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Sustainable Industrialization in Africa: Toward a New Development Agenda

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This book is about developmental choices. Its main argument is that countries and regions face individual dilemmas and trade-offs in promoting sustainable development, even when the choices to be made begin from a definitional standpoint. Despite the social sciences' rich scholarship and the benefits of pluralism, a great vice still afflicts it, in that we engage in debates on critical notions that are potentially path altering without actually aligning ourselves on what they may mean for different contexts. Sustainable development is one such notion that holds a different appeal to all who seek to operationalize it. Sustainable development can denote simply the ability to grow at a high rate for the next two decades or more. The term is often also used to denote development that is more equitable, and encompasses the ability to be inclusive and lift people out of poverty in urban and rural areas. Sustainability can also simply refer to growth and development that focus on being environmentally sustainable or intergenerationally conscious. Yet for many others, the term "sustainable development" can be multifaceted, denoting various means of eliciting sustainable outcomes – environmental, developmental and equity based – the so-called holy trinity of development.

In this book, we argue that, however important it may be to agree on the different aspects of sustainable development, in the context of the 2030 Agenda for Sustainable Development, eliminating poverty and attaining equitable outcomes for the majority by promoting industrialization remain the core national prerogative, both in terms of agenda setting and problem solving for countries. It is well known that in the current context, globalization, rapid urbanization, free trade and the ongoing fragmentation of production

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are the main factors that determine economic outcomes globally, and often the role of a nation state is heavily circumscribed (UN-Habitat, 2013; Breznitz, 2007). Despite this, in our view, the nation state has never been more important than it is now in steering the paths of individual countries in the ways they interact with other actors within the globalized community. Equally, and more importantly, states are critical to determining how economic gains can be captured and translated into social outcomes, in a manner that is sustainable at the national level, vis-à-vis the global community and the environment at large.

Today's Africa in its variegated hues is a statement of promise: the region has witnessed growing trade relations and a substantial increase in real GDP growth rates in the 2000s, making it the fastest-growing continent worldwide. And yet, poverty and inequality remain the largest hindrance to channeling developmental outcomes. Over 70% of the world's poorest people live in Africa, including the ten countries that have the highest number of people living in extreme poverty. Similarly, of the 1.3 billion people who lack access to energy, approximately 700 million live in Africa and African states lose roughly 5% of their GDP on ensuring access to water and sanitation as a result of weak national infrastructure. Viewed from these standpoints, lauding international trade or multilateralism for delivering greater access to international markets to African countries seems premature: up until now, there has been not much data to support the claim that increased trade and openness contribute to poverty reduction in general (Bhagwati and Srinivasan, 2002) and in Africa in particular (Le Goff and Singh, 2014).

The growing trade relations between African countries with the rest of the world presents opportunities but these, in fact, need to be punctuated with concern that it is concentrated mainly in extractive or low-technology sectors of the economy, and restricted to some countries more than others. On these topics, however, consensus is hard to come by. Academic and policy scholarship is split on the question of whether trade openness is unfavorable and whether such concentration in some sectors is development friendly. Views oscillate between those who espouse a commodities-based industrialization pathway to development (Lin, 2011; Morris and Fessehaie, 2014) and those who vehemently criticize the overdependence on commodity rents, arguing that it leads to entrenching countries in product spaces that are not conducive to upgrading in general (Hausmann and Rodrik, 2005; Hausmann and Klinger, 2006; Hidalgo et al., 2007).

Recently, the academic scholarship has laid claim to the fact that the region's history is crucial to understanding some of its challenges of

underdevelopment (Jerven, 2009; Austin, 2008). A long list of explanations has been proposed to explain the region's developmental challenges – a lack of institution building as a result of historical political instability, structural adjustment, a low focus on industrial development in a historical context, and colonization and slavery backed by accounts that span back millennia. Such studies try to connect today's developmental issues to shortcomings of the past. In the process of creating potential trajectories between the past and current circumstances to draw conclusions, several simplifications are often made to fit certain conceptual categories and to justify particular patterns of data and analysis.

