

Africa's Industrialisation and Economic transformation within a Developmental Regionalism Paradigm

Gabila F. Nubong

Senior Lecturer, School of Economics, North West University

Abstract

Africa's recent growth episode has been largely commodity driven, raising concerns around growth sustainability and commodity dependence. Its economies can however experience economic transformation through the process of industrialisation because industrialisation historically often comes with structural change (the shift of resources from low productivity to high-productivity sectors). This paper argues that Africa should adopt a commodity based industrialisation model by learning from the examples of other regions on how to promote forward and backward linkages into their commodity sectors. It further argues that the unbundling of production and the increasing share of services in global trade both represent opportunities for Africa to industrialize through the creation of regional value chains and its participation in global value chains. This would however require the adoption of industrial policies that are coordinated regionally (across national borders), hence the pursuit of regional integration and industrialisation as a combined objective within a developmental regionalism paradigm. To be successful at this, African countries would have to address the existent and binding constraints around State Capacity for development planning and execution. Reviving the role of the state to kick-start and drive the industrialisation process while creating an enabling environment for effective private sector participation is line with the experience of recent industrialisation efforts in Asia. Africa's demographic dividend and rising middle class represent a ready market for the consumption of the goods that may be the fruit a manufacturing led industrialisation drive. The experience from resource rich Nordic countries suggests that the pursuit of natural resources based industrialisation can become the basis for important learning that will have a spill-over effect into other manufacturing based industrialisation experiences. When coupled with the increasingly role for services in manufacturing and industrialisation, and the global unbundling of production processes in global value chain, there seems to be strong evidence to suggest that Africa can pursue a commodity based industrialisation pathway, by consolidating its market potential through its regional integration efforts, strengthening the capacity of its national and regional institutions, investing in regional infrastructure and taking advantage of the unbundling of global production value chains.

Keywords: Africa's Industrialisation, Economic transformation, Developmental Regionalism Paradigm.

1.1 Introduction

Since the late 1990s, Africa has experienced positive economic growth due to improved macroeconomic management, higher domestic demand, and principally, higher commodity prices. Notwithstanding increasing contributions to GDP from manufacturing, financial, telecom and tourism sectors, Africa's economic growth has been mainly driven by primary commodity exports (Morris & Fessehaie, 2014,

25). This witnessed high growth has rekindled the debate around how to translate growth to improved standards of living for Africans. Since resources are likely to be depleted at some point in the future and the boom in commodity prices largely driven by the growth of the Chinese economy is not going to last forever, Africa needs to look for way of diversifying away from the commodity dependence of its economies, pursue the structural transformation of these economies and explore avenues of increasing their global share of trade in manufactured goods and participating at higher levels of Global Value Chains (GVCs). Therefore it is important for it to revisit the traditional arguments around industrialization and the role that it can play in economic transformation and the development of the continent.

The combination of high growth, the resources that are generated in the process and the continued developmental challenges still witnessed across the continent has rekindled the debate around the questions of the structural changes and economic transformation that could come with industrialization. It remains a common believe backed by the experience especially of the Newly Industrialized Economies of Asia that structural change that is often accompanied by industrialization efforts has proven to be the true pathway to prosperity and significant and meaningful improvements in Standards of living. This is because structural change—the shift of resources from low productivity to high-productivity uses—becomes in this instance the main driver of the witnessed economic growth. This is the kind of growth led by industry (industrialization) that is desirable for African economies because of the developmental benefit associated with such approaches to societal transformation.

Historically, industry has been the sector that led the process of structural change. Industry contributes to structural change because it is a high-value-added sector into which labour can flow. The average manufacturing–agriculture labour productivity ratio for low-income Africa is 2.5 to 1. Given this very large difference in output per worker and the potential of manufacturing to absorb labour, industrialization presents a significant opportunity for productivity-enhancing structural change (Ajakaiyea & Page, 2012). In addition to this, there are two important structural characteristics related to the types of products produced by the manufacturing sector—diversity and sophistication—influence productivity change and growth. Cross-country evidence indicates that countries with more diversified production and export structures have higher incomes per capita (Imbs and Wacziarg, 2003; Cadot et al., 2011), and countries that produce and export more sophisticated products—those that are primarily manufactured by countries at higher income levels—tend to grow faster (Hausmann et al., 2007; UNIDO, 2009).

Thus inclusive and sustainable industrial development is often associated with job creation, sustainable livelihoods, innovation, technology and skills development, food security and equitable growth. Rarely has a country evolved from poor to rich without sustained structural transformation from an agrarian or resource-based economy towards an industrial or service-based economy. This transformation is important to ensure wealth creation through increased economic integration and productivity. This is because by providing decent jobs and by expanding the fiscal revenues needed for social investments, can boost capacity for the much-needed inclusive development.

The fact that the benefits of industrialization are these numerous and that it has been the reason why so many countries have been lifted out of underdevelopment justifies its resurgence as an element for important policy consideration on the African integration and development landscape. The question in these debates have been varied over the years but typically center around two main axis, being: *Why has Africa not been able to industrialize in spite of the above stated benefits industrialization that are clearly in line with its developmental aspirations?* This remains a very pertinent question in the case of Africa, especially whenever ever the experience of the Asian NICs is brought into perspective. It is now widely accepted that there was no ‘East Asian Model’ of industrialization *per se* but that there seemed to have been a specific model for each of the Newly Industrialized Countries (NICs), each having different industrial objectives and using different interventions but within a common context of *export-orientation*, *good human capital development* and *strong regional spillovers* (Hiley, 2000, 58). This meant that each of these economies had a different pattern for industrial and export growth, reliance on foreign direct investment (FDI), technological capability and enterprise structure. They however succeeded to collectively upgrade their industrial production bases and gained access to global markets through the adoption of export-oriented strategies. Export orientation as a strategy requires global market access and the creation of a competitive advantage in the production of goods. Their experience is informative for Africa because the NICs created a competitive advantage in the production of goods for which they have not always been competitive as can be seen in the figure below:

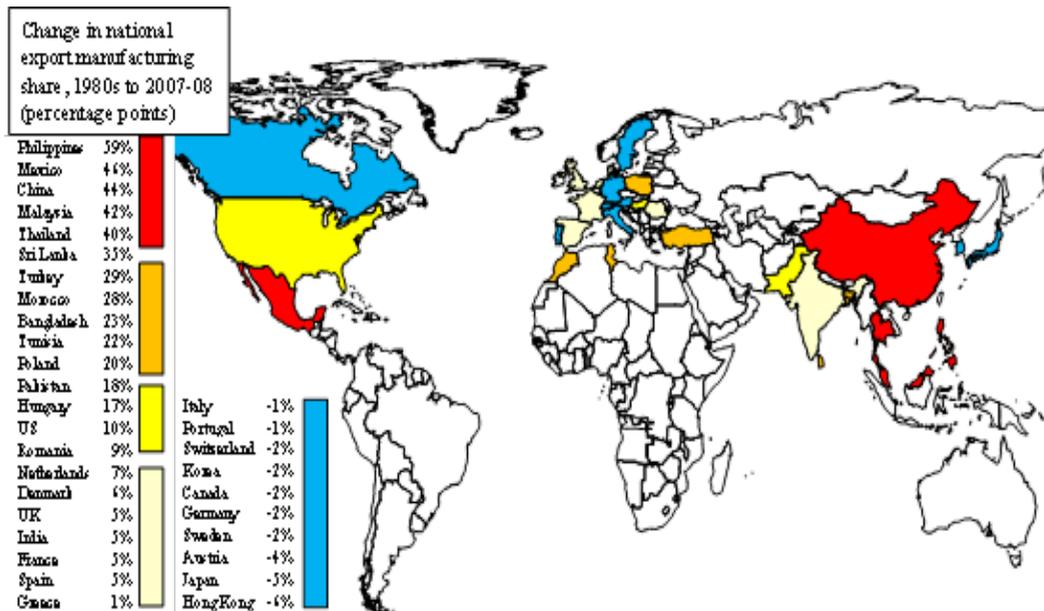


Figure 1.1 Change in National Export Manufacturing Share, 1980s to 2007-08.

