wealthiest nations around; both nations are considered Sub-Saharan Africa (SSA) anchor nations, because the sun shines brightly on these two African economies (Hanson, 2009; World Atlas, 2018). Recent economic reforms have further positioned Nigeria as the third fastest-growing economy on the list of 10 emerging markets; South Africa also made the list.<sup>30</sup> Nigeria also features not only as one of the only two African economies on the list of 3G (Global Growth Generators) economies<sup>31</sup> identified by Citigroup as sources of growth and potential investment opportunities, but also in Goldman Sachs’s Next 11 nations (Emweremadu, 2013). These two anchor states will continue to play an active role in Pan-African issues, therefore, nowhere is this potential more apparent than in Nigeria and South Africa where Nigeria is now the largest African nation not only by population, but also in economic output (MGI, 2014), following the rebasing of its GDP in April 2014 of US\$522 and growth rate of 6.2 percent, which exceeds all the nations of the Economic Community of West Africa States (ECOWAS) region combined (Davies, 2015; Ogunnubi and Okeke-Uzodike, 2016).

More so, in SSA, Regional Value Chains (RVCs) South Africa and Nigeria are rightly considered the “growth pole” of their respective regions owing to their relative economic weight. Also, they attract several investors in the sector of hydrocarbon, energy, e-commerce, telecommunication, building etc. and sophisticated corporate capabilities, as reflected in their regional FDI and trade footprints. As such, just as Nigeria and South Africa are considered as the “growth poles” of their respective regions in SSA, in Asian RVCs, Japan serves as the “growth pole” in initiating the dynamic development chain to create spill-over to other nations, and China as a big player also takes the vital part in formulating and duplicating the RVCs into a gigantic “factory” we are seeing nowadays. However, in the SSA region context, Nigeria and South Africa, relatively, are analogous to Japan in terms of driving regional investment patterns and, therefore, RVCs.

Nevertheless, the main dissimilarity is the absence of a China in the region to act as an attractor for the Global Value Chain (GVCs). Only Nigeria with its large rapidly growing population and its dynamic domestic market is somewhat comparable to China in the early 1990s. Nigeria and South Africa have the most potential to motivate a flying-geese pattern of industrialization in the region. This is because both nations have been able to play a leading role on behalf of Africa in a multilateral institutional arrangement such as the United Nations, the African Union, ECOWAS, and SADC (Saurombe, 2010; Ogunnubi and Okeke-Uzodike, 2016). As a result, both Nigeria and South Africa could offer other SSA nations with development opportunity through the exploitation of industrial strategies similar to those followed by Japan and the East Asian Tigers during their catching-up process. An application of the flying-geese model to SSA has unsurprisingly South Africa as the lead goose, followed by Nigeria, which in turn transmit their industrial development to Botswana, Cameroon, Chad, Congo, Cote d’Ivoire, Equatorial Guinea, Ethiopia, Gabon, Ghana, Guinea, Kenya, Mozambique, Senegal, Tanzania, Uganda and Zambia. The remaining SSA nations are in the rear ranks of the formation (Jovanovic, 2011). Deeper regional integration (third wave of regionalism) would enhance the links between the more and the less advanced geese and would facilitate the upgrading of the nations in the latter group to higher flying rows.



In March 2012 at the BRICS Summit in New Delhi, former South Africa President Jacob Zuma referred to South Africa as the “gateway into the continent of Africa”. Zuma mentioned that South Africa spearhead Africa’s economic integration and “offered guidance on African economic development opportunities” for foreign firms. On the other hand, Nigeria is the main ECOWAS corridors for formal trade, international trade and foreign direct investment. The corridor is emanating from Lagos (with two ports, Apapa and Tin Can Island). The coastal (west-east) Abidjan-Lagos corridors is by far the busiest corridor in West Africa, making Nigeria more like a “gateway” to the region.

Gateways are hinges between the regional and global level. They open their hinterland to external influences – goods and services, people and ideas – and possesses a nodal function; regional clustering happens around them. The United States geographer Saul Cohen (1982, 1991) cited from Draper et al. (2016), who coined the term “gateway”, argues that gateways have to be analyzed by their success in attaining “nodality”. Connects to extra-regional partners are vital for nodality; so is regional connectivity. In other words, the idea of Nigeria and South Africa being the gateway in their various sub-regions complements the flying geese model because it plugs RVCs in GVCs, or at least has the potential to do so.

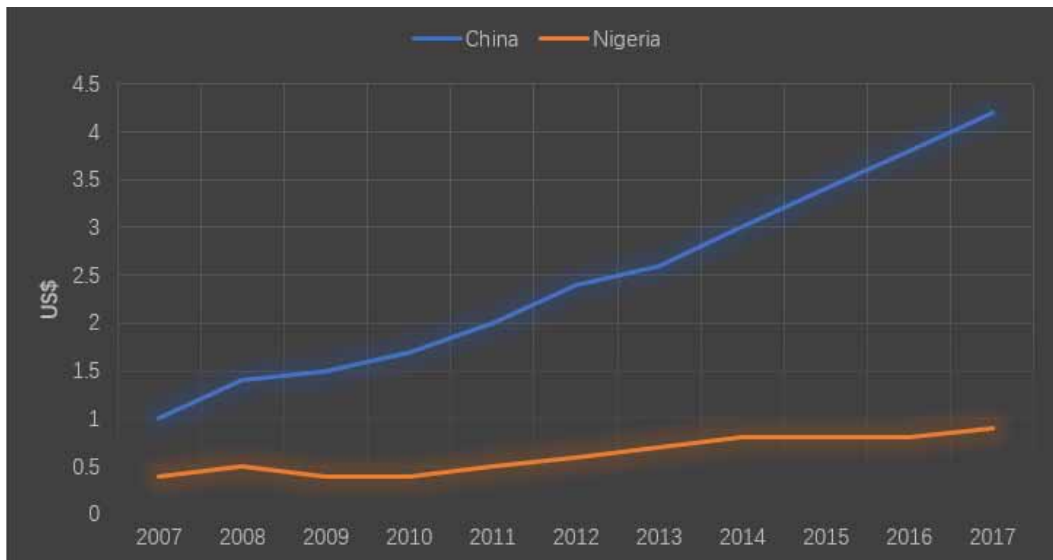
Crucial components of a gateway are hence transport infrastructure and advanced producers service, like banking and consultancy, which enables multinational companies (MNCs) to coordinate their businesses. Krugman (1991a, 1991b) and Krugman & Venables (1992) argued that location, i.e., proximity, matters for international trade and that regional economic processes tend to favor polarization, for instance, between the gateway and its periphery, because of economies of scale and related agglomeration. The World Bank report confirms this hypothesis: location and “economic distance”, meaning distance measured in cost and time of transport, matter. Trade intensity and proximity correlate (World Bank, 2009) – at least for most of Nigeria and South Africa’s neighbors.