One such simplification that is found in a large part of the economic growth literature is related to the relationship between economic growth and income. This highly critical link is assumed to be relatively straightforward. As Jerven (2009) points, low income today must be the result of a lack of income growth in the past (p. 78). If we were to accept this relationship as factual, one simply has to delve into how best to identify the causes of the lack of income growth in the past in Africa as the starting point to finding solutions. In fact, there is a lot of literature that does begin with such an assumption (see, for instance, Collier and Gunning, 1999). On this basis, scholars have argued that what Africa needs today is a set of pro-growth institutions that can tackle the challenge of income growth that has arisen due to decades of sluggish industrial development, its specific population characteristics, political instability, inflation and unemployment, lack of skilled labor, or even factors such as slavery and racism.

Even if we were to accept the relatively straightforward assumption between low income in the current context and a lack of income historically, attaining higher income growth will depend on (1) structural change, especially a faster transformation from agriculture to industry; (2) higher export shares; (3) lower inflation; and (4) decreases in inequality and dependency ratios (Bulman et al., 2014, p. 2). Not only are these issues interconnected but they suggest that there are differentiated yet important roles to be played by a series of extenuating factors. These factors include not only higher education strategies for a wider skills base, research and development (R&D) infrastructure and techno-logical change. There can also be a large number of barriers to achieving equality are simply associated with marginalization and the lack of opportunities of large sets of people within countries as associated with basic access to health, education, social exclusion or simply the lack of creative space. The key question, therefore, is much more profound: how do we achieve these outcomes simultaneously in a way to channel the current

economic growth toward a process of sustainable industrialization in Africa?

The comparative political economy literature on industrialization has yet to address itself to accommodate the possible synergy between the economic and the social interfaces in the growth process that together contribute to the process of sustainable development. The post-2015 agenda deliberations that were conducted under the auspices of the United Nations embarked upon the rich and complex task of finding a go-between for the economic and social domains of development in the context of all countries worldwide. The fundamental idea underlying the 2030 Agenda for Sustainable Development is the creation of prosperity for all. It is embedded in the notion that global prosperity calls for integrated and common solutions in which all countries assume a common responsibility to enable sustainable development. The, recently adopted Sustainable Development Goals (SDGs) are expected to be framed as a common objective of mankind, which if properly implemented has the potential to fundamentally foster an equitable global future for all. The adoption of the SDGs is a first step of the long road that faced the global community. While devising means to further the SDGs agenda, it seems especially important to take on board the lessons learned from the Millennium Development Goals (MDGs) era. Fundamentally, what stands out from the MDGs experience is that, despite the level of success achieved in implementing several of the social goals, the goals in their entirety were insufficient for addressing local challenges in some countries, mainly because they were not closely coordinated with the overall economic development of countries themselves. To a certain extent, although the goals and the progress achieved thereunder were laudable, they were targeting the consequence of social and economic inequalities, rather than addressing their causes. For example, the processes that underlie education or health exclusion are embedded in socio-cultural patterns and the economic division of opportunities. Seeking to achieve access to health or universal primary education without addressing these underlying causes was perhaps a major failing in the older approach. Another critical failure was the inability of the MDG social goals to closely connect with and contribute to the overall industrialization processes of countries. As a result, lives were saved and health was improved, but at the same time, the countries have not been able to guarantee livelihoods along with a chance for everyone to prosper equitably.

The developmental vision advanced by the MDGs also did not also accord due attention to several cross-cutting themes that were important for the achievement of the individual goals and also for contributing to overall sustainable development. These include the acquisition

of technological capabilities and innovation, dynamic industrialization and, by extension, productive capacity and equitable development.