Source: Baldwin & Gonzales.

As indicated in Figure 1.1 above, within the period of 1980s to 2007-08 the growth of manufacturing in the national share of exports moved significantly East at the detriment of traditionally recognized industrialized economies of the North like Europe and North America. Admittedly, this increase was certainly from a lower base, but it is championed by countries such as Philippines (59%), Mexico (46%) China (44%), Malaysia (42%), and Thailand (40%). This happened at the same time when traditional industrialized economies were experiencing a decline in their global share of manufacturing Hong Kong (-6%), Japan (-5%), and Sweden, Canada, Germany and Switzerland (all dropping by 2%). One of the reasons why these changes are important for Africa is the realization that these countries who experienced an increase in their global share of manufacturing are the same countries who in the 1960s would not have been categorized as having a comparative or competitive advantage in manufacturing. This means that the notion of comparative or competitive advantage often touted in much of traditional trade theories may explain the rationale of a production structure given a static or even progressive and dynamic evaluation of countries and their relative resources endowments that bequeath upon them their competitive advantage, but it does not in any way suggests that countries would perpetually retain the comparative or competitive advantages that they once possessed as this is in reality determined by a host of factors outside of the framework and tools of analysis of these trade theoretical frameworks.

The implication for Africa is that its comparative and competitive advantages can be changed just as the NICs have changed theirs. The NICs did not just settle to produce and supply global markets according to their natural endowments, but they created opportunities (a competitive advantage) through carefully crafted/coordinated domestic and regional industrial policies alongside measures that were aimed at building local production capacity. These distinct characteristics of the Asian experience (for individual countries and their collective regional efforts) represents interesting cases for African countries to study. There is no doubt that Africa needs to industrialize so as to provide job opportunities to millions of its young people. This is one sure way the continent can eradicate poverty (like the Chinese have done) while simultaneously facilitating the dynamic processes of technological innovation, skills development, knowledge-intensification and capital accumulation (Morris & Fessehaie, 2014, 26). Given the consensus that ought to exist around the benefits of industrialization to Africa, it remains a reality that the continent's many decades of efforts towards industrialization are not yet yielding the results in Africa that have been recently observed in the NICs. This reality is part of what fuels the renewed interests and debates about the actual obstacles to Africa's industrialization. This renewed interest is also growing amidst considerations of the opportunities that may exist for Africa's collective industrialization as part of its regionalization efforts (developmental regionalism) at the Sub-regional and continental levels. To resolve this dilemma, Africa needs to learn concrete lessons from its past attempts at industrialization, draw lessons from the industrialization experience of other regions (particularly the NICs in our view), and take cognizance of its current advantages endowments and comparative advantages and the opportunities that are not presented by the changing patterns of global trade to identify and pursue

an “African Unique Pathway” to industrialization. The opportunities presented by an increase of trade in intermediate goods, that has come with the unbundling and dispersal of global production structures, as well as the increased share of services in global production value chains present are all avenues through which Africa could explore its engagement with industrialization. To accomplish this, it needs to be able to ask itself the right questions, both at the national as well as the regional level, taking into account the contextual realities of African countries, while reassessing the capacity and potential of regional corporation and integration to bring about the much desired levels of industrialization.

Asking the right questions and rightly assessing the available opportunities should lead the African continent towards the most suitable pathway for its industrialization. This may require developing an understanding of why earlier efforts towards for example ‘*Import-Substitution Industrialization*’ failed whereas it is known to have been practiced successfully in Japan. It may also entail revisiting the Resources Curse argument and the limitations of a commodity-led industrialization pathway for Africa. This paper intends to adopt this approach to the industrialization question for Africa by revisiting some of the historical debates and explanations about Africa’s industrialization in the light of new case study experiences that could serve as new evidence to challenge the conclusions of earlier debates on the subject. The second objective of the paper is to examine new opportunities and possible new paths for Africa’s industrialization that have been opened up by the changing patterns of global trade. To accomplish both objectives, the paper will be answering questions like:

- i. What lessons do African countries need to draw from the experience of the NICs in the light of current structures and patterns of global production?
- ii. What would it take for Africa to increase its share in global manufacturing?
- iii. What would it take for Africa’s products to be involved in more value addition and go up global value chains?
- iv. Is a commodity-based industrialization model still a viable pathway for Africa’s industrialization given its known resources endowment?
- v. Is there still a potential role for manufacturing and what other opportunities and alternative pathways for industrialization remain open for the continent.
- vi. What role for regional industrial policy and Africa’s practice of developmental regionalism in its industrialization efforts?

Though the idea is not to answer these questions one after the other, the thrust of the paper is to provide reflections in these directions, with the aim of engaging upon discussions that would lead to certain conclusions that would be answering these questions directly. The resultant responses should constitute recommendations for the formulation of domestic and regional industrial policies for the continent’s industrialization within the context of a global drive towards the 4th industrial revolution and its associated opportunities. To accomplish its stated objectives the paper is divided into 6 sub-sections. Section 1.2 that follows revisits the challenge to Africa’s industrialization and the reasons why previous industrialization efforts failed to accomplish their objectives. Section 1.3 will explore possible pathways to Africa’s industrialization by examining the debate around commodity-based industrialization while section 1.4 examines other new opportunities for Africa’s

industrialization offered by the changing patterns of global trade. Section 1.5 makes a brief case for Africa’s industrialization within a developmental regionalism paradigm and section 1.6 concludes the chapter.

1.2 Challenges to industrialization in Africa

The idea that Africa should industrialize is not new. The continent’s post-independence leaders—like those in many developing countries in the 1960s and 1970s—looked to state-led, import-substituting industrialization as the key to rapid economic growth. Though African manufacturing grew in the immediate post-independence period, largely shaped by state-led and protectionist policies, by the mid- 1980s, a series of external shocks—including oil price increases, commodity price decreases, real interest rate rises, withering public coffers, and the limitations of domestic markets—were major factors in industrial decline in the region (Signe,2018:3). In addition to these external factors, the industries that were created in these early years were frequently uncompetitive and unsustainable, and efforts to spur industrial development in Africa largely vanished with the economic collapses and Structural adjustment programmes (SAPS) of the 1980s and 1990s. The consequences of this first failed episode of industrialization is that Africa and most African countries have remained largely exporters of unprocessed natural resources with little value addition. This has left them occupying inferior positions in the Global Value Chains of the products which they produce. Despite their manufacturing potential and promising trajectories, most African countries have remained relatively dearth of factories. Africa as a continent has witnessed a systematic decrease in manufacturing’s contribution as a percentage of GDP over the last four decades, this at the same time when other regions in the world were experiencing an increase (See Figure 1.2 below).