Furthermore, and obviously, it is worth mentioning that post-apartheid South Africa and post-colonized Nigeria are not comparable to 1960s Japan on numerous levels, starting with economic capacity and reach, traveling through very dissimilar labor forces and population sizes, into fundamentally diverse domestic political economic and related constraints. Nigeria and South Africa do not have a Japan-equivalent economy ready to drive rapid development in this way. So, these nations might have some good credentials as discussed above but cannot emulate Japan in terms of the scale of FDI, size and sophistication of home firms. Although South Africa and Nigeria are the largest intra-continent investors in the region, their investments are less concentrated in manufacturing and more concentrated in service (e.g., retailing) and consumer products and are not much of the kind that focuses on low-end manufacturing for export, flying-geese style, that can ignite a takeoff in a host nation.

The Japanese outward FDI footprint is comprehensive, huge and powerful, as befits the third largest economy in the world. South Africa and Nigeria dearth the necessary economic, political, and technological capacities to copy it. Both nations also have a limited (in global economic terms) presence. More so, the demographic structure in East Asian supports the flying geese pattern: Japan population is aging and costly maintain, which encourages relocation of low value-added, labor intensive operations to lower income, labor abundant neighboring nations. Nevertheless, Nigeria and South Africa may not suit the role in the region since Nigeria and South Africa population is young.

More so, South Africa has been dealing with a stubborn structural unemployment rate of about 25 percent (World Bank, 2014) for two decades while according to the source, the data are ILO estimates, in 2020, the estimated youth unemployment rate in South Africa was at 55.75 percent<sup>32</sup>, one of the highest in the world during that period (Biavaschi et al., 2012). Based on current data, in the first quarter of 2020, there were 20,4 million young people aged 15–34 years. These young people accounted for 63,3 percent of the total number of unemployed persons. The unemployment rate within this group was 43,2 percent in the 1st quarter of 2020,<sup>33</sup> implying that more than one in every three young people in the labor force did not have a job in the first quarter of 2020.

Figure 7. Average Manufacturing Labor Costs Per Hour



Source: May Brown (2017)

For Nigeria, the nation's workforce within the age bracket of 25-34 recorded the highest unemployment rate among the age group classification by Nigeria Bureau of Statistics cited from Business Day,<sup>34</sup> with 7 million persons unemployed, higher than the 6 million people recorded in Q3 of 2018. The number of persons in the labor force, people within ages 15-64, who are able and willing to work was estimated to be about 80 million of which those within the age bracket of 25-34 were highest, 29.1 percent of the labor force; which is also on the high side when compared to South Africa. Consequently, capital is urgently needed in Nigeria and South Africa; as such, depending on larger multinational cooperation (MNC) from outside the continent is a necessary alternative.

One feasible scenario for the flying geese pattern in Nigeria and South Africa is from Chinese investment into the region. This is particularly relevant in cases where Nigeria and South Africa firms are not capable to act as lead geese. Global lead firms within GVCs could use Nigeria and South Africa as the gateway and act as the lead goose in the value chain. China, in its quest for natural resources via FDI and development aid, has been picked by the World Bank as the most promising investor to help build Africa's manufacturing base (Ozawa and Bellak, 2011). The selection is made based on the Chinese experience with labor-intensive, massive production of footwear, textiles and electronics.

Chinese companies could establish factories in Nigeria and South Africa as they are doing in Ethiopia and Rwanda, a process which appears to be underway as China-led special economic zones (SEZs) has been established in numerous African nations including Nigeria Ethiopia and Southern African nations (Davies et al., 2014), although not South Africa. Labor costs in most African nations especially South Africa are not low (Ethiopia being one of the exceptions), especially when looking labor costs. Various Asian nations undercut African unit labor costs. For example, at the unit South Africa manufacturing average monthly wage level is US\$1.281.2 in the second quarter of 2019<sup>35</sup> compared to China's US\$853.4 (6, 007.39 Yuan) a month in 2019,<sup>36</sup> Ethiopia's US\$222.992 per month in 2019,<sup>37</sup> Thailand US\$438.618 per month in 2019.<sup>38</sup>

Comparing Nigeria with China, hourly manufacturing labor costs in China are three times what they are in Nigeria and the differential is likely to climb steeply (see figure 7). Nonetheless, the flying geese pattern is in essence based on the mechanism of "recycling comparative advantage" (Ozawa, 2009). However, even with the rising production and wage costs, we have not seen Nigeria and South

African manufacturing shift to lesser-cost African economies, except perhaps textile and garment production from South Africa, which has moved to Lesotho. It is unfortunate that regional economies in the Southern African Development Community—a region with a combined population of over 285 million—have not done enough to make themselves attractive to South African manufacturing in the way that Asian economies did to attract Japanese manufacturing in the early 1990s (Davies, 2015).