In contrast to this, at the heart of the SDGs is an emphasis on productive activities in all countries, as represented by three core goals: Goal 8, Goal 9 and Goal 12. Goal 8 calls for "[p]romot[ing] sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all," whereas Goal 9 reads, "Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation." These are complemented by Goal 12, which specifies the need to "ensure sustainable consumption and production patterns." The focus, therefore, in the SDGs is the emphasis on national-level capability development, through the goals specified therein, in a holistic way. This is evident also in the way many developmental concerns are coded in the 2030 Agenda for Sustainable Development, such as the treatment of multidimensional poverty: the SDGs differentiate the various vulnerabilities to set a zero-goal for poverty over the next 15 years. Goal 10, which calls for reducing inequality within and among countries is a goal that guides how these other goals should be directed. In sum, the SDGs take a more robust view of national-level development in place of the donor-driven approach in the MDGs, which took a relatively narrow notion of development with an explicit emphasis on and preference toward socially, economically and ecologically sustainable objectives.

This book, while acknowledging the importance of an overall effort of that nature, argues that developmental solutions are ultimately rooted in contextualization and that choices matter. Most of all, these choices relate to how sustainable development is defined and implemented. Given that development is an ultimate outcome of the process of industrialization, the critical choices for nations as we see it are related to two key issues: how to perceive equitable, sustainable industrialization, and how countries can begin to devise means to foster it. Despite the ambitious tone of the 2030 Agenda for Sustainable Development, it would be naive to believe that different countries and actors can be bound to a common framework on economic and social prosperity, given the vast hinterlands of poverty and inequality that plague some regions of the world much more than others. The SDGs themselves recognize the need for local solutions. In fact, as Breznitz (2007) notes, a most essential shortcoming up until now has been the inability of social science theories to explain how different countries, each with a discrete set of policies on industrialization and development, can be expected to meet a similar set of targets over time, on whether to attain industrial growth, catch-up growth, technological progress or to achieve a common set of socio-economic goals. This last point is perhaps not just the omission of the comparative industrial economists but also of development economists in general.

From this standpoint, it remains an imperative for any development agenda, if it is to have any success, to create the bases as producers of goods and services for wealth creation that can be channeled to finance social goals and to recognize that different regional and national contexts may require differentiated treatments.

If countries are to succeed in eradicating poverty, generating opportunities for their people, fostering business and taking responsibility in devising a sustainable future for all, nuancing options, opportunities and challenges at a regional context is highly relevant.

1.1 Comparative industrialization: insights and pitfalls

Contemporary notions of industrialization can be traced back to the experience of Great Britain, Western Europe and North America during the 19th and early 20th centuries (Nzau, 2010). The literature that reviews the experiences of these countries seems to agree that, although the early-industrializing countries started out at different stages of growth, they followed more or less a similar format of change that led to their transformation. Marked by the shift from a subsistence/agrarian economy to more industrialized/mechanized modes of production, hallmarks of industrialization include technological advance, widespread investments into industrial infrastructure and a dynamic movement of labor from agriculture into manufacturing (Lewis, 1978; Todaro, 1989; Rapley, 1994). Agreement exists that a dynamic process of industrialization is fundamental to the overall economic development of countries, given that it promotes growth-enhancing structural change, which is the gradual movement of labor and other resources from agriculture to manufacturing, as accompanied by productivity increases. Manufacturing is construed as critical in most such expositions because of the empirical correlation between the degree of industrialization and the per capita income in countries (Szirmai, 2012). Given that productivity is higher in the case of manufacturing than agriculture, transfer of resources into manufacturing should normally provide a basis for higher rates of productivity-induced growth structures.

While the role of the state is not clearly elaborated in early industrialized countries, Gerschenkron (1962) was one of the first scholars who revisited the notion that state plays a critical role in helping latecomer countries to catch-up. His thesis has been fundamental in shaping our understanding of what forms of support structures latecomer countries might put in place to facilitate the process of industrial change, and by extension, achieve economic development. Analytical constructs of

latecomer development that have been extensively advanced to understand the process of industrial and economic catch-up of countries are mostly based on the notion that a large number of technological developments that are needed for the latecomers to embark on industrialization are already available (Gerschenkron, 1962). Based on this, a spectrum of activities characterizes the essential "catch-up" route: assimilation of existing knowledge to imitative innovation, to incremental innovation, to state-of-the-art R&D, to frontier innovation (Amsden, 1994; Kim, 2003; Amsden and Chu, 2003). This sort of industrial catch-up focuses on the development of industrial sectors as such, with local firms at the center of technological activity.