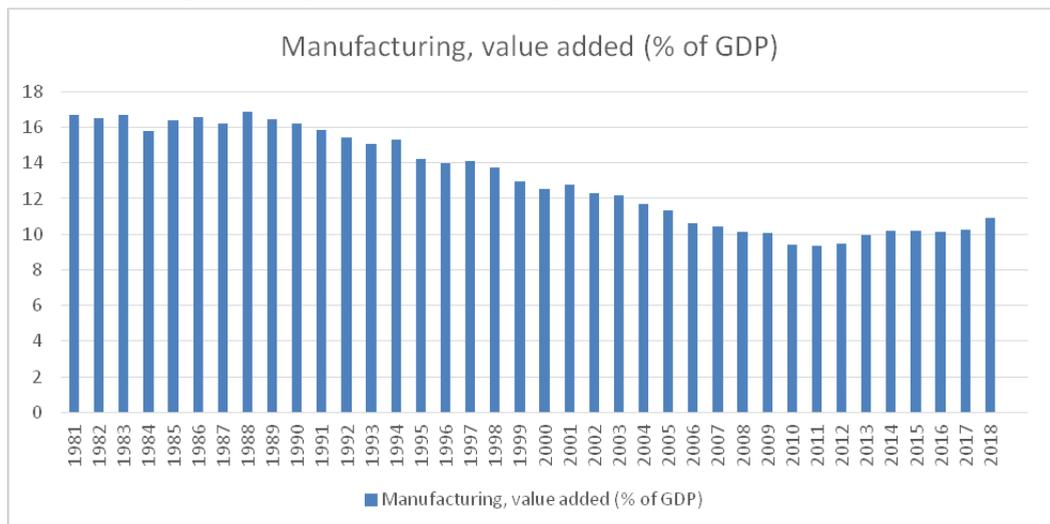


Figure 1.2 Manufacturing, Value Added (% of GDP)

Source: World Bank WDI

As illustrated in Figure 1.2 above, the contribution of Manufacturing value added as

a percentage of GDP has been consistently lower than 18% in Sub-Sahara Africa for the last four decades. This confirms both the minimal contribution of manufacturing to GDP and its progressively declining share to below 12% since about the year 2002 and reaching an all-time low in 2010 and 2011. This limited industrial development represents a missed opportunity for economic transformation and quality employment generation that alleviates poverty. This remains a source of concern for the continent given the enormity of the developmental challenges it is facing and remain continued focus and concern for the continent’s policy makers. This remains a policy priority because a robust manufacturing sector is broadly understood as a fundamental path to economic growth and development. The most recent illustration is the launch of the African Continental Free Trade Area (AFCFTA) in March 2018, a single market for goods and services in Africa that aims to unlock manufacturing potential and facilitate industrialization, driving sustainable growth and jobs among other objectives (Signe, 2018, 1). This acknowledgement and sense of urgency from Africa’s policy makers is further accentuated by the fact that while Africa was experiencing a decline, other regions in the world were experiencing an increase and a greater contribution of their manufacturing share of GDP. In Figure 1.3, the SSA performance is compared with that of East Asia and Pacific, as illustrated below.

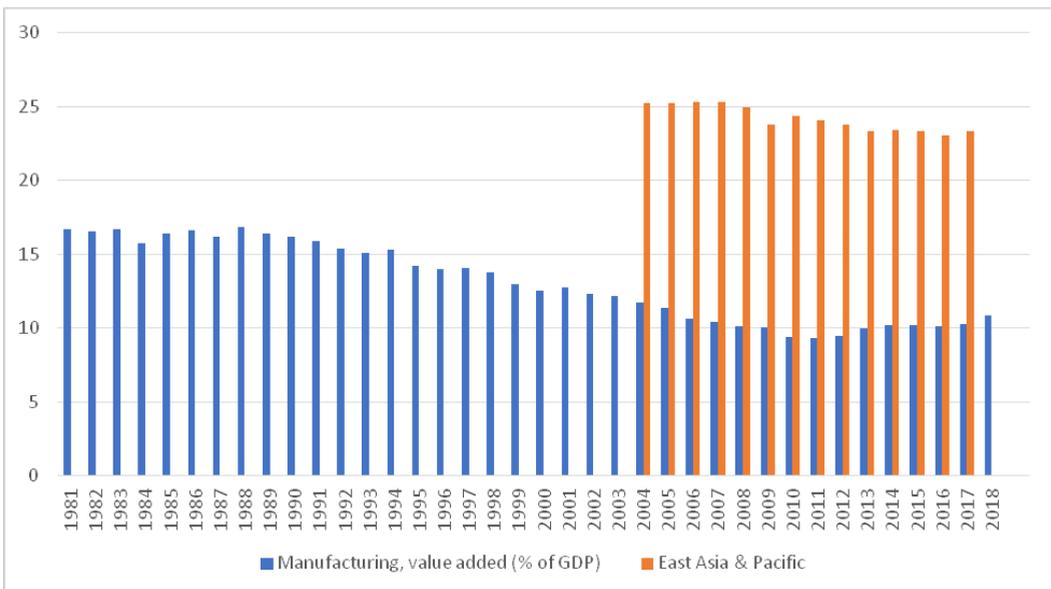
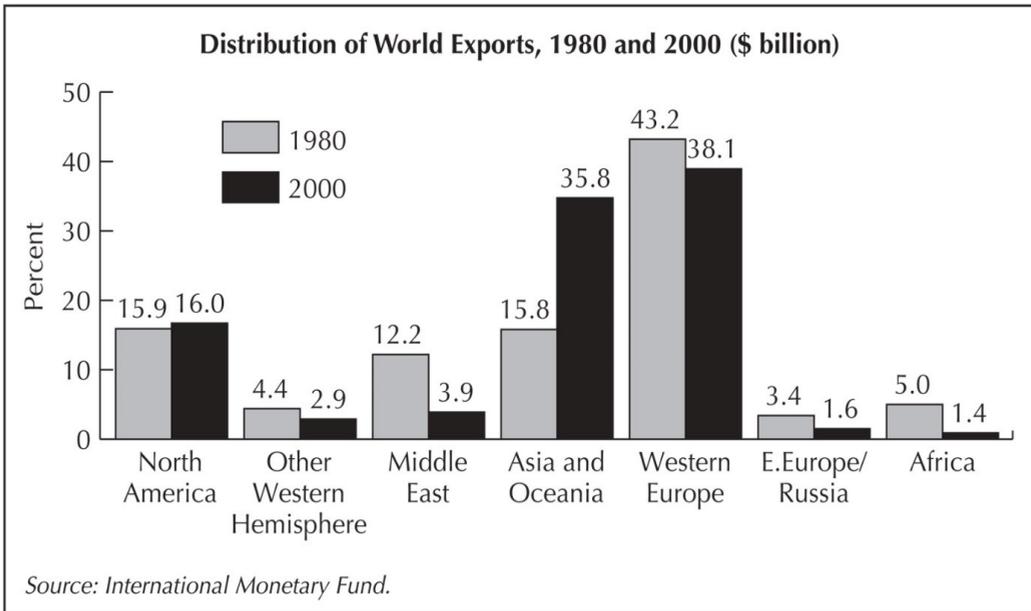


Figure 1.3 Manufacturing, Value Added (% of GDP)

Source: World Bank WDI

As can be seen in figure 1.3 above, while the manufacturing value added as a percentage of GDP was declining from the mid-2000s in Sub-Saharan Africa (SSA), in the East Asia and Pacific Region the contribution of Manufacturing value added as a percentage of GDP was consistently above 20% within that period (2004-2017) and being above 25% between 2004 – 2008. As illustration in 2016, Asia alone accounted for about 88 per cent of developing country gross exports of manufactures to the

world, and for 93 per cent of South–South trade in manufactures, while East Asia alone accounted for 72 per cent of both. These trade patterns in Asia have been explained to be the result of a shift from natural resources to manufactured goods as illustrated in figure 1.4 below.



Copyright © 2006 Pearson Prentice Hall, Inc.

Figure 1:4 Distribution of World exports between 1980 and 2000

As illustrated in figure 1.4 above, most regions of the world have experienced a decline in their contribution to global world exports between 1980 and 2000. The only difference is North America that experienced a marginal increase from \$15.9 billion to \$16 billion and the most significant increase being in Asia and Oceania that increased from \$15.8 billion to \$35.8 billion over the period of 1980-2000 attributed to a shift from natural resources to manufactured goods in Asia. Within this same period, Africa experienced a significant decline from \$5 billion dollars to \$1.4 billion which can also be closely correlated with it declining percentage of manufacturing value added as a percentage of GDP as earlier indicated in Figure 1.2. The correlated decline in manufacturing value added as a percentage of GDP together with a decline share of Africa’s contribution in global exports together attest to the industrialization challenge on the continent.

