Kick-starting industrial transformation in sub-Saharan Africa

13

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13.1 Introduction

Sub-Saharan Africa is experiencing a very promising period of sustained economic growth. Since the late 1990s the economy has grown considerably faster than the population, and per capita income consequently has increased. The region has increasingly been integrated into world trade, and foreign direct investment tripled between 2002 and 2012. In general terms, sub-Saharan Africa's economic future looks much brighter than it did in the 1980s and 1990s, when the region was associated with backwardness and failed economic policies, including policies that led to de-industrialization. Many recent international economic reports portray sub-Saharan Africa as a region of growth and investment opportunities (McKinsey Global Institute, 2010 and 2012; Robertson et al., 2012). The *Economist* now regularly celebrates Africa as "the world's fastest growing continent", "the hottest frontier" and the "hopeful continent".

There are doubts, however, about whether the current boom will translate into sustainable and inclusive socio-economic development. Two characteristics of the boom are alarming.

First, thus far growth has not had the desired effects on employment, income and human development: it has not translated into sufficient jobs, and most employment expansion has occurred in the informal economy, usually at very low levels of productivity. Low labour absorption rates especially affect the young new entrants to the labour market. While the share of income poor (below the US$1.25/day threshold) in the overall population of sub-Saharan Africa decreased from 59.4 per cent in 1993 to 49.2 per cent in 2008, the absolute number of

income poor actually increased from 330 to 399 million due to population growth.[1] According to World Bank data, economic growth has had less of a poverty-reducing effect than in the rest of the world, a difference that can be attributed to resource dependence and high inequality (the Gini coefficient is around 0.45 on average) (World Bank, 2013).

Second, there is little indication of structural change towards productivity-driven economies. Growth has mainly been driven by the exploitation and export of natural resources. Between 2000 and 2011 petroleum and mineral resources accounted for more than two-thirds of exports, and agriculture for an additional 10 per cent (ibid.). The revenues from commodity exports stimulated domestic consumption, creating spillover effects into wholesale and retail activities as well as real estate markets, but little progress has been made in terms of manufacturing and production-oriented services. Manufacturing is decreasing as a percentage of GDP and of exports. The region is basically earning revenues from commodity exports and spending them on manufactures, with the trade deficit increasing. This dependence on commodities also has made the region's economies more volatile.

Many observers point to the need to diversify the economies of the region towards higher-productivity activities in manufacturing, modern agriculture and services (Dinh et al., 2012; ILO, 2011; Page, 2013; UNECA and AU, 2011; UNIDO and UNCTAD, 2011). The challenges of latecomer development – in terms of existing productivity gaps, small markets, low levels of economic sophistication and diversification and lack of capital – are such that it is hard to imagine how they could ever be met without a coordinating developmental state.

Against this background, this chapter explores the role of industrial policy in sub-Saharan Africa. It does so in four steps. In section 13.2 we briefly analyse the region's recent economic performance, highlighting the opportunities resulting from the current commodity-driven boom as well as the disconnect between growth and productive transformation. We show why structural change is required to make growth sustainable and inclusive, and we argue that such change is unlikely to occur without proactive and targeted industrial policy. Section 13.3 then specifies challenges that any industrial policy for the region would need to address. It draws attention to the heterogeneity of the region, bringing out some of the differences within it and stressing the need for country-specific industrial policies. It also shows, however, that the region's countries share a number of structural characteristics that set them apart from wealthier and technologically more advanced economies. Due to these characteristics, industrial policies for the

[1] http://povertydata.worldbank.org/poverty/region/SSA

region need to be fundamentally different from those typically applied in more mature industrial economies. Section 13.4 addresses the issue of government failure. While it is nowadays widely recognized that market failure in principle justifies proactive policies to promote structural change, questions of how and to what extent governments should intervene in factor allocation are a matter of intense debate. Governments also tend to fail, and their interventions may actually allocate scarce resources in ways that are even worse than those of the imperfect markets that they tried to correct. This criticism of industrial policy is particularly strong when it comes to sub-Saharan Africa. Overall, the region scores very low on indicators of government effectiveness, and its track record of earlier industrial policies has been poor (Bates, 1981; Lall, 2004). The last section draws practical policy conclusions. It describes which economic opportunities seem particularly worth exploring in the region and what national stakeholders can do to develop a realistic and shared strategy for industrial transformation.