Despite the richness of such studies, there are several old and new pitfalls in the literature on comparative industrialization. The first of these is the relationship between economic growth (as measured by rising GDP growth rates) and industrial development. Industrialization in the more recent past in developing countries, particularly in Africa, has defied conventional wisdom: while one sees a rise in GDP growth, there is often not a clear correlation between this growth and the rate of structural change. The large gaps in labor productivity between the traditional and modern sectors of the economy have not only been productivity declining in terms of structural change but there is also evidence that a large amount of labor is shifting into services directly from agriculture, or inversely, from agriculture into the commodity-based sectors (McMillan and Rodrik, 2011; Tregenna, 2009). Numerous changes that have taken place in the global political and industrial landscape are the main factors that could account for these unconventional shifts, and the comparative political economy literature of industrialization is yet to emerge with a consensus on how best to account for them, or leverage them for development.

Particularly, industrial systems and structures have changed drastically in the past two to three decades, not only in the high-innovation intensity sectors (Breznitz, 2007) but also in other sectors of production. Global trade and industrial production have become increasingly fragmented, with 80% of all total trade in 2014 being conducted through value chains or production networks (UNCTADStat). There is an ever-reducing emphasis on assembling products and processes within any specified geographical space, as was the case in all the sectors that have been the hallmarks of previous analyses of industrial catch-up in economic studies, such as semiconductors and electronics, pharmaceuticals, and manufacturing, among many others (see Wade, 1990; Odagiri et al. 2010; Kim, 2003). Instead, in the current context, competitiveness

is determined by those firms that specialize in a set of activities per se, although not necessarily operating within a wider sectoral context in the country in question.

Industrial economists and political scientists are gradually coming to terms with this new reality, in which the focus of industrialized competitiveness is not dependent on the sectors that are being fully developed for production *in situ* within a country, but rather on the sets of activities that can be honed as expertise to beneficially tap into existing opportunities, local, regional or global. In the context of Africa, therefore, although there has been a lot of comparative work on how latecomer industrialization experiences (particularly from Asia) can be applied to policy and practice, the emergence of newer industrial structures and systems calls for framing industrial development as a new set of questions.

A second point at which the conventional political economy literature leaves us bereft of explanation is on the role of the state in promoting industrialization. It has been argued that the less of a role the state plays, the better, since it will enable markets to dictate outcomes in an uninterrupted manner. Concerned that this would not be able to achieve the economic outcomes of the kind needed for low-income countries (let alone social outcomes), scholars have time and again articulated the need to combat market failures through state and governmental action. In one of his recent books, Stiglitz (2010) calls for stronger government to combat all the market failures that we see in modern financial capitalism. He argues that finance needs deep structural change – and that "the too-big-to-fail banks need to be broken up – and more and better regulation." This is not a new call: concerns about withdrawing governmental intervention under the guise that the markets need space to function have been expressed for decades or even centuries now (see List, 1885; Young, 1928; Abramovitz, 1956; Kaldor, 1976; Stein, 1992; Greenwald and Stiglitz, 1986; Stiglitz, 2002; Chang, 2007).

To understand how countries have countered markets, Low and Tijaja (2013) review industrial policies that governments have deployed in countries to support market functions and conclude that these consist of four different kinds of policies: (i) import-substitution industrialization (ISI) policies; (ii) export-oriented industrialization (EOI) policies, which include variants such as export-processing zones (EPZs), special economic zones (SEZs), and industrial clusters; (iii) resource-based industrialization (RBI) policies; and (iv) industrialization through innovation strategies. However, it still remains a fact that despite the ideological biases that cloud this debate, and regardless of the positive experiences

of some countries in this regard, there are at least twice as many that did not manage to achieve the kinds of results anticipated. Furthermore, even in a large number of countries that are regarded as exemplars of success, social outcomes have remained difficult to achieve.