The main reason the industrialization gap in Africa with respect to the rest of the world has increased is because of structural weaknesses such as poor infrastructure, weak logistics and trade facilitation, slow regional integration and absence of accreditation frameworks (UNIDO, 2016, 13). This is also accompanied by insufficient energy and low information and communications technology which further constrain development. It is estimated that almost 290million out of 915 million people in SSA have scanty

access to electricity. In some African countries, road, rail and freight transport systems date back from colonial times and were focused on moving unprocessed raw materials from extraction zones in the hinterland to coastal areas for onward shipment to international markets (combination of existing trade and infrastructure development patterns). Whereas a reliable logistics performance and infrastructure network is critical for trade, economic integration, growth and competitiveness. This includes efficient border management that eliminates shipment delays and enhances predictability in border clearance. In addition to these, there remain coordination challenges among government custom control agencies on regional transit regimes across the continents. There have been efforts aimed at introducing best practices like single windows for trade, automation and risk management also in non-customs control agencies which are all vital for improving trade facilitation. These measures to boost trade facilitation are an important component of industrial competitiveness. These weaknesses and challenges together partly also explain the low level of merchandise trade amongst African countries, which represented only 11% of total trade between 2007 and 2011 (compared with 50% in Asia and 70% in Europe). Added to this is the failure of African countries to take advantage of lower than average labour costs to increase their share of labour-intensive manufacturing. Notwithstanding all these challenges, there is still some optimism about the future of Africa's growth and industrialization. Some authors believe that Africa is likely to be "the world's next great manufacturing center", potentially capturing part of the 100 million labor-intensive manufacturing jobs that will leave China by 2030. This trend creates a huge opportunity for the continent, not only for countries such as South Africa, Egypt, and Nigeria (all regional outperformers in the Global Manufacturing Competitiveness Index), but also for newer players such as Ethiopia, Morocco, Rwanda, and others (all of whom have recently adopted policies enabling manufacturing and industrial development). (Signe, 2018, 2). This optimism that also accompany the Africa Arising narrative speak to the opportunities that lay ahead of Africa to pursue an industrialization path taking into account its endowments and contextual realities. For this to happen the continent would have to draw lessons from the industrialization experience of other regions, as well as the advantages that come with the changing nature of global trade to industrialize. The various options and opportunities that the continent could adopt, drawing lessons from the experience of other regions including it possible industrialization options shall be examined in the section that follows.

Haven clearly articulated the benefits of industrialization in solving development problems and haven clearly highlighted the challenges that limit Africa's industrialization, this section seeks to explore the opportunities and options open and available for Africa's industrialization. These opportunities represent a combination of new options that are now open within the context of the 4th industrial revolution as well as contemplation about previously attempted pathways towards industrialization that could now be more successful due to the lessons that have been learned from past failures and opportunities gathered from the experience of other regions. In this regard, there are opportunities available for Africa's industrialization through the changing nature of global trade, the unbundling of production and the

increased share of global trade in intermediate goods. An analysis of over 400 traded goods in the four traditional GVCs—apparel, footwear, electronics and autos—shows that Sub-Saharan Africa is not highly integrated into these GVCs, whether via exports or imports. Among these industries, vehicle manufacturing, mainly assembly, leads on foreign value added embedded in exports. Other medium-tech manufacturing, such as electrical machinery and metal products, follows a similar structure (UNIDO, 2016:11). In addition to this, the New Industrial Revolution (NIR)—including the Internet of things, big data, cloud computing, artificial intelligence, robotics, 3D printing, new materials, augmented reality, nanotechnology and biotechnology—has the potential to improve productivity, reduce energy and resource consumption, and thus protect the environment and increase resource efficiency and effectiveness. Though Africa may not currently have the technological endowment to be competitive in this area, it does not preclude it from participating in the opportunities represented by the 4th industrial revolution and the future of production and consumption. Furthermore, there are also opportunities associated with the increased contribution of services in global trade and advantages to be taken of the growing middle-class population on the African continent that represent a potential market for consumer goods. These once treated together with an examination of the natural resources endowment of the continent represent real opportunities for Africa's chosen pathway towards industrialization. Whereas each of these components merit extended chapters and even books on their own, they will be treated here in summary forms to highlight some of the key arguments that justify their visitation as both opportunities and suitable pathways for Africa's industrialization efforts. For ease of presentation, these pathways and opportunities shall be briefly examined in the next two subsections that follow. First through an examination of the opportunities for a resource-based industrialization pathway in section 1.3 and then through a brief examination of other opportunities for industrialization that Africa could take advantage of as a result of the changing nature of global trade.

1.3 Africa's possibilities to pursue a resources-based industrialization pathway

The debate about the possibility for Africa to adopt a resource-based industrialization pathway is one that is long standing and ongoing on the continent. The economic logic of this re-occurrence is simple, it seems rationale to contemplate an industrialization pathway for Africa on the basis of its natural resources endowments, seeing that it still has reasonable reserves of a number of globally sought after natural resources. These become their initial sources of revenue and income upon which they can build to develop industrial and production capacities through value addition and aspirations to climb to higher levels in current global value chains while using the revenues generated during this upgrading to diversify and create industrialization capacities in other areas. This pathway seems reasonable compared to the no capacity, no possibility of progressive industrialization, 'resources curse' 'Africa is doomed' narrative that often accompanies discussions about Africa's industrialization. There is no arguing that in the current context of global trade and the evolution towards the 4th industrial revolution no single strategy would be necessarily enough but a comprehensive strategy that attempts to develop capacity in a combination of areas,

amongst which a focus on its resources. Natural resources have proven to be a blessing in other countries and the recent experience of Asian economies have also proven that comparative advantages and competitive edge are not static deterministic prophecies of a people's outcomes but that a combination of right policies and carefully contemplated outcomes can convert the revenue from natural resources to be the source of an economic expansion and deliberate investments in other areas can develop productive capacity that makes countries and regions to become globally competitive and regional production/manufacturing hubs for newly created global markets and changing patterns of global demand.

Seen from this perspective, there are real opportunities to be harnessed for Africa to adopt a natural resources-based pathway to industrialization as one of the corridors of an industrialization strategy that has other components as well. This section intends to make a case of why such a strategy is possible for Africa and how it can be achieved. This would have to part of a comprehensive develop strategy that includes an industrial policy that is integrated into a comprehensive strategy to develop national and regional capacities and markets while deliberately working at overcoming the power relations that influence global market access and by proxy global value chains. Through a combination of breaking into existing value chains and looking for new opportunities in emerging economies and taking advantage of the emerging global order with the multipolarity of global centers of power and influence.

One must admit that such a transformation for Africa would be coming from a low base and that in many regard the continent is a late starter and late comer to the space of the control of market access and global value chains, even in the areas of its current resources endowments and once celebrated comparative advantage. African countries are for example very lowly placed in the Global Value chains of some commodities for which they enjoy top tier positions in global production. For example, Côte d'Ivoire, Ghana, and Nigeria are amongst the world's top exporters cocoa bean but they individually and collectively own a very tiny percentage of the global market shares for chocolates. In addition, their profiles show remarkably low levels of value addition in their export commodity with only Côte d'Ivoire and Ghana exporting between a fifth and a quarter of their production in semi-processed form, which is in sharp contrast with their Asian and South American counterparts involved in the same industry. Taking the example of some Asian cocoa producers, more than 50% of Indonesia's export value was at the lower and higher end of the semi-processed stages (cocoa paste, butter and powder), and almost all of Malaysia's export value was at the higher end of the semi-processed stage (cocoa butter and powder). In Latin America, Brazil and Mexico have been successful in moving even further up the value chain with one third of Brazil's and almost all Mexico's exports consisted of chocolate products (Morris & Fessehaie, 2014, 31).