13.2 High growth, slow structural change: The need for industrial policy in sub-Saharan Africa

After stagnating throughout the 1975–95 period, sub-Saharan Africa more recently has experienced continuing growth. Since the turn of the millennium, African economies have averaged GDP growth rates of 5.6 per cent per annum (AfDB, 2012).[2] Oil-rich countries such as Angola and Equatorial Guinea have pulled ahead, but other economies, in hitherto resource-scarce regions such as East Africa, have also grown at unprecedented rates, making Africa's growth a continent-wide phenomenon.

The turnaround in the late 1990s can be explained partly by political factors and improved economic governance. After an initial upsurge in armed conflicts following the end of the Cold War, the number of conflicts decreased towards the turn of the millennium as external finance dried up and militia wars were met with better international peacekeeping efforts (Goldstein, 2011). In parallel, economic policies improved throughout the region. Since the 1990s most sub-Saharan African countries managed monetary, fiscal and trade policies more successfully and avoided the macroeconomic instabilities of the past (Fosu, 2013).

[2] All data for this chapter stem from the usual "authoritative" sources. But a note of caution is in order: Jerven's (2013) *Poor numbers* demonstrates the magnitude of flaws inherent in contemporary SSA statistics, which makes it difficult to draw meaningful conclusions on the region's growth trajectories.

The main reason for the region's economic boom, however, has arguably been the increasing international demand for resources, which led to a sustained upward trend of prices. In 2002 mineral prices surged, and in 2006 prices for agricultural commodities also rose sharply (Morris, Kaplinsky and Kaplan, 2012). This benefited sub-Saharan Africa, which is particularly well endowed with oil and mineral resources and has the world's largest reserves of underexploited agricultural land. Export revenues soared from US$100 billion in 2000 to $420 billion in 2011 (World Bank, 2013), while foreign direct investment (FDI) tripled from $15 billion in 2002 to $46 billion in 2012.[3]

Most, but not all, FDI inflows targeted extractive industries. Investments also increased in real estate, construction works and improved transportation, electricity, telecommunication and water infrastructure (ibid.). Furthermore, export revenues and capital inflows spurred income growth and domestic consumption. Consumer spending accounts for more than 60 per cent of Africa's GDP (ibid., p. 5), which in turn has attracted international investment in the retail sector, especially in countries with growing urban middle classes, such as Nigeria, Kenya and Ghana.

Africa's economic expansion is thus largely built on extractive industries and increased public and private expenditure, associated with revenues from extractive industries, for real estate, construction and consumer goods. Otherwise, there has been very little structural change. Agriculture's share in GDP is still higher than in any other region, although services are now the largest contributor. Both are characterized by very low productivity. Thus, the main structural change of the last decades has been a shift of labour force from low-productivity agriculture to low-productivity non-tradable services. Mining, oil and gas industries are highly productive, accounting for 75.9 per cent of regional exports (World Bank, 2013), but they employ less than 1 per cent of the region's workforce (McKinsey Global Institute, 2012). Manufacturing value added as a percentage of GDP declined from 15 per cent in 1990 to 10 per cent in 2008 (UNIDO and UNCTAD, 2011). Sub-Saharan Africa's shares of global manufacturing output and exports are dismally low and have stagnated over the period 1990–2005 (Page, 2012; UNIDO, 2009).[4] While East Asia's manufacturing sector has greatly benefited from globalization, sub-Saharan Africa has experienced *negative,* or *productivity-reducing* structural change over the past two decades in the sense that productive sectors shrank as a share of GDP, and excess

[3] http://www.economist.com/debate/overview/249

[4] Both figures for sub-Saharan African manufacturing (exports and output) have stagnated and even slightly declined. Excluding South Africa, they are less than 0.5 per cent of the world's share.

labour has moved from higher to lower productivity sectors and to informality (McMillan and Rodrik, 2011).