This is not a call to question the role of the state or the market, but to point to what is perhaps the largest shortcoming of comparative thought on the topic, namely, our inability to articulate clearly how industrialization feeds into fostering the social development of countries. There are several layers to this debate that, up until now, have not been considered at all. There is the inevitable link between industrial development, income growth and distribution effects, which is perhaps the aspect to which the literature has paid the most attention. But at the same time, the industrial patterns of countries, that is, the policy frameworks, instrumentalities and incentives, all have specific social implications. For example, when a country chooses to specialize in low-technology sectors that call for large-scale employment as opposed to higher-technology sectors, which pool the skilled into specialized niche areas of work (with few inter- and intra-sectoral effects), it has a tremendous impact on employment generation, wage differentials and overall prosperity. In the same way, when industrial policy dictates the growth of specific large-employing sectors – such as ready-made garments or agro-processing – without clear social protection, it often leads to the proliferation of large numbers of rural workers in urban areas, with typical implications for urban resources, spatial spread and congestion, as is being witnessed in a large number of cities in the developing world today.

1.2 Sustainable industrialization for Africa: envisioning a future

The African debate on how to foster industrialization and the role of the state has mirrored the developmental triumphs and failures of other countries to a large extent. The successes of the East Asian economies and now the BRICS (Brazil, Russia, India, China and South Africa) have served as the main touchstone of the discourse. Drawing on their experiences, there has been a wide-ranging discussion on the role of the state in economic growth, the ways in which the state can minimize or take risks and how it could champion industrial development.

We take this as our starting point, but suggest that the questions of sustainable industrial development for Africa are mainly those that the contemporary literature on the topic has not been able to answer, up until now.

A fundamental issue for industrialization in Africa is that it is *yet to happen* as a general phenomenon. Although African countries have had rich and important experiences in promoting industrial development and they have tried out a wide variety of developmental state constructs, ranging from the state-led developmental model, to the private-sector oriented developmental model, and not least, the free-market oriented, minimalist state, many of them still await real industrial development of the kind that changes society en masse. As opposed to the images of the African states that have been caricatured over time (as corrupt, rent-seeking, lacking in political vision), a large number of African countries, in reality, enacted detailed industrial strategies to foster economic development almost immediately after their independence between the 1960s and the 1980s.

The comparisons between Ghana and South Korea are relatively well known and have been repeated often in the developmental literature. In 1957, both countries had the same per capita GDP growth rates, and yet their industrial and economic growth trajectories diverged in such stark contrast that they lent fodder to several important economic analyses by the World Bank and other scholars over the past 50 years. These analyses have traced the rise of South Korea and the concomitant decline of Ghana to several reasons, including political insecurity, authoritarianism and corruption (Jackson and Rosenberg, 1982). But Ghana was not the only country that went from being highly promising to highly constrained in fostering economic development. For instance, the per capita GDP growth of Mozambique and Senegal were equally as large as that of Ghana in 1957, and yet those countries were unable to promote industrial development in the decades that followed.

In fact, casting the net a bit wider, one finds that Nigeria, the Central African Republic, Burkina Faso and Gambia are some of the other countries (there are many more, if one were to list them painstakingly) that had per capita GDP growth rates similar to several of the BRICS economies today, particularly China and India. Given the largely differential developmental pathways of each of these countries, would it suffice simply to bundle their failures under the headings of corruption, state inaction, weak institutions and totalitarianism? Pae (1992), tracing Korea's rise, notes that corruption, political instability or weak institutional infrastructure existed in South Korea as well. In fact, as some other scholars observe, Ghana had more liberal, less-corrupt and less-tyrannical leaders (for example, Ghanaian president Jerry Rawlings) than South Korea in the late 1980s and the 1990s, which was headed by Rhee Syng-man, Park Chung-hee Park and Chun Doo-hwan (Werlin,