This narrative is important for Africa's commodity based industrialization argument because the countries that are sited here (Indonesia, Malaysia, Mexico, Brazil) were considered to be for some at comparable levels of development like most African countries in the 1960s. In fact, the ability to significantly increase their value addition in production and even to expand production of agricultural based export cash crops

in Asia and Latin America is what reduced the competitive edge which African commodities had enjoyed in world markets in the period shortly following their independence in the 1960s. They moved from being preferential suppliers of certain commodities to world markets to having to compete with more efficiently produced and consequently cheaper alternatives from Latin America and parts of Asia (the case of Palm Oil & related products from Malaysia), resulting to a decrease in their global share of trade even in unprocessed primary commodities in world markets. So although there are political economy issues with Tariff and Non-Tariff technical barriers to market access in the advanced economies of the North (high tariffs and taxes placed upon some processed goods than on raw unprocessed commodities) which cause the rents to be disproportionately located in these northern economies (Swiss Chocolate factories and European fortress protection of its agricultural sector), African economies cannot resort to victimhood because as indicated in the above passages, some countries in Latin America and Asia have been able to overcome these barriers to global market access, value addition in production and progress along global value chains, and all Africa needs to do is to emulate the examples of these countries.

One of the ways in which African countries can successfully pursue a natural resources-based industrialization pathway is through the promotion of forward and backward linkages in the areas of their current resources endowments and production. For African countries endowed with natural resources, the recent developments in commodity markets present an added opportunity to promote industrialization and knowledge intensification processes around backward and forward linkages to the commodity sectors. Morris & Fessehaie (2014, 29) referencing an Albert Hirschman (1981) framework identify three possible linkages that African countries could adopt to pursue a commodity-based industrialization pathway. These are possible fiscal linkages, *consumption linkages* and *production linkages*. With respect to Fiscal linkages, they argue that the resource rents which the government is able to harvest from the commodity sectors in the form of corporate taxes, royalties and income taxes can be used to promote industrial development in sectors unrelated to commodities.

There is a lot that Africa needs to learn in this regard from other resource rich countries like the Nordic Countries and the countries in the Middle East. There is for example The Abu Dhabi Investment Authority (ADIA), a Sovereign Wealth Fund (SWF) owned by the Emirate of Abu Dhabi (in the United Arab Emirates) and founded for the purpose of investing funds on behalf of the Government of the Emirate of Abu Dhabi. It manages the Emirate's excess oil reserves, estimated to be as much as \$875 billion. In the Nordic Countries, Norway also established a Sovereign Wealth Fund (SWF) to manage the proceeds of its oil revenue derived from the North Sea Oil fields called '*The Government Pension Fund of Norway*'. It comprises of two entirely separate sovereign wealth funds owned by the government of Norway. The Government Pension Fund Global, also known as the Oil Fund, was established in 1990 to invest the surplus revenues of the Norwegian petroleum sector. It has over US\$1 trillion in assets, including 1.4% of global stocks and shares, making it one of the world's largest sovereign wealth fund (In May 2018 it was worth about \$195,000 per Norwegian citizen).

There are many examples of this nature that exists and could strengthen the thesis of the fiscal linkage for the ownership of resources for African countries that could become an important financing source for Africa's industrialization. This example dispels the traditional 'resources curse' argument as concerns the usage of Africa's resources and make the argument that it is not the presence of natural resources that predisposes a country to a certain 'cursed series of outcomes but the usage of those resources. As far as this is related to the industrialization debate, it makes the case in favour of commodity-based industrialization because it could constitute the basis for important learning through the development of technological capacity while also being an important source of financing for industrialization capacity in order sectors. This is for example how the Emirates used their oil wealth to develop Dubai into an attractive touristic destination and business hub with a booming Real Estate market and increasing capacities in the financial services industries while becoming a trading hub for the region. These they have supplemented with a number of globally competitive airlines that make these countries an effective transition hub for travelers coming from all over the world. It took visionary leadership and the decision to intentionally invest the initial oil wealth in specific avenues to develop other sectors of the economy, which is the nexus of the fiscal linkage argument.

The other two forms of linkages that Africa's commodity-based industrialization could explore and be based upon is the consumption linkages and production linkages. With regards to Consumption linkages this relates to the demand for the output of other sectors arising from the incomes earned in the commodity sector has the potential to provide a major spur to industrial production as all incomes (whether salaries, wages or profits) earned in the resource sector are spent on products and services. This has to do with the coordinated stimulus that will be released upon the economy through spurring expenditure as a result of the incomes earned from the commodity-based industrialization process. This has the effect of direct demand stimuli for consumer goods and the spillover effects of the consumption of a rising middle class. This linkage is closely tied to the Production linkages. Which relate to both the forward (processing commodities) and backward (producing inputs to be utilized in commodity production) linkages of the industrialization process.

Hirschman (1981) argues in this regard that production linkages pave a path for industrial diversification. This for example would relate to the development of a petrochemical industry (and the learning associated with it thereof) that comes as a result of the ownership and exploration of oil deposits. The petrochemical industry is an industry branch that produces organic intermediate products such as refinery products, natural gas, plastic, rubber, fiber raw materials. This industry is competitive, involves significant technological innovation, is capital intensive and operates in a global product market. In terms of production volumes the industry represents approximately 10% of the total petroleum industry. Historically the industry evolved out of technological innovation in the developed industrialized economies. Until the last quarter of the twentieth century production of petrochemicals was concentrated in Western Europe, the United States and Japan. Over the last few decades, however, production in areas with competitively priced feedstocks has increased dramatically. New production capacity has been built in the Middle East and Asia. This new

capacity employs the latest technologies on the largest scales with some of the cheapest available feedstocks and, as a result, has changed the competitive landscape of the industry. Many older facilities using higher cost feedstocks have not been able to compete and hence there have been site closures especially in the more established and mature European markets (Clews, 2016).

This brief narrative about the petrochemical industry hold two fundamental truths for Africa's industrialization. The first is *that competitive advantages are not static and indefinitely skewed in favour of certain economies, and if countries invest in developing their competitive edge in any domain, they can overtake those who have traditionally been presented as the owners of the competitive advantage*. The second lesson for Africa's industrialization is the fact that *there are opportunities for diversification beyond the current stock of natural resources*. The desire to move up global value chains of existing resources that African countries own ought to be an express priority and objective for their host economies, as well as the exploration of possibilities for industrial diversification based on current endowment of resources. These must never be treated as quick fix solutions but as part of long-term plans to develop the capacity to move up existing production value chains, create alternative industries, access current markets and take advantage of the demographic dividend on the African continent to anticipate the creation of newer markets that would justify industrialization at a certain scale. This ought to be the real focus of African solidarity as opposed to a simple focus and emphasis on market integration.

Though there is this emphasis on the opportunities that come with resources-based industrialization for Africa, resource-based industrialization strategies are subject to three main types of criticism:

- a) resource-based industrialization is as difficult as any other industrialization path;
- b) commodity sectors are not likely to promote linkages and externalities: and
- c) resource-based industries do not match Africa's factor endowments (Morris & Fessehaie, 2014, 29).

The first criticism is a reality check regarding the fact that the ownership of resources is not a guarantee that industrialization and diversification will automatically take place. Wherever these have been found to occur, they are often the result of deliberate policies to produce the same. As much as the argument has been made that ownership of resources is not a curse, it is important to equally argue that resources ownership must be accompanied by requisite capacity building measures to take full advantage of the benefits of resources ownership, as countries like Norway have done and seen the development of an elaborate petrochemical industry alongside the mere exploration and sale of oil reserves to generate revenue. This brings to the fore the importance of factors such as infrastructure, human capital, access to financial capital, technology and skills which are all important in determining the benefits that may accrue to any country from the ownership of natural resources. The used of the revenue from the exploration of owned resource to through the three aforementioned linkages through deliberate policy interventions and action i what ultimately determines a country's competitiveness, position and growth along the global value chain of its selected product. As Morris & Fessehaie (2014) argue, the experience of resource-rich Venezuela, Argentina, Malaysia and Thailand suggests that the export

success of resource-based industries was not so much the result of high level of initial skills and capital, but rather *economic policies fostering their accumulation*. Though the experiences of these countries may vary greatly, the lessons from the more successful ones amongst them point to the fact that it will require deliberate policy action to make the best of the ownership of natural resources for the adoption of a natural resources based industrialization pathway and to utilize the resources generated rents to create broader-based and more dynamic growth trajectories (diversifying into services industries for example).