Therefore, relying on China, may neither deliver the quality nor the quantity of investment required. So, a mixture of investors from different home nations is needed. Rather than a single, dominant Nigeria or Ethiopia or South Africa flock, a multitude of smaller flocks is essential. In other words, the role of a “lead goose” in the region is clearly important, but is not enough. A leading-geese must, in turn, be capable to invest in lower-wage neighbors as it graduates from low-cost production under the pressure of soaring wages and currency appreciation, the way the Chinese people are presently doing—and most significantly, be capable to climb the ladder of industrialization to the higher rungs (so as to convey the kick-starting opportunity to its African neighbors in succession). This is the significant role assigned to the follower geese, if the continent as a whole is to be industrialized.

It remains to see if Nigeria and South Africa can turn out to be such significant leading geese. So, it is important to not only attract firms from the region itself but also from other regions. Despite caveats mentioned so far, we are slightly optimistic. Regarding the overall success of East Asia’s RVCs development, in the author’s view, if the “flying geese” model could be successfully applied in the continent of Africa, the implications would be substantially positive. The continent would become a center of export-oriented industrialization generating a virtuous circle of investment with attendant spillovers into domestic economies. As few nations in Africa are effectively differentiating themselves from their neighbors—Ethiopia, Ghana, and Rwanda stand out as possible exceptions perhaps the African geese will fall into formation with the Asian model.

A crucial question to consider is, which African nations will proactively build the required institutions and enabling environments to attract manufacturers into their economies and step up on the bottom rung of the industrial value chain? In answering this question, a new kind of direction is therefore imperative. The new direction must generate an FDI-friendly and well-governed environment. To avoid numerous internal political and institutional constraints, special economic zones (SEZs, EPZs, ECZs, etc.) needs to be established. Such zones are one of the main enabling conditions for a flying-geese pattern catch-up. Structural changes in China, therefore, presently hold out huge development potential for Africa.

## 5. CONCLUSION

The paper examines the FG pattern and brings attention to the vital phenomenon of China’s relocation to Africa. One of the critical variables in the FG model, i.e., a comparative advantage that states that industries will be transmitted from the lead goose nation to the follower geese nations based on their comparative advantage was described and applied as the analytical framework of the paper to explore the potential of China’s manufacturing factory relocation as a decisive kick-starter for African industrialization. From the paper, the author discovers that industrialization will permit African nations follow in the footsteps of Japan, China and newly industrializing economies (NIEs) (Hong Kong, South Korea, Taiwan Province of China, and Singapore): build factories that employ its booming population and change its institutions to meet the demands of modern capitalism.

Notably, the economic growth in the continent of Asia has been the result of the relocation of the labor-intensive industries. Currently, the labor-intensive production is mostly concentrated in China but it is anticipated to relocate overseas as China slowly loses its comparative advantage in light manufacturing—garments, shoes, toys, and electronics assembly, as manufacturing labor cost increase. Bearing in mind, labor-intensive is connected with the early stages of economic development in which labor costs are low. The rise or decline of the manufacturing industry in China is the outcome of growth and structural change which usually results in the rise of labor costs. This could offer great

opportunities for Africa whose labor costs are lower than China's. According to Justin Lin cited from Altenburg (2019), if only 1 percent of China's production of apparel can be relocated to Africa, "it would bolster the continent's production and exports of apparel by 47 percent".

Nonetheless, at the moment, China's FDI involvement in local manufacturing in the continent of Africa is still in the early stage of evolution, and its capacity to transform the continent into a vibrant manufacturing base is still underdeveloped and quite limited. Based on this, the author discovers from the study that such a hopeful prospect can materialize for Africa only when the time comes for those foreign multinationals operating in China to seriously look for Africa as possible sites for their labor-intensive production. After all, they are the strongest force that has engendered the FG-formation of sequential "economic miracles" across East Asia and specifically China. It is, therefore, imperative for Africa to strive to attract not only Chinese multinationals but also, and most importantly, those multinationals from the developed nations that are heavily involved in labor-seeking FDI. This is because they are the actual kick-starters of industrialization.

However, even though Chinese multinationals and multinationals from advanced economies maybe serious about shifting their low-cost factories to the continent of Africa, but we have to bear in mind that it will not be automatic. On top of that, there are hurdles to clear on both sides. In the near future, Chinese firms can still shift their labor-intensive manufacturing to Africa, however, Africa itself is institutionally not quite prepared to host labor-seeking FDI on a scale substantial enough to spark catch-up industrialization as it has occurred in China and other East Asia nations. On one hand, though there are some encouraging signs of the first stage of a flying geese formation of tandem catch-up in Africa, China capability to serve as a lead goose is still constrained by China-side factors which the author elaborated on in section 3; China-side factors are most likely to prolong the process of discarding low-end production. On the other hand, Africa-side factors (like political stability, policy consistency, soft and hard infrastructure, security issue and suitable business environment) are overall even more unfavorable. As Ozawa puts it, "the hoped-for "the continent of Africa Miracle" seems a long way off" (Ozawa, 2015).

Therefore, if Africa will be able to capture this opportunity from Chinese multinationals and those multinationals from advanced economies, Africa must address these major challenges: (a) They dearth of technological know-how about how to produce high-quality product at a competitive price in the worldwide market by using their abundant labor and resources must be addressed; (b) African must address the issue connected with global buyers' complaining of having lack of confidence in the capability of the continent manufacturers to deliver products on time and with the consistent quality specified in contracts; (c) African leaders in collaboration with African Union must come together to address the lack of infrastructure and unfavorable business environment problems that can help investors lessen their transaction costs and reach global markets. It is in this context we turn to the recommendation part of this paper.