The region's lack of manufacturing industry is not just a reflection of low per capita GDP. Page (2012) compared the economic structure of contemporary African countries with that of seven successful Asian economies at the point in time when they had GDP per capita levels similar to those currently recorded in Africa. He shows that even at that early stage, the Asian countries' manufacturing sectors were twice as large in terms of labour and value added.

Is this a problem? We think it is. Historically, for a number of reasons growth has been associated with structural changes in the direction of manufacturing. Manufacturing tends to be more productive than other sectors. In Africa labour productivity in manufacturing is on average more than twice that in agriculture (McMillan and Rodrik, 2011; Page, 2012). At the same time, manufacturing tends to be labour intensive, especially at early stages of industrial development, and can therefore absorb part of the surplus of workers who flock to the cities in search of work. Dinh et al. (2012) estimate that close to 80 per cent of the sub-Saharan African workforce is employed in low-productivity, low-income jobs, either in small-scale agriculture or the informal economy. Thus, there is a great need for productive urban employment. Manufacturing is also associated with greater product sophistication, which has been found to cause higher per capita GDP growth (Hausmann, Hwang and Rodrik, 2007; UNIDO, 2009). Lastly, manufacturing is associated with diversification, which cushions price volatility. Sub-Saharan African exports tend to be highly concentrated in a narrow range of products and are thus particularly vulnerable to external shocks.[5]

Altogether, sub-Saharan Africa's growth process is socially exclusive. The main driver of growth, the oil and mining industry, employs extremely few people and has hardly any productive forward and backward linkages. Moreover, incomes earned from extractive industries are typically regressive.[6] Manufacturing and modern services, which could potentially integrate a larger part of the workforce in productive jobs, have not yet benefited from increased consumption. The largest part of the workforce is still stuck in smallholder agriculture and petty trading, where productivity is very low. As a result, the pace at which poverty is

[5] A recent report illustrates this vividly: "The value of African exports fell by 31 per cent in 2009 and grew by 25 per cent in 2010 – but in volume terms, these figures equate to only 11 per cent and 9 per cent of exports in these two years. In other words, price accounts for almost two-thirds of the growth or contraction in the value of trade" (UNECA and AU, 2011, p. 42).

[6] Revenue management in the region is often weak, leaving room for illicit enrichment of those who are politically connected. Also, oil and mining companies demand few highly skilled workers who receive high wages. Secondary effects tend to increase inequality further: real estate price booms make landowners more wealthy, and rising land and food prices are particularly harmful for the poor.

reduced in sub-Saharan Africa is markedly slower than in all other developing regions (AfDB, 2012).

All this suggests that sub-Saharan African countries need to push for structural transformation. The region faces the challenge of kick-starting productivity-driven and labour-absorbing economic development. Historical evidence suggests that this is impossible without targeted and well-coordinated policy support (see, for example, Chang, 2003). Too many market failures work against such a deep transformation. Price signals help entrepreneurs identify where they can exploit comparative advantages, but they are highly imperfect when it comes to finding future production possibilities in economies where substantial learning-by-doing is involved. Individuals who invest in a particular activity today cannot anticipate how knowledge spillovers may lead to diversification and new technological opportunities at a later stage of maturity of the given industry. Even if they could, they would not make all the investments needed for structural change, because they would not be able to appropriate all the gains of those activities. Furthermore, building up new industries in a pre-industrial society requires investments in infrastructure and related upstream and downstream activities of different sorts. Unless these investments are undertaken simultaneously, the industry cannot thrive. Hence, considerable coordination and government guarantees may be needed to get the new industry started (Altenburg, 2011).

13.2.1 Specific industrial policy challenges for the region

Sub-Saharan Africa is a heterogeneous region. The prospects for industrial development greatly differ according to many factors, including whether countries are resource-rich, large or small, coastal or landlocked, how developed their neighbours are and how they are governed. At the same time, the region's economies show a number of commonalities, which they share with a few other low-income countries but that set them apart from more advanced countries, including most developing economies of Latin America and Asia. These commonalities include a high share of agriculture and commodities and a low share of manufacturing in GDP; self-employment of a large portion of the workforce; widespread informality of economic relations; weak linkages between some modern economic sectors and the traditional small-scale economy; and particularly low productivity and incomes. These conditions call for a very specific bundle of industrial policies.