This suggests that there is hope for Africa through the pursuit of a resources-based industrialization pathway. The experience of other countries offer hope in the fact that Africa indeed stands a chance to make a difference with the use of its resources, if it can learn and implement the lessons that other countries have to offer in their own industrialization efforts from a resources base. For example, *commodity sectors have promoted technologically sophisticated upstream industries in 'new' resource rich countries (Australia, Norway, Scotland)*. With the right policies and under the right conditions, commodity production can have a positive impact on technological deepening, manufacturing and service upstream/downstream activities, and ultimately growth (Morris & Fessehaie, 2014, 29). In addition to this, the historical experience of many resource-rich countries shows that commodity sectors foster productivity growth, technological innovation, forward and backward linkages, provided they are supported by good institutions and investment in human capital and knowledge (de Ferranti et al., 2002). If this has been the case in other countries and regions, there is no reason why it would not be the same in Africa. The question should therefore not be whether Africa can industrialize based on its natural resources endowment but rather how this can be achieved through the promotion of linkage development, value addition, and the diversification into new avenues making use of the rents accumulated from the resources sector to invest into the development of capability in other areas and sectors like the development of technological capabilities in related and associated industries and diversification into other aspects of the production value chain. There are amply opportunities and examples for Africa to delve into alternative and related paths of industrialization and participating in global value chain and some of these options are briefly examined in the sub-section that follows.

1.4 Other current industrialization possibilities for Africa

There are opportunities for Africa's industrialization presented by the changing patterns of global trade because global trade flows have been increasingly characterized by intra-industry trade in intermediate goods. This reflects trade between lead firms and their suppliers around the world. It represents an opportunity for Africa's industrialization because unlike the days of import substitution industrialization in Africa, there is an opportunity not only to produce complete finished products to be sent to the global market which may require a more varied sets of skills and capabilities, but there could be the production of intermediate products based on Africa's natural resource endowments that feeds into. Now, whilst Africa's degree of export orientation and import penetration is high, imports are largely composed of final consumer goods and exports of raw materials. Imports of capital equipment

and many intermediaries are primarily destined for commodity extraction. This can however be quickly changed with by two important factors that characterize the continent, the demographic dividend of a rising middle class that could constitute an effective labour force and a consumer market for finished goods and the potential for the creation of larger markets that could come with furthering regional integration, including the expected gains of the just concluded African Continental Free Trade Area (AFCFTA). In this regard, a 2016 UNIDO report to the G20 Development Working Group (DWG) noted that the fragmentation of the African market is very costly for all African countries. The report recommended that industrial agglomerations and other growth benefits could be realized from the development of transport, logistics and industrial corridors and hub development around transport nodes and important urban centers. These together represent the formulation of industrial policies not just based upon existing markets but the deliberate commitment to create larger markets through furthering economic integration by uplifting the trade and non-trade related barriers to trade. This is perhaps why preferential liberalization of service trade now features in many regional trading arrangements, and the LDC service waiver of the World Trade Organization (WTO) opens then possibility of making them more widely available on a non-reciprocal basis.

So there are indeed encouraging patterns of global trade that represent real opportunities for Africa's continued quest for industrialization through the creation of opportunities to be integrated into global value chains. Global value chains (GVCs) refer to the different value-added links, composed of many activities, required to bring a product from conception and design to its delivery to the final consumer and, finally, to its disposal (Kaplinsky and Morris, 2001). GVCs are composed of various stages characterized by varying levels of value addition and, crucially, by different entry barriers. Higher entry barriers are usually created by skills, R&D and technology. It is these barriers that allow countries and firms to capture high rents, because there are fewer competitors and such rents are also high in activities associated with design, marketing and distribution (Morris & Fessehaie, 2014, 26). All Africa needs to do in this regard is to overcome these entry barriers through a deliberate accumulation of skills and technology that builds both capacity and competency in specific selected industries. Like will every process of R&D investment, skills accumulation, innovation and technology acquisition, this will require long term deliberate and strategic investments that may yield their fruits only over time. This would have been done both with the intention of tapping into existing markets and GVCs but also through the ability to project long into the future to anticipate future markets needs and consumer demand. There is no saying that there is path dependency as to the pathway and trajectory of development that African economies need to follow but there are real opportunities to be harnessed from economic transformation that comes with industrialization that is accompanied by the readiness to provide new consumer goods for the products that its expanding population would need. Without advocating for an autarkic philosophy of anticipated production, it is both prudential macroeconomic management (from a Balance of Trade & balance of payment perspective) for Africa to anticipate well ahead of time being able to produce a significant proportion of the consumption needs of its current and future

population and integrated market as shall be adapted to their tastes and preferences as they evolve.

Some authors have argued in this regard that breaking into global markets for manufacturing, agro-industry and tradable services represents Africa's only viable path to accelerated structural change and industrialization. Such industries can be served by micro, small and medium-sized enterprises, using their relative advantages in flexibility, innovativeness, personalized contacts, quality of products and creating new opportunities for the international sourcing of scarce specialized skills. These gives considerable scope for the African private sector to become a part of the industrialization process in partnership with their governments and regional organizations who shall provide them the support and policy environment to contribute their innovativeness in such industrialization efforts. This option makes a lot of sense for Africa because current trends in intermediate goods trade are indicative of regional and global value chain integration, as fragmented production processes require parts, components and partially manufactured sub-assemblies to cross borders, sometimes more than once, before goods are produced and shipped to consumer markets. At the moment, Africa is only capturing a small but growing share of this global trade in intermediaries, which rose from 1.4_per cent in 1995 to 2.2_per cent in 2011. Almost three quarters of this growth was due to backward integration (the share of foreign value added embedded in a country's exports). (UNIDO, 2016, 11). For Africa to increase its share in this global trade in intermediary goods and effectively leverage the possibilities that lay in its regional industrialization efforts it would urgently need to close the knowledge gap with industry in other regions which again highlights the role of knowledge in production—both in terms of the role of technology and that of firm capabilities. Upgrading national and regional production capabilities should be integrated into national and regional industrial policies and become as much a point of emphasis as have been market access and expansion through further integration.

The potential to do this at the regional and continental scale is huge and this remains the core of the developmental regionalism argument. Industrial development opens up opportunities for positive externalities that are difficult to quantify. Through cooperation at the regional and continental levels, African countries can promote a diversification of technological capabilities and of their skills base by developing backward linkage supply firms to the commodity sectors and resource-processing industries. The variety of technological capabilities and skills fostered in linkages also opens up opportunities for lateral migration into other sectors. This can be pursued anchoring upon the experience of slight more advanced industrial hubs in various sub regions to promote the flying geese model of industrialization as Japan was for its surrounding Asian neighbors.

The flying geese model explains the shifting competitiveness of an industry over time by focusing on the dynamic changes in factor endowments (labour and capital) that countries usually experience during economic development. Foreign direct investments, besides triggering an indigenous improvement in the availability and quality of factor endowments in the countries catching up from behind, also helps promote the transformation of trade structures by transferring factors of production

(capital, technology and management know-how) from the more advanced countries to the less developed ones (Hiley,2000:62). This could be the approach/model adopted in African countries to pursue industrialization around anchor countries and sub-regional industrial hubs, like South Africa in the Southern Africa or Kenya and Tanzania in East Africa. The dynamics could be different for West Africa and Northern Africa, but the principle could more or less be the same, emphasizing upon the leadership of a regional leader. The industrial policies and development of these regional leaders could also serve as an anchor of the industrialization strategy of the rest of the region, with its progression along the manufacturing line leading it to give way to other countries while it progresses to the production of more advanced goods. This can create a mutually beneficial and symbiotic relationship amongst countries participating in a regional integration arrangement even if they are at different levels of production and technological intensity in their manufacturing capacity for example.