## **5.1 Recommendations**

For Africa and specifically Rwanda and Ethiopia to overcome these challenges and create fast feat stories in export-oriented light manufacturing, to offer the aspiration, confidence and experience needed to realize the potential in terms of industrialization, the following pragmatic strategy towards attracting manufacturing firms need to be adhered to.

- African nations must try to adopt an active investment promotion strategy to attract existing export-oriented light manufacturing firms that have the technological know-how and confidence of international buyers in China and other emerging market economies;
- African nations must try to use their limited resources and implementation capacity strategically to establish industrial parks and special economic zones with adequate infrastructure and a good business environment that helps investors lessen their transaction costs. Such zones are one of the main enabling conditions for a flying geese-style catch-up. So, the host African nation must

facilitate the mobilization of labor to the industry from the rural areas where under- and unemployed labor exists in abundance. Therefore, the immediate success of Huajian Shoe Factory in Ethiopia's Eastern Industrial Park in 2012 and the inflow of foreign direct investment in light manufacturing into the new industrial park near Addis Ababa in 2013 show that such an approach can work in Africa;

- African nations should try and bridge the gap of information. This can be done by supporting multinationals from China, other emerging economies and advanced economies to understand their various nations advantages that will encourage them to set up manufacturing in their nations. Also, African nations willing to attract these firms can engage with policymakers, development agencies, businesses communities and other key stakeholders – globally, regionally and nationally – to share their vision and approaches for capturing their nations windows of opportunity to industrialize;
- There is the need for collaboration that is working with the government to build quick crucial success instances – this collaboration can be driven by working with national leaders to develop a pragmatic method to creating quick successes in manufacturing development. Also, there is a need for African nations to invite prospective investors who have manufacturing expertise to visit their nations, facilitate early-stage investment negotiation with their governments and ensure successful investments and implementation to turn their nations opportunities into reality. It is necessary to recognize policy constraints through the first movers' operations and advise the governments of these African nations on further reforms to attract more worldwide and local manufacturing investment. Above all, African nations must open up their home economies to the outside world and attract FDI in labor-intensive low-skill industries;
- African economies can advocate for the “triangular collaboration” to link the dots among prospective investors like Chinese multinationals, international retailers in the 27 European Union (EU-27) nations, the United States, and African economies, with a comparative advantage in plentiful supplies of labor and raw materials. For that reasons, and since worldwide industrialization transformation will offer a great opportunity for African economies to use their comparative advantages, it is necessary for emerging and advanced economies to share feat and failure of past industrialization efforts, offer intellectual support to African nations to identify their sectors of comparative advantage and develop their own development strategy accordingly. It is also necessary for African nations to work with international organizations and world leaders in the global supply chain to connect the dots of triangular collaboration (manufacturing capacity, global retail market and African comparative advantage).<sup>39</sup> By linking the dots, the efforts of the global community and private commitment to supporting African nations industrialization will promote capacity cooperation that will eventually propel African nations to attain sustainable development goals.<sup>40</sup>

## REFERENCES

- AfDB. (2020). Africa Industrialization Day: Unlocking Africa's "value-added" Industrial Potential. *African Development Bank*. Retrieved 2 February, 2021 from <https://www.afdb.org/en/news-and-events/africa-industrialization-day-unlocking-africas-value-added-industrial-potential-39116>
- African Union. (2014). Inclusive and Sustainable Industrial Development: Agro-Industry for Food Security in Africa (Concept Note, 20th Africa Industrialization Day). Author.
- Akamatsu, K. (1962). A Historical Pattern of Economic Growth in Developing Countries. *The Developing Economies*, 1(1), 3–25. doi:10.1111/j.1746-1049.1962.tb01020.x
- Altenburg, T. (2019). Migration of Chinese Manufacturing jobs to Africa: Myth or Reality? Brookings.
- Alter, R. (1991, December 7–9). Lessons from the Export Processing Zone in Mauritius. *Finance & Development*.
- Amirapu, A., & Subranmanian, A. (2015). *Manufacturing or Service? An Indian Illustration of a Development Dilemma*. Center for Global Development Working Paper 409.
- Biavaschi, C., Eichhorst, W., Giuliette, C., Kendzia, M. J., Muravyev, A., Peters, J., & Zimmermann, K. F. (2012). *Youth Unemployment and Vocational Training*. World Bank. Retrieved 15 June 2018 from <https://openknowledge.worldbank.org/handle/10986/12150>
- Brautigam, D. (2003). Close encounters: Chinese business networks as industrial catalysts in sub-Saharan Africa. *African Affairs*, 102(8), 447–467. doi:10.1093/oxfordjournals.afraf.a138824
- Brautigam, D. (2009). *The Dragon's Gift: The Real Story of China in Africa*. Oxford University Press.
- Brautigam, D., Weiss, T., & Tang, X. (2018b). Latent Advantage, Complex Challenges: Industrial Policy and Chinese Linkages in Ethiopia's Leather Sector. *China Economic Review*, 48, 158–169. doi:10.1016/j.chieco.2016.06.006
- Brautigam, D., Xiaoyang, T., & Xia, Y. (2018a). *What Kinds of Chinese "Geese" are Flying to Africa? Evidence from Chinese Manufacturing Firms*. Working Paper No.2018/17. China Africa Research Initiative, School of Advanced International Studies, Johns Hopkins University.
- Broadman, H. (2007). *Africa's Silk Road: China and India's New Economic Frontier*. The World Bank.
- Calabrese, L., Gelb, S., & Hou J. (2017). *What Drives Chinese Outward Manufacturing Investment? A Review of Enabling Factors in Africa and Asia*. Background Paper. Supporting Economic Transformation (SET).
- Central Statistical Agency (CSA) of Ethiopia. (2013). *Report on Livestock and Livestock Characteristics (Private Peasant Holdings)*. Agricultural Sample Survey 2012/2013 [2005e.C.] Volume II. Statistical Bulletin 570, (April). Addis Ababa, Ethiopia: CSA. Centre for Economic Policy Research (CEPR).
- Chandra, V., Lin, J. Y., & Wang, Y. (2013). Leading Dragon Phenomenon: New Opportunities for Catch-up in Low-Income Countries. *Asian Development Review*, 30(1), 52–84. doi:10.1162/ADEV\_a\_00003
- Dasgupta, S., & Singh, A. (2006). *Manufacturing, Services and Premature Deindustrialization in Developing Countries*. United Nations University World Institute of Development Economic Research Paper No. 2006/49.
- Davies, M. (2015). What China's Economic Shift Means for Africa. *World Economic Forum*. Retrieved 1 October, 2018 from <https://www.weforum.org/agenda/2015/03/what-the-shift-in-chinas-economy-means-for-africa/>
- Davies, M., Draper, P., & Edinger, H. (2014, May). Changing China, Changing Africa. *Asian Economic Policy Review*, 9(2), 180–197. doi:10.1111/aep.12059
- Dent, M. C. (2010). *China and Africa Development Relations*. Routledge. doi:10.4324/9780203845028
- Draper, P., Freytag, A., Scholvin, S., & Tran, L. T. (2016). *Is a 'Factory Southern Africa' Feasible? Harnessing Flying Geese to the South African Gateway*. CESIFO Working Paper No. 5867. Category 8: Trade Policy.
- ECA (Economic Commission for Africa). (2014). Dynamic industrial policy in Africa. Economic Report on Africa. Author.