At the same time, industrial policies need to account for differences within the region. This short overview chapter cannot do justice to the diversity of country conditions and their implications for structural transformation. All it can do is

highlight key challenges for major country groupings with similar starting conditions. Collier and O'Connell (2007) suggest a useful typology for this purpose. They distinguish three types of countries with very different opportunities for growth: coastal and resource scarce; landlocked and resource scarce; and resource rich. In this last category endowments trump location, because for resource-rich countries, both the coastal advantages for manufacturing are erased (by Dutch disease effects) and the transportation hindrances of being landlocked become negligible. This section starts with the commonalities and works out what they imply for industrial policies. Then, it addresses some of the specific industrial policy challenges for the three country groupings.

We highlight *five characteristics that are widely shared among the economies of sub-Saharan Africa* (with the exception of the Republic of South Africa). All of them pose specific requirements for industrial policy (Altenburg, 2011).

First, the region's economies are still at very early stages of the structural transformation from agrarian to industrial societies. Agriculture still accounts for 32 per cent of GDP and 65 per cent of employment.[7] Furthermore, many of today's urban residents have an agricultural background, having migrated relatively recently. To engage in manufacturing requires new sets of entrepreneurial, technical and managerial skills as well as specific attitudes – passion for business, readiness to take risks, achievement spirit, curiosity, persistence – that are quite different from those in traditional agriculture, especially when the aim is to create competitive enterprises that are part of modern production networks. Such skills and attitudes can be acquired in different ways. While a good education system lays the groundwork, additional sources of knowledge are also important; these can be formal (business schools, vocational training) or informal (knowledge transfer within business families). In largely agrarian societies these pools of knowledge have to be built step by step. Moreover, traditional norms may discourage entrepreneurial behaviour. In some sub-Saharan African societies, for example, social obligations to share accumulated wealth with family and kin are strong (Grimm et al., 2013), which may undermine the profit-maximizing behaviour that drives capital accumulation in firms. Similarly, business transactions may be complicated by tensions between contractual law and informal norms of reciprocity. Especially in the least developed countries of the region, governments therefore have a role in establishing basic institutions for market economies and nurturing the skills and attitudes of a newly emerging "entrepreneurial class". Some sub-Saharan African countries have systematically tried to link up with

[7] http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0,,contentMDK:21935583~pagePK:146736~piPK:146830~theSitePK:258644,00.html

entrepreneurs in the diaspora, who have accumulated skills through their exposure to diversified business communities (Plaza and Ratha, 2011).

Second, the economies of the region are latecomers to the globalizing economy. While they are still at early stages of industrial development, they already face competition from international enterprises. The latter have often accumulated know-how and capital over long periods of time, established good relationships with suppliers, customers and other business partners, created pools of skilled labour and built a brand reputation. Newcomers from lagging world regions, therefore, do not compete on equal terms. They lack comparable network externalities and typically suffer from diseconomies of scale. Although some African countries offer competitive wage cost, they can hardly compensate for the cluster synergies that some Asian export countries have been able to build up over the last decades. Thus, the latecomer situation creates a vicious circle: "Firms located in Africa face costs that will be above those of Asian competitors, but because costs are currently higher individual firms have no incentive to relocate" (Collier and Venables, 2007, p. 1). To break out of this circle, governments need to adopt a much more supportive role – e.g. providing tax incentives for exporters or investing in labour productivity – than one would expect in economies that compete on fairly equal terms.

Third, sub-Saharan African economies are deeply fragmented. The productivity gap between the majority of the workforce that is engaged in traditional farming and rural or urban microenterprises and the typically small modern mining or industrial sectors is very large and even widening (OECD, 2009). Economic theory suggests that, without market distortions, competition reallocates labour and capital from less efficient firms and activities to more productive ones. This mechanism obviously does not work well in sub-Saharan Africa. Despite the recent economic boom, only 28 per cent of Africa's labour force has stable wage-paying jobs (McKinsey Global Institute, 2012). Apart from labour markets, enterprise structures are also segmented in such a way that there are few productive linkages and knowledge spillovers between high- and low-productivity firms. This is especially