Drawing some inspiration from the case of Asia, the NICs started to accept FDI from Japan, Europe and the United States before other regions did so. Consequently, at the beginning of the 1970s they suddenly emerged as international export bases in the global economy. The FDI route to join the global economy was different from the path which Japan had followed. Japan achieved growth through import substitution using technology introduced from abroad. In the same token, the development of South Korea's industry was initially never expanded beyond textiles and home electric appliances because the range of Japanese FDI was limited to these industries. (Hiley, 2000, 63). Africa can follow in these footsteps because there is considerable scope for African countries at different levels of industrialization to benefit mutually from the flying geese pattern of trade and FDI. As long as they pursue appropriate industrial and technology policies geared towards the export market, these countries can move up the industrial hierarchy through accelerated capital accumulation and the adaptation of advanced technology in such a way that shifts competitiveness to the mutual advantage of all countries and does not lead to unmanageable dislocations and adjustment problems or trade frictions (Hiley, 2000, 65).

This could be applied in Southern Africa, for example in the minerals sector, for which the ownership and exploration of minerals and natural resources is a common characteristic amongst some countries (Angola, Mozambique, Botswana, Namibia, Zambia, Zimbabwe, and South Africa for example). The resources endowments of these countries in the minerals and natural resources sector (oil and gas in the case of Angola, Mozambique and recently South Africa) constitute a comparative advantage which could facilitate the formation of a new regionally oriented, minerals-based industrialization strategy. As these economies develop, and as a response to the changing economic environment, there is no reason why these Southern African economies should not undergo significant structural change and readjustment in the future. They could aim to maintain their comparative advantage in the minerals, sector whilst developing and moving into labour intensive and human capital-intensive manufactures before finally developing a comparative advantage in technology intensive manufactures, passing the outdated industries down the ladder in line with the flying geese pattern of economic development (Hiley, 2000, 70). This

calls for a different approach to the formulation of national industrial policy that is coordinated along with regional industrial policies. Its successful application at the level of Southern Africa implies that it can be replicated at the continental level. Industrialization is thus possible within the developmental regionalism paradigm, but it imposes a unique responsibility upon national and regional organizations in the development of their industrialization policy and strategy. The extent to which national and regional policies could be utilized for the advancement of an industrialization agenda within a developmental regionalism paradigm is the subject of the next section.

1.5 Industrialization within a developmental regionalism paradigm

In the pursuit of industrialization within a developmental regionalism paradigm in Africa, there are various roles to be played by national and regional industrialization policies. These roles are closely linked to the responsibility of national governments and regional/continental organization who together share the responsibility for the formulation and implementation of policies that would effectively lead to economic transformation and the industrialization of the continent. These policies would have to be enacted and implemented at the national level and mainstreamed for adoption and implementation at the regional level through effective coordination and strategic cooperation. It takes growing and industrializing countries to make for growing and industrializing regions and the continent. The impetus would not effectively come from the sub-regional organizations if the drive is not nurtured at the level of the country and in the same token individual country efforts could be limited in scope and reach if they fail to take advantage of opportunities that can be created by sub-regional and continental integration. Seen from this perspective, the question of Africa's industrialization then becomes one of determining what the national authorities ought to be doing and what regional authorities ought to be doing in return and how their combined efforts ought to be coordinated.

The East Asian experience has shown in this regard that what worked best for national economies were macroeconomic and structural policies that enabled the private sector to play a leading role in the growth process; policies to boost domestic savings and FDI; effective use of foreign aid and sound external debt management. Their experience further demonstrates what can be achieved with a combination of pragmatic and sensible government policies and a disciplined and hard-working population that responds to the right incentives (Hiley, 2000, 59). Therefore to emulate their example, African countries would need to promote an active role for the state in promoting industrial development (through the adoption of pragmatic as opposed to ideologically driven policy positions and the development and training of a disciplined and hardworking labour force), working together or in sync with the private sector. To adopt a pragmatic approach and move away from ideological pockets of market fundamentalism, Africa could need to move away from the debate of whether or not the state should be involved in the promotion of industrialization to settle on defining the role the state ought to play in promoting industrialization and structural change. In the same token, there seems to also to be a consensus that public action needs to move beyond the regulatory reform agenda pushed by

the international financial institutions to address the physical, institutional and knowledge constraints limiting Africa's industrial development (Ajakaiye & Page, 2012, :ii6). Reforms are important but insufficient conditions to promote a certain kind and intensity of industrial production, especially where production capacity is low and technology scanty. These amongst other considerations ought to constitute a more comprehensive agenda for policy makers involved in and interested in the promotion of industrialization. The components of this agenda ought to include but are not limited to the following:

- (i) Infrastructure and new skills are central to any attempt to create globally competitive industry;
- (ii) Spatial industrial policies in the form of well-functioning special economic zones (SEZs) have been poorly implemented in the region and offer considerable promise;
- (iii) Foreign direct investment (FDI) is a key tool to acquire knowledge and needs to be effectively promoted;
- (iv) Fiscal incentives should be time bound, reward first movers and subject to rigorous evaluation.

When these elements are embedded in national industrial policies, they should equally become the connecting points into regional industrial policy frameworks. Through a synchronization of national and regional industrial policy, industrialization would be able to be achieved within a developmental regionalism framework. The developmental regionalism framework advocates for conscious and planned policy actions aimed at building the productive capacities of member countries and promoting industrial restructuring. The agenda extends beyond tariffs and non-tariff measures, import and export quotas and bans, technical and phytosanitary standards, to include issues such as *competition policy, the provision of infrastructure and other public goods, investment, promotion of research and development and building the domestic productive capacities of both the private sector and State-owned enterprises* to ensure the greatest impact and efficiency. Within this framework, the emphasis of developmental regionalism is on facilitating industrial restructuring and economic transformation through coordination efforts at the regional and continental level for the implementation of "*strategic*" trade policies that are consistent with the domestic industrial policy frameworks of the states involved.

Going beyond a mere emphasis on market integration, developmental regionalism, promotes "gradual and sequenced trade liberalization" that is combined with policy actions, such as *coordinated investments into regional transport infrastructure, in order to improve linkages between the states involved and enhance the productive capacities of the region (sub-regional emphasis that builds into continent wide capacity)*. Developmental regionalism therefore also thrives through the promotion of policy harmonization among participating countries in a regional arrangement and its promotion goes hand in hand with the strengthening of the *structures, institutions and capabilities* of national governments to implement such policies (UNCTAD, 2013, 97).

According to UNCTAD (2013), there are four key "policy tools and drivers" for fostering developmental regionalism in Africa. The first driver of developmental regionalism is *industrial policy*, which, as the Report notes, is already being incorporated into regional integration initiatives in Africa through, for example,

the regional industrial development policy of the East African Community (EAC) and the industrial development pillar of the Tripartite Free Trade Agreement being negotiated by the EAC, the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC). The second potential driver of developmental regionalism in Africa is *the use of development corridors*. In theory, these spatial development initiatives encourage intra-regional trade through linking markets. They also improve the productivity of local industries and economies by expanding and *improving trade-related infrastructure*. The third key policy tool of developmental regionalism is the *establishment of special economic zones (SEZs)*, which can serve both as platforms for supplying regional markets and as locations from which to source regional inputs and the fourth and final driver is *the promotion of regional value chains*. African countries are encouraged therefore to promote the development of regional value chains by *investing in infrastructure and business support services* as well as in broader policy areas such as *education, innovation and technology* as regional initiatives. Regional value chains provide local firms with access to larger foreign markets and inputs, thereby freeing them from the constraints of small domestic markets and providing them with opportunities to benefit from economies of scale and 'learning-by-doing'.