- [illegible]

- Lall, S., & Wangwe, S. (1998). Industrial Policy and Industrialisation in Sub-Saharan Africa. *Journal of African Economies*, 7(1), 70–107.
- Lin, J. Y. (2011). *From Flying Geese to Leading Dragon: New Opportunities and Strategies for Structural Transformation in Developing Countries*. UNU-WIDER Annual Lecture.
- Lin, J. Y. (2012). From Flying Geese to Leading Dragons: New Opportunities and Strategies for Structural Transformation in Developing Countries. *Global Policy*, 3(4), 397–409.
- May Brown. (2017). *Playing the Long Game: China's Investment in Africa*. A May Brown Report.
- McMillan, M.S., Rodrik, D., & Verduzco-Gallo, I. (2014). Globalization, Structural Change, and Productivity Growth, with an Update on Africa. *World Development*, 63(2014), 11–32.
- Megbowon, E., Mlambo, C., & Adekunle, B. (2019). Impact of China's Outward FDI on Sub-Saharan Africa's Industrialization: Evidence from 26 Countries. *Cogent Economic. Finance*, 7, 1–14.
- MGI. (2014). *Nigeria's Renewal: Delivering Inclusive Growth in Africa's Largest Economy*. McKinsey Global Institute. MGI.
- Mihretu, M., & Llobet, G. (2017). *Looking Beyond the Horizon: A Case Study of PVH's Commitment to Ethiopia's Hawassa Industrial Park*. World Bank Group.
- Moyo, D. (2009). Why Foreign Aid Is Hurting Africa. *The Wall Street Journal*. Retrieved 2 April, 2019 from [http://online.wsj.com/article/NA\\_WSJ\\_PUB:SB123758895999200083.html](http://online.wsj.com/article/NA_WSJ_PUB:SB123758895999200083.html)
- Munyi Elijah, N. (2020). Africa's Stalled Structural Transformation: The End of the Flying Geese? *Review of African Political Economy*. Advance online publication. doi:10.1080/03056244.2020.1789855
- Ogunnubi, O., & Okeke-Uzodike, U. (2016). Can Nigeria be Africa Hegemon? *African Security Review*, 25, 2.
- Okuda, H. (2002). Today's Problems in Developing Financing and Japan's Financial Assistance for Economic Development. Aiming at Knowledge-Based-Type Assistance, Technology and Development. *JICA*, 15, 5–10.
- Oqubay, A. (2018). *The Structure and Performance of the Ethiopian Manufacturing Sector*. Working Paper Series No 299, African Development Bank, Abidjan, Côte d'Ivoire.
- Ozawa, T. (1991). The Dynamics of Pacific Rim Industrialization: How Mexico can Join the Asian flock of "flying geese". In R. Roett (Ed.), *Mexico External Relations in the 1990s*. Lynne Rienner Publications.
- Ozawa, T. (2004). *Institutions, Industrial Upgrading and Economic Performance in Japan: The "Flying Geese" Paradigm of Catch-up Growth*. Edward Elgar.
- Ozawa, T. (2005). *Asia's Labor-Driven Economic Development, Flying-Geese Style: An Unprecedented Opportunity for the Poor to Rise*. Discussion Paper Series, APEC Study Center Columbia University. Discussion Paper No.40.
- Ozawa, T. (2009). *The Rise of Asia: The "flying-geese" Theory of Tandem Growth and Regional Agglomeration*. Edward Elgar Publishing.
- Ozawa, T. (2011). The (Japan-Born) 'Flying-Geese' Theory of Economic Development Revisited –and Reformulated from a Structuralist perspective. *Global Policy*, 2(3).
- Ozawa, T. (2015). *Next Great Industrial Transmigration: Relocating China's Factories to Sub-Saharan Africa, Flying-Geese Style?* Discussion Paper No. 78. Discussion Paper Series APEC Study Center Columbia University.
- Ozawa, T., & Bellak, C. (2011). *Will China Relocate Its Labor-intensive Factories to Africa, Flying-geese Style? Colombia FDI Perspective*. Vale Columbia Center on Sustainable International Investment. Retrieved 19 August 2018 from [101.96.10.63/ccsi.columbia.edu/files/2014/01/FDI\\_28.pdf](http://101.96.10.63/ccsi.columbia.edu/files/2014/01/FDI_28.pdf)
- Page, J. (2012). Can Africa Industrialize? *Journal of African Economies*, 21(2), 86–124.
- Radelet, S., & Sachs, J. (1997). Asia's Reemergence. *Foreign Affairs*, 76(6), 44–59.
- Rauch, J., & Casella, A. R. (2003). Overcoming Informational Barriers to International Resource Allocation: Price and Group Ties. *Economic Journal (London)*, 113(1), 21–42.