1994; Jeffries and Thomas, 1993). Yet Ghana's sought-out developmental trajectory was hard to influence by then. Similar anomalies can be found in comparing Senegal or Nigeria to India, for instance, where despite the current economic successes, the latter country still suffers from issues of corruption. In segregating the experiences of these countries, what seems to matter for successful industrial strategies are not just longer-term visions or the ability to coordinate but also the ability to pool resources for industrial and innovation capacity simultaneously, and to use them in the process of development. There are many developing countries that have managed to synergize industrial and innovation policies, while having the same shortcomings that are advanced as arguments concerning Africa – political vision, corruption or even rent-seeking (Khan et al., 2000).[1] Fundamentally, what stands out that much more than other factors, in the African context, is that technological learning has not been part and parcel of industrialization, and this has impeded the ability of firms to learn, expand and increase productivity in the past.

A second issue for Africa is that African industrialization is much more affected by and perhaps even determined through globalization and the internationalization of trade. These impacts of trade on national industrialization processes call for a more thorough review. Due to the low levels of productivity in many African sectors, trade openness has had devastating impacts on local firms. A large number of these local firms have been subject to a process of natural elimination or pushed into informality, not being able to withstand the pressure of competition from foreign firms (Mahutga and Smith, 2011; IADB, 2010). As a result, an increasing share of African industrial activities actually occur in the informal sectors of the economy, and how these are factored into future policy will remain a key issue for sustainable industrialization. Associated with this is the current debate on the rise of value chains and their impact in terms of concentration of exports into specific categories, leading to a low rate of diversification (Gui-Diby and Renard, 2015) or the movement of labor into productivity-declining structural change. There is a need for more open debate on whether these forms of specialization could have some potential for the creation of linkages and expertise (Morris, Kaplinsky and Kaplan, 2012; Morris and Fessehaie, 2014; see also Kaplan chapter in this volume) and how this could be strategically motivated. Especially, it remains to be seen what options exist to shift or travel between existing product spaces, and what could be the role of policy in promoting such upgrading (Hidalgo et al., 2007). At the same time, there is also a need to understand whether national

policies can play a role in harvesting some gains from existing value chains for local learning and how these gains could be promoted.

A third, somewhat related issue is that African growth and structural change do not seem to follow the traditional pathway from agriculture to manufacturing, but there is a movement toward services as well. In fact, data show that services are the largest sector of the economy in many African countries presently. This calls for a more open-minded assessment of the merits of services growth for African economies, and what the implications of these shifts could be.

Finally, we arrive at the highly nebulous linkages between industrialization and poverty reduction. The classical assumption in this regard has always been that differences in experiences of countries in attaining poverty reduction might be due to their differentials in economic growth rates. However, a growing number of studies indicate that pre-existing inequality plays a crucial role in determining how growth can lead to poverty reduction. In other words, the greater the pre-existing levels of inequality, the more difficult it will be to ensure that economic growth leads to poverty reduction (Fosu, 2011; Adams, 2004; Ravallion, 1997). Drèze and Sen (2013) observe rightly in this context that growth of GDP (among other economic indicators) should generate resources to expand public and private spending on the fundamental requirements of all in society such as health, education and other social necessities that underscore a fuller human life, so that these pave the way for the development of human capabilities for the next generations. It is therefore as important to understand inequality of opportunities as it is to analyze unequal outcomes.

There are some path-defining moments in the history of nations, and although historical accounts may shed some light on why countries are embedded in particular challenges, only developmental choices will play a key role in shaping real-world alternatives. A large number of political scientists argue that alternatives selected at the national level play a smaller role in determining outcomes, but industrial development experiences show otherwise – that outcomes are dictated by the individual choices of nations. Whether to rely on the market, and to what extent, which industries need protection, when to open up markets, how to promote technology transfer and how to leverage the social benefits of industrial growth are all national policy-driven choices. Moving ahead, therefore, there is a need to differentiate the challenges of sustainable industrialization in countries and to calibrate mechanisms and outcomes based on a clear identification of the developmental context of nations and regions.