In pursuing these four avenues as a collective, it is expected that developmental regionalism would facilitate industrial restructuring and economic transformation through the implementation of "strategic" trade policies that are consistent with the domestic industrial policy frameworks of the states involved. This would be the case if gradual and sequenced trade liberalization is combined with complementary policy actions, such as coordinated investments into regional transport infrastructure, in order to improve linkages between the states involved and enhance the productive capacities of the region. There is evidence that regional economic communities are embracing these perspectives and putting in place initiatives to foster developmental regionalism through the four avenues identified above. This ought to be encouraged more at the sub-regional level and at the continental level and become the subject of extensive deliberations and action. Developmental regionalism for industrialization goes beyond superficial commitments to market integration that are heavily constrained by other obstacles. It is a joint pursuit of the development of productive capacity, the creation of expanded markets and the coordination of national and regional industrial policies. Through the establishment of regional development corridors and special economic zones, the promotion of regional value chains and investment in business facilitation infrastructure, education and capacity development initiatives at sub-regional and continental levels, the industrialization of the continent becomes a possibility within a developmental regionalism framework.

1.6 Conclusion

This paper has examined the possible pathways that Africa could adopt in the pursuit of its industrialization. It has adopted an approach that is in line with the thinking that is not focusing on answering the question of whether industrialization is an option for Africa but builds from the understanding or assumption that it is a necessity. It has made the case that there are many lessons to be learnt from Africa's past industrialization efforts that could inform its current and future quest towards

industrialization. It has in this regard revisited the debate about the resource curse and made the argument that natural resources was not a hindrance in other regions of the world but constituted the basis for industrialization through the creation of linkages, then Africa's resources can be used as a basis or take off point for its industrialization. It has also made the argument that there are also new opportunities available to Africa represented by the changing nature of global trade that could make it possible for Africa's industrialization to adopt paths today that were perhaps not possible in the past. With a population dividend and an emerging middle class, coupled with an increase in the quality of its human capital endowment through education and deliberate skills acquisition, and the implementation of a well-crafted industrial policy coordinated at the national and regional level, there should be considerable scope to make progress in the advancement of Africa's industrialization agenda. Such a coordinated approach will help the rapidly growing African economies to answer the central question they have been facing of recent, that of how to use the dividends of their recent economic growth to foster industrialization and thereby facilitate general development. There is also sufficient scope for such initiatives to be pursued at the national, sub-regional and continental level as ought to be the case within a developmental regionalism paradigm. To get to that level Africa would have to deal with the scale and scope of the under-provision of regional public goods, particularly infrastructure, as well as coordinated knowledge generation and a harmonized trade and investment regimes among countries (UNIDO,2016:14). This can be accomplished through the inclusion of these priorities in national and sub-regional industrial policies, whose adoption and implementation would become part of the continental industrialization effort.

As part of this continent-wide industrialization effort, cross border infrastructure has to be made widely accessible and reliable, supported by institutional harmonization in the trade regime, to increase productivity and competitiveness. It is also worth saying that given the diversity of resource endowment, differences in stages of development and economic background between the different geographical regions of Africa, there can be no 'one size fits all' industrialization strategy. There are however certain approaches to the accumulation of industrial capabilities and focal sectors that could be a common and shared experience all across the continent. African countries could for example focus on strategies for the development of a modern service economy (tourism, IT, transport) and low & medium technology manufacturing development as a point of departure while aiming to create and serve large domestic and regional markets. There should also be opportunities for the development of resource-based industrialization in countries rich in natural resources. Indeed, each country and region on the continent is likely to have a multifaceted approach to industrialization and pursue more than one strategy (Morris & Fessehaie, ,2014, 29).

These strategies would have to be accompanied by some consistency between trade and industrial strategies as pivotal elements to foster regional integration, within a developmental regionalism paradigm. In this regard, African countries and their regional organizations will have to move away from "generalized" industrial policies that have proven ineffective over the last three decades. They will also need to still build strong institutions and viable investment climates and to prioritize and explore

the full potential of public–private partnerships (PPPs) and the opportunities for collaboration among industry, governments and other stakeholders. With these, they would be able to make use of the advantages that come with resources ownership to develop a well-coordinated resources-based industrialization strategy and pathway, while taking advantage of the new and emerging opportunities that are represented by the changing patterns of global trade.

References

- Ajakaiyea, O. & Page, J. (2012). Industrialisation and Economic Transformation in Africa: Introduction and Overview. *Journal of African Economies*, Vol. 21, AERC Supplement 2, pp. ii3–ii18 doi:10.1093/jae/ejr049.
- Clews, R. J. (2016). *Project Finance for the International Petroleum Industry*. Academic Press, London. Published by Elsevier Inc
- De Ferranti, David; Perry, Guillermo E.; Lederman, Daniel; Maloney, William E.. (2002). *From Natural Resources to the Knowledge Economy: Trade and Job Quality*. World Bank Latin American and Caribbean Studies - Viewpoints. Washington, DC: World Bank. © World Bank. <https://openknowledge.worldbank.org/handle/10986/14040> License: CC BY 3.0 IGO."
- Kaplinsky, R. & Gereffi, G. (2001). Introduction: Globalisation, Value Chains and Development. *IDS Bulletin*, 32(3) pp. 1–8. DOI: <https://doi.org/10.1111/j.1759-5436.2001.mp32003001.x>.
- Morris, M., & Fessehaie, J. (2014). The industrialisation challenge for Africa: Towards a commodities based industrialization path. *Journal of African Trade*, 1(1), 25–36.
- Imbs, J. & Wacziarg, R. (2003). Stages of Diversification. *The American Economic Review*, Mar., 2003, Vol. 93, No. 1 (Mar., 2003), pp. 63– 86 Published by: American Economic Association Stable URL: <https://www.jstor.org/stable/3132162>
- Olivier Cadot, Céline Carrère, Vanessa Strauss-Kahn; Export Diversification: What's behind the Hump?. *The Review of Economics and Statistics* 2011; 93 (2): 590–605. doi: https://doi.org/10.1162/REST_a_00078
- Hausmann, R. C. A. Hidalgo, B. Klinger, & A.-L. Barabási (2007). The Product Space Conditions the Development of Nations. *Science* 27 Jul 2007, Vol. 317, Issue 5837, pp. 482–487, DOI: 10.1126/science.1144581
- Hiley, M. (2000). Lessons for Sub-Saharan Africa from the experience of East Asia: SADC and ASEAN compared. Edward Elgar.
- Hirschman, Albert O., 1981. "Essays in Trespassing," Cambridge Books, Cambridge University Press, number 9780521282437, May.
- Signé, L. (2018). The potential of manufacturing and industrialization in Africa Trends, opportunities, and strategies, *Africa Growth Initiative at Brookings*, available online: [Manufacturing-and-Industrialization-in-Africa-Signe-20180921.pdf](https://www.brookings.edu/wp-content/uploads/2018/09/Manufacturing-and-Industrialization-in-Africa-Signe-20180921.pdf) (africaportal.org)
- Richard Baldwin & Javier Lopez-Gonzalez. (2015). Supply-chain Trade: A Portrait of Global Patterns and Several Testable Hypotheses. *The World Economy*. Volume 38, Issue 11, November 2015, Pages 1682–1721.
- United Nations Industrial Development Organisation (UNIDO) 2016. *Industrialization in Africa and Least Developed Countries. Boosting Growth, Creating Jobs, Promoting Inclusiveness and Sustainability*. A Report to the G20 Development Working Group by UNIDO.
- UNIDO (2009) 'Value Chain Diagnostics for Industrial Development'. Vienna: UNIDO Working Paper.
- UNCTAD (United Nations Conference on Trade and Development). 2013. *World Investment Report 2013: Global Value Chains: Investment and Trade for Development*. Geneva: UNCTAD.