- Reinhardt, N. (2000). Back to Basics in Malaysia and Thailand: The Role of Resource-based Exports in their Export-led Growth. *World Development*, 28(1), 57–77.
- Rodrik, D. (2015). *Premature Deindustrialization*. NBER Working Paper Series 20935.
- SAIS-CARI. (2021). *Data: Chinese Investment in Africa*. School of Advanced International Studies-China Africa Research Institute (SAIS-CARI). Retrieved 20 February, 2021 from <http://www.sais-cari.org/chinese-investment-in-africa>
- Saurombe, A. (2010). The Role of South Africa regional Integration: The Making or Braking of the Organization. *Journal of International Commercial Law and Technology*, 5(3).
- Shen, X., & Zhang, R. (2009). *Implications for the African Market from the Yuemei Group Group (Zhejiang)*. NetEase. Retrieved 11 January, 2021 from <http://money.163.com/09/0403/16/5606INJO002524SD.html>
- Shimeles, A., & Ncube, M. (2015). The Making of the Middle-Class in Africa: Evidence from DHS Data. *The Journal of Development Studies*, 51(2), 178–193.
- Song, H. (2011). Chinese private direct investment and overseas Chinese network in Africa. *China & World Economy*, 19(4), 118–122.
- Suisheng, Z. (2014). A neo-colonialist predator or development partner? China's engagement and rebalance in Africa. *Journal of Contemporary China*, 23(90), 1033–1052.
- Sun, I. Y., Jayaram, K., & Kassiri, O. (2017). *Dance of the lions and dragons: How are Africans and China engaging, and how will the partnership evolve?* McKinsey & Company.
- Tadesse, D. (2015). An Analysis of Chinese Foreign Direct Investment (FDI) in Sub-Saharan Africa: A Particular Focus on Ethiopia. *Ethiopia Journal of Business Economic*, 4, 183.
- Tang, X. (2018). 8 Geese Flying to Ghana? A Case Study of the Impact of Chinese Investments on Africa's Manufacturing Sector. *Journal of Contemporary China*, 27(114), 924–941.
- Tang, X. (2019). *Chinese Manufacturing Investments and Knowledge Transfer: A Report from Ethiopia*. Working Paper No. 2019/24. China Africa Research Initiative, School of Advanced International Studies, John Hopkins University.
- The Economist. (2015). *Global Manufacturing: Made in China?* Retrieved 26 January, 2021 from <https://www.economist.com/leaders/2015/03/12/made-in-china>
- UNCTAD. (1999a). *Foreign Direct Investment in Africa: Performance and Potential*. United Nations Conference on Trade and Development (UNCTAD). Retrieved 5 May, 2018 from <https://unctad.org/en/Docs/poitelitm15.pdf>
- UNCTAD. (1999b). *World Investment Report, Foreign Direct Investment and the Challenge of Development*. United Nations Publication.
- UNCTAD. (2010). *World Investment Report, 2010*. United Nations.
- UNCTAD. (2020a). *Key Statistics and Trends in International Trade 2019*. United Nations.
- UNCTAD. (2020b). *Investment flows in Africa set to drop 25 percent to 40 percent in 2020*. United Nations Conference on Trade and Development. Retrieved 10 January, 2021 from [unctad.org/news/investment-flows-africa-set-drop-25-40-2020](https://unctad.org/news/investment-flows-africa-set-drop-25-40-2020)
- United Nations. (2017). *World Population Prospects*. Retrieved from: <https://esa.una.org/unpd/wpp/Download/Standard/Population/>
- Weiss, J., & Jalilian, J. (2016). De-Industrialization in Sub-Saharan Africa: Myth or Crisis? *Journal of African Economies*, 9(1), 24–43.
- Wenjie, C., Dollar, D., & Tang, H. (2016). Why is China Investing in Africa? Evidence from the Firm Level. *The World Bank Economic Review*.
- Widodo, T. (2008). Dynamic Changes in Comparative Advantage: Japan “Flying Geese” Model and its Implications for China. *Journal of Chinese Economic and Foreign Trade Studies*, 1(3).

World Atlas. (2018). *The Biggest Economies in Africa*. Retrieved 19 December, 2020 from <https://www.worldatlas.com/articles/the-biggest-economies-in-africa-html>

World Bank. (2009). *World Development Report 2009: Reshaping Economic Geography*. World Bank.

World Bank. (2014). *World Development Indicators*. Retrieved 11 August, 2018 from <http://data-catalog/world-development-indicators>

World Bank. (2016). *FDI and Manufacturing in Africa: Chinese FDI in Africa and Manufacturing FDI in Ethiopia and Rwanda*. World Bank. Retrieved 11 January, 2021 from <https://www.worldbank.org/content/dam/Worldbank/Event/Africa/Investing%20in%20Africa%20Forum/2015/investing-in-africa-forum-fdi-and-manufacturing-in-africa.pdf>

Xiaoyang, T. (2018). 8 Geese Flying to Ghana? A Case Study of the Impact of Chinese Investment on Africa's Manufacturing Sector. *Journal of Contemporary China*. Advance online publication. doi:10.1080/10670564.2018.1488106

Xiaoyun, L. (2014). China's Industrialization: Overview – Implications for Africa's Industrialization. *Africa-China Poverty Reduction and Development Conference*.