This book seeks to contribute to this urgent task. The book is organized in three parts. The first part comprises this chapter and a chapter that reviews the MDGs, with lessons for SDGs for the future. The second part delves deeply into the current challenges of African industrialization, whereas the third part raises some relevant issues in linking industrialization to social outcomes. In doing so, the book aims to bring forth the African voice in the debate on the developmental agenda for the future. Almost all of the chapters employ entirely new data sources and new methodologies to shed light on the opportunities and challenges that lie ahead for Africa in the post-2015 era.

1.3 Structure and contributions

The book begins by looking at the MDGs framework, which has had its inherent implementation and monitoring challenges as well as successes, in Chapter 2. It looks at the MDGs from a very specific perspective, namely the complementarities between the MDGs and the overall development of countries. Given the limited number of studies on this topic, this chapter tries to fill an important vacuum in the literature on the subject, using new and interesting methodological tools. It argues that for African countries with scarce resources, it is important to prioritize how resources should be allocated, and this process is only viable when it is based on a clear articulation of the developmental goals and national growth challenges. Looking back at the ways in which the MDGs could have been strengthened by focusing on the complementarity, the chapter analyzes issues in policy prioritization toward the SDGs.

In the African context, while contextualizing the SDGs development agenda, the book argues that a first set of challenges will be to take note of the current drivers of growth and structural change, and to draw relevant conclusions for industrialization. Three chapters (Chapters 3 to 5) each assess the current processes underlying African growth to identify the challenges and opportunities, particularly in terms of progressing into manufacturing and services simultaneously, creating linkages from the natural resources sectors into the local economy and linking global value chains to learning. The second set of challenges relate to making industrialization socially inclusive and equitable. Chapters 6 to 8 deal with specific questions of how industrialization can be made to go hand-in-hand with reduction of poverty and inequality.

1.3.1 Issues particular to African growth and industrialization

Chapter 3 assesses a very important issue confronting African industrialization. African countries, particularly since 2000, have shifted labor into the services sector. On the whole, the trend has been toward less labor concentration in agriculture (which still remains the largest employer), but greater labor toward services (which increased by 12% between 2000 and 2012). This raises two related questions – is Africa bypassing the traditional route to structural transformation and is this sustainable? Or is Africa's increasing role in the services sector a means to channel industrial growth? In this chapter, the authors use empirical data from the African region to show that many of Africa's services are concentrated in low-cost, low-value telecom and other minor retail segments, which offer very little productivity rents. They also indicate that a lot of the expansion is concentrated in the construction sector, rather than training, capacity building or advanced knowledge services. The analysis then moves on to identify the challenges in making the services sector an engine of growth.

Chapter 4 examines linkages from natural resource activities with other sectors of the economy. The chapter outlines these linkages in general, and then, utilizing recently collected data on eight African countries, discusses the potential to expand and deepen linkages, and the policy implications of such a process. The chapter contests much of received wisdom to make the point that while there is considerable variation, in a number of African countries, commodity-producing sectors, notably mining, have considerable linkages with local economic activities, and there is evidence that these are increasing. Moreover, with appropriate policies, the potential to enhance such linkages is significant. The chapter argues that the greatest potential for enhancing linkages is with respect to backward linkages, since developing forward linkages from mineral production (beneficiation) has a much more limited potential. A much-neglected area of study is how skills and competencies move laterally from one sector to another – and, in this case, from mining to other sectors. This chapter traces several pathways by which this occurs and outlines policies that can further promote such movement.

Chapter 5 looks at how current global production networks and value chains, particularly in the natural resources and low-technology sectors, impact industrial growth in the African context. Using the newest data on global value chains for over 50 African countries, this chapter shows that current patterns of trade are, in fact, in the low-technology and natural-resource sectors in most countries. However, the chapter also

shows that innovation policy (or similar emphasis on increasing value-added) in the local national contexts can have much impact on how such business can create learning effects and backward linkages into the local economy. The chapter concludes with several important questions for industrial development for the African region, many of which are explored for the first time in the literature.