Xinhuanet. (2018). *Xinhua Headlines: Chinese Factory in Ethiopia Ignites African Dreams*. Retrieved 9 October, 2018 from [www.xinhuanet.com/english/2018-03/31/c\\_137078647\\_2.htm](http://www.xinhuanet.com/english/2018-03/31/c_137078647_2.htm)

Yang, Z., Sang, J., & Wang, J. (2006). *Zhongguo waimao chenggong zhilu*. The Policy Research Department, Ministry of Commerce of the People's Republic of China. Retrieved 10 August, 2018 from <http://zys.mofcom.gov.cn/aarticle/cm/200611/20061103884100.html>

Yuemei Group. (2014). *Yuemei Group Overseas Investment*. Retrieved 15 August, 2018 from <http://www.chinayumei.com/en/productsinfo.aspx?id=189>

Zhang, X., Tezera, D., Zou, C., Wang, Z., Zhao, J., Gebremefas, E., & Dhavle, J. (2018). *Industrial Park Development in Ethiopia Case Study Report*. Inclusive and Sustainable Industrial Development Working Paper Series WP 21/2018. Retrieved 16 December 2020 from <https://www.unido.org/api/opentext/documents/download/10694802/unido>

## ENDNOTES

- <sup>1</sup> Animal spirits: Shaping patterns of economic growth. United Nations University. October 11, 2011. Retrieved from 10 May, 2019 from <https://unu.edu/publications/articles/animal-spirits-shaping-patterns-of-economic-growth.html>.
- <sup>2</sup> According to the 2008 *Growth Report* by the Commission on Growth and Development, led by Nobel Laureate Michael Spence, 13 economies attained an average annual growth rate of 7 percent or above for 25 years since the end of the Second World War. In 2000-2008, 29 economies attained that average annual growth rate, and 11 of them were in sub-Saharan Africa.
- <sup>3</sup> This was widely reported in the media. See *inter alia*. "China and World Bank in talks to establish industrial zones in Africa," Financial Times December 4, 2009.
- <sup>4</sup> China's investment in Africa and the flying Geese Paradigm. Ecofix- current issues in economic. 28 July, 2017. Retrieved from <https://econfix.wordpress.com/2017/07/28/chinas-investment-in-africa-and-the-flying-geese-paradigm/>.
- <sup>5</sup> Just name a few, Brautigam (2009), Brautigam et. al. (2018a), Broadman (2007), Dent (2010) and Tang (2018)
- <sup>6</sup> In other categories, Ren, Au, and Shen (2014) include "former government officials with a stable and good life; the returnees and overseas Chinese who went abroad to study or to make a living and subsequently return to China for business" (p. 108).
- <sup>7</sup> UNCTAD (2010) calls this type of FDI motivation "the efficiency-seeking investment." It also points out that some Indian investors are similarly taking advantage of the trade preferences given to African countries: "80 per cent of Indian investments in eight East African countries, for example, are market-seeking. While labor costs in Africa may not differ significantly from those in the firms' home economies, the duty-free, quota-free access [programs] have generated some efficiency-seeking investment" (p. 34). Another survey

(Gu, 2009) finds that “taking advantage of African regional or international trade agreements” is among the most important reasons for investing in Africa.

Global econometrics with the gravity model show that bilateral trade links are significantly stronger when two countries share some population that speaks the same language (perhaps especially so if the language is Chinese) Frankel (1997, pp.74-75, 104).

Subramanian (2001) Particular one E. Lim Fat (Brautigam 1997, p.148). The government sent a team to Hong Kong and Taiwan to investigate the export success of these newborn tigers, and the EPZ Act of 1970 was the result of its recommendations.

There is an extensive literature on the flying geese pattern, including Kiyoshi Kojima’s seminal work (2000) and Ozawa (2004), Lin, (2012), Ozawa, (2015), Brautigam et al., (2018a), Xiaoyang, (2018) who has contributed to the dissemination of the model outside Japan, and applied it in country-level analysis.

Number of employed people in China 2009-2019. Statista. Retrieved 15 February, 2021 from <https://www.statista.com/statistics/251380/number-of-employed-persons-in-china/#:~:text=The%20labor%20force%20of%20China,around%20811%20million%20in%202019.>

The relevant figures for South Africa are 1.3 percent for 1980-1990 and 0.1 percent for 1990-1994.

Mckinsey (2013) ‘A new era for manufacturing in China. Retrieved 12 July, 2020 from <http://www.mckinsey.com/business-functions/operations/our-insights/a-new-era-for-manufacturing-in-china>

FDI is “capital provided by a foreign direct investor (parent enterprise) to an affiliate enterprise in the host country. It implies that the foreign direct investor exerts significant influence on the management of the enterprise resident in the other economy. The capital provided can consist of equity capital, reinvested earnings or intra company loans” (UNDP, 2000).

“Chinese manufacturers feel their way in African market,” Chinadaily, 2013-11-19. <http://africa.chinadaily.com.cn/world/ /wor2013-11/19/content...> Downloaded 12/11/2014.

A strong manufacturing sector fuels economic growth. Forbes, 21 November, 2016. Retrieved from [www.forbes.com/sites/realspin/2016/11/21/a-strong-manufacturing-sector-fuels-economic-growth/#dcf53a27f3eb](http://www.forbes.com/sites/realspin/2016/11/21/a-strong-manufacturing-sector-fuels-economic-growth/#dcf53a27f3eb)

Top 20 facts about manufacturing. National Association of Manufactures March 2018. Retrieved from [www.nam.org/Newsroom/Facts-About-Manufacturing](http://www.nam.org/Newsroom/Facts-About-Manufacturing)

Adjusting to rising costs in Chinese light manufacturing: What opportunities for developing countries? Peking University’s Center for New Structural Economics and the Supporting Economic Transformation program at the Overseas Development Institute in London. Retrieved 22 January, 2021 from [https://set.odi.org/wp-content/uploads/2017/12/SET\\_Surveyreport\\_Chinese-manufacturing\\_Final.pdf](https://set.odi.org/wp-content/uploads/2017/12/SET_Surveyreport_Chinese-manufacturing_Final.pdf)

Rwanda eyes \$100 million in private investments from China. The New Times. November 5, 2019. Retrieved from <https://www.newtimes.co.rw/business/rwanda-eyes-100-million-private-investments-china>

China’s Xi Jinping commits to build Rwanda economic zone. (2017, March 17). KT Press. Retrieved 26 July, 2020 from <https://ktpress.rw/2017/03/chinas-xi-jinping-commits-to-buildrwanda-economic-zone/>

“Ethiopia becomes China’s China in global search for cheap labor,” Bloomberg. July 22, 2014. <http://bloomberg.com/news/print/2014-07-22/ethiopia-becomes-china-s-china...> Downloaded 12/8/2014/

“China Inc. Moves the Factory Floor to Africa,” Wall Street Journal, May 15, 2014, A1. This article also reports that China’s higher end products are made in South Africa, while lower-end ones in less developed African countries such as Ethiopia and that “Chinese factories also produce steel pipes and textiles in Uganda.”

“Chinese firm steps up investment in Ethiopia with ‘shoe city,” Guardian, 30 April, 2013, <http://www.theguardian.com/global-development/2013/apr/30/Chinese-investment-ethiopia...> Downloaded 12/8/2014.

Overview of the Used Clothing Market in East Africa: Analysis of Determinants and Implications.” USAID and East Africa Trade and Investment Hub, July 2017. Retrieved from 10 March, 2019 from <https://agoa.info/image/documents/15244/eastafricatradeandinvestmenthubclothingreport-compressed.pdf>

Will East Africa Ban Used Clothes?” BBC News, March 2, 2016, sec. Africa. Retrieved from <http://www.bbc.com/news/world-africa-35706427>.

US to Review Benefits to Rwanda, Tanzania for Used Clothes Ban.” Reuters, June 20, 2017. Retrieved 18 May, 2019 from <https://www.reuters.com/article/usa-trade-agoa/us-to-review-benefits-to-rwanda-uganda-tanzania-for-used-clothes-ban-idUSL1N1JH0RX>.

“AGO: Government to Pay Taxes for Affected Rwandans.”The New Times|Rwanda, June 11, 2018. Retrieved from <http://www.newtimes.co.rw/news/agoa-government-pay-taxes-affected-rwandans>

Collins Mwai, “Rwanda, China Outline New Cooperation Areas.” The New Times Rwanda. Retrieved 9 April, 2019 from <http://www.newtimes.co.rw/section/article/2017-03-18/209067/>.

“Full Text of Chinese President Xi’s Signed Article on Rwanda Media.” China Daily, July 21, 2018. Retrieved 26 June, 2019 from <http://www.chinadaily.com.cn/a/201807/21/WS5b52edcfa310796df4dfdd8.html>.

- 30 According to the Standard Bank research team, the EM10 nations include Brazil, China, India, Indonesia, Nigeria, Russia, Saudi Arabia, South Africa, Thailand and Turkey; see S Freemantle and J Steven, EM10 and Africa: Nigeria –potent opportunities, daunting challenges, Africa macro insight and strategy Standard Bank, 4 September 2012, 1, Retrieved 10 May, 2019 from <http://ws15.standardbank.co.za/cdp4/publish edResearchPrinterFriendly?id=7a066d88-e206-4175-a992-6b73f3587627>.
- 31 The other African nation is Egypt.
- 32 South Africa: Youth unemployment rate from 1999 to 2020. Statista. Retrieved 10 February, 2021 from <https://www.statista.com/statistics/813010/youth-unemployment-rate-in-south-africa/>
- 33 Vulnerability of youth in the South African labour market. Stats.sa. Department: Statistics South Africa. Retrieved 10 February, 2021 from <http://www.statssa.gov.za/?p=13379#:~:text=In%20the%20first%20 quarter%20of,the%201st%20 quarter%20of%202020>.
- 34 NBS data show youths record highest unemployment rate. Business Day. Retrieved 2 February, 2021 from <https://businessday.ng/news/article/nbs-data-show-youths-record-highest-unemployment-rate/>
- 35 South Africa average monthly wages in manufacturing. Trending Economics. Retrieved from <https://tradingeconomics.com/south-africa/wages-in-manufacturing>
- 36 China average yearly wages in manufacturing. Trending Economics. Retrieved 1st December, 2019 from <https://tradingeconomics.com/china/wages-in-manufacturing>
- 37 Average salary in Ethiopia 2019. Salary Explorer. Retrieved from [www.salaryexplorer.com/salary-survey.php?loc=69&iotype=1](http://www.salaryexplorer.com/salary-survey.php?loc=69&iotype=1).
- 38 Thailand average monthly wages in manufacturing. Trading Economics. Retrieved 1st December, 2019 from <https://tradingeconomics.com/thailand/wages-in-manufacturing>
- 39 “Africa’s open road to development”. China Daily. January 1, 2017. Retrieved from [www.chinadaily.com.cn/kindle/2017-01/content\\_27835509.htm](http://www.chinadaily.com.cn/kindle/2017-01/content_27835509.htm)
- 40 ibid