1.3.2 Linking industrialization with inclusive development

A second set of challenges for Africa relates to how industrialization can be made to work in favor of inclusive development. In this second part, Chapters 6 to 8 seek to link structural change and GDP growth patterns to social indicators, to assess where the region stands with respect to developmental challenges.

Chapter 6 discusses opportunities and policy options for African countries that are seeking innovation- and learning-based development strategies, with a view to promoting industrialization. What kind of policies and institutions are necessary in order to transform the current increase in rents from commodities exports into industrial investment and upgrading of agriculture and agroindustrial development? This question is raised in the context of competing theories about economic development. On the basis of empirical patterns and theoretical considerations, the chapter discusses policy options in relation to the African reality, so that business and industry relations can be mutually beneficial for the future of the region.

Chapter 7 attempts to decode some of the important issues in industrial development pathways and social outcomes. It takes productive industrial clusters as an embodiment of industrial dynamism, productivity and growth, and explores how these clusters alleviate poverty among employees of cluster-based firms in the current context, as evidenced by an improvement in employee living standards in small- and medium-size enterprises in Africa. Drawing on the concepts of industrial clusters and multidimensional poverty to guide the study, the chapter uses new empirical data collected in the Otigba Information and Communications Technology cluster in Lagos, Nigeria, to understand the nature and depth of deprivations. The chapter uses multidimensional poverty and slum household indicators as standardized measures of living standards to see if these assumptions can be defended in the African context. The results show the need to better coordinate industrial policy with social policy objectives in order to (a) prioritize industrial policy mechanisms that have a greater and faster impact on reducing employment and poverty,

within national economic agendas, particularly industrial policy and (b) provide institutional support through social policy instruments to ensure that their social benefits are harnessed while enhancing industrial productivity.

Finally, Chapter 8 sets out to understand inequality of opportunity in the African context by systematically examining the issue of access to basic services and opportunities for all, within an equal opportunity framework. In particular, it questions how circumstances over which a child has no control, such as ethnicity, gender, parents' education, income and area of residence, affect his/her access to basic services and opportunities (education, clean water, effective sanitation, electricity and habitability), which are necessary for his/her growth and development and which influence his/her prospects for a high standard of living in the future. We calculate an human opportunity index (HOI) for Kenya, Uganda, Nigeria, Ghana, Zambia and Egypt, using demographic and health study data from 2006 to 2008. Our findings reveal that parental education matters with regard to access to electricity, sanitation and education, while area of residence is an important factor in determining access to electricity, water and sanitation. This study is innovative as it applies HOI within the African context and provides a tool for policymakers to assess how to more equitably distribute existing national resources.

1.4 Some caveats

This book argues that sustainable development of countries is a direct result of their achieving dynamic industrialization, of a kind that works for people and holds the key to making their economies independent and responsive to the needs of all citizens. Sustainable industrialization as a key driver of this process is a means of raising living standards and quality of human life. Such industrialization is not just a long-term goal but is also important in the shorter- and the midterm, for business development, entrepreneurship, technological change and growth. If countries are to succeed in eradicating poverty, generating opportunities for their people, fostering business and taking responsibility in devising a sustainable future for all, the starting point would be to promote such sustainable industrialization.

The chapters presented in this book and the analysis therein make a contribution to elaborating upon the key issues in a future developmental agenda for Africa. In most of the chapters, the data and research presented deals directly with sub-Saharan Africa, but the issues analyzed are pertinent to the entire region. While acknowledging that this debate

is perhaps one that needs much more thorough contributions and research in the years to come, the aim of the book and its chapters is to help nudge scholarship and policy thinking in the direction of contextualizing the 2030 Agenda for Sustainable Development for Africa.

Note

1. Khan and Jomo et al. (2000) use the examples of Malaysia, the Philippines, Thailand and Indonesia to show that rent-seeking is endemic both in developed and developing countries and has several positive impacts on the growth process.

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