

## Industrialisation in Africa – Challenges and Opportunities

By Helmut Asche and Michael Grimm

### Key Points

- Sub-Saharan Africa has experienced substantial growth and poverty reduction in the past two decades, yet as this process has not been based on industrialisation it is unlikely that it is sustainable in the longer term.
- Governments in Sub-Saharan Africa should consider structuralist industrial policies, yet these policies should avoid a top-down approach and rather rely on a structured and inclusive public-private dialogue.
- As mature light industries, such as textiles, can be good for mass employment, but allow little technological learning, reliance on a dual core of industries, that is labour-intensive industries alongside a smaller knowledge-intensive core, appears as the best developmental fit.

Most countries in Sub-Saharan African (SSA) have recently made significant progress in their fight against poverty. According to the World Bank Africa Poverty Data Base (Beegle et al., 2016), Uganda has over the past two decades reduced poverty at an annual rate of 2.4 percentage points, Ethiopia by 2.0 percentage points, Tanzania by 1.8 percentage points and Ghana by 1.2 percentage points. Poverty increased only in a few countries, such as Zambia, Madagascar, Cameroon and Côte d'Ivoire, which were all hit by severe crises or conflicts. For SSA as a whole, the share of the population living below the international poverty line of US-\$ 1.90 (in purchasing power parity terms) declined from 57 percent in 1990 to 43 percent in 2012. Although this progress is impressive, it is questionable whether the dynamic is sustainable and whether SSA will see an 'African miracle' similar to the 'miracle' of the Asian 'dragon' states (Hong Kong, Singapore, South Korea and Taiwan) and later the 'tiger' states (Thailand, Indonesia and Malaysia) experienced. Whereas in Asia economic growth was driven by massive industrialisation with a strong focus on manufacturing, African economic growth is still largely driven by the export of natural resources, subsistence agriculture and a migration of the workforce from the agricultural sector to the urban informal sector. In the Competitive Industrial Performance ranking, which by its composite nature mirrors facts like export or GDP contribution of manufacturing industry and its sophistication, African countries consistently feature in the two lowest quintiles. see figure 1 for the CIP of SSA countries).

The problem with the export of natural resources is the little value added that it generates and the high volatility of the price of raw materials in conjunction with a long-term decline of the price of many of these goods and thus a continuous loss in terms of trade. Unlike in Asia, agriculture in SSA has not yet seen

a significant rise in total productivity. There is only little use of fertilizer, pesticides, high yield varieties, irrigation and other 'modern' technology. Agricultural growth has in most African countries been driven by an expansion of the cultivated area. Yet, limited availability of further land for conversion, climate-change induced erosion and a deterioration of soil quality render this strategy unsustainable.

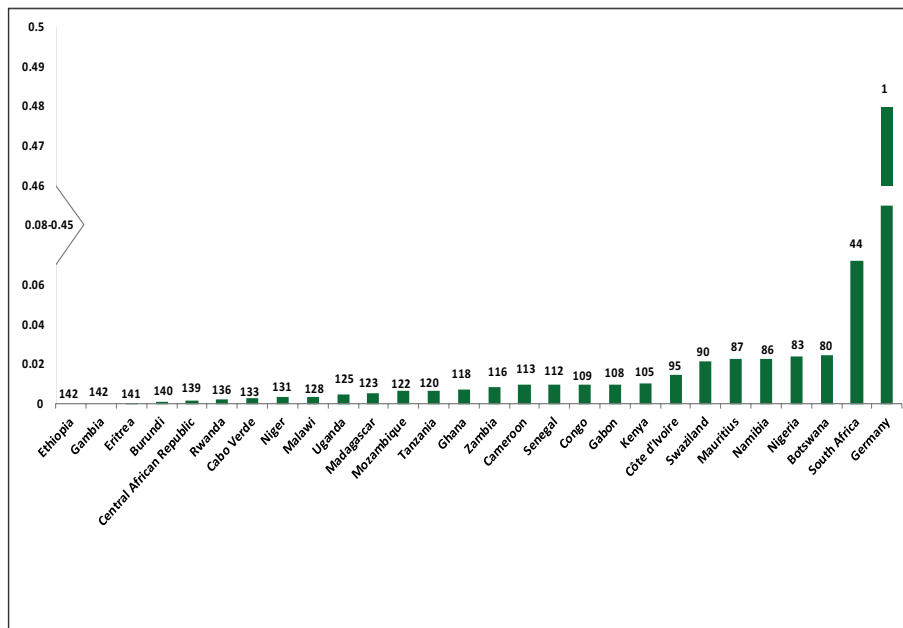
Finally, the influx into the urban sector - although it comes with income gains for those who migrate - was not triggered by any significant industrialisation in the classical sense and it is also not sustainable given the limited market size for informal products. Recent data, even after GDP adjustments which reflect some economic modernisation, confirms what has been argued since a decade, that SSA is in a process of deindustrialisation from an already low baseline (Arbache et al., 2008). The share of manufacturing industry was for many countries of SSA in the year 2015 smaller than in 1981, hovered at 10% of GDP, and never had the characteristic peak of industry found in most other world regions (See figure 2, where manufacturing is included as part of industry). Most small and micro firms do not grow into the modern formal sector and path-dependently operate at a very low level of productivity.

If these trends continue, SSA will not be able to turn the demographic burden into a demographic gift or 'dividend'. Africa's workforce will grow between now and 2050 by another 500 million people, which all need productive jobs. High under- or unemployment will in turn slow down the awaited demographic transition, as especially for women a continuation of current trends would have little effect on their labour market participation and the number of desired children.

Hence, to increase the chance that poverty continues to decline, that enough jobs are created and that the demographic transition gains momentum, more and more researchers



**Figure 1: Competitive Industrial Performance Score of Sub-Saharan Africa and Germany**



Source: UNIDO (2013).

think that governments in SSA should consider to engage, as many of the Asian countries did, in more ambitious industrialisation strategies, as markets alone cannot trigger the needed structural change. For agriculture, this entails complex choices between consequential modernisation of small-holder farming and areas where industrial agriculture may be sustainable. Not surprisingly many also refer to China or Vietnam as more recent examples where industrialisation, subsequent to agricultural modernisation, and the related policies have played a major role for poverty reduction, job creation and integration into global value chains.

In consequence for Africa, bypassing manufacture and leapfrogging straight into the service age has become far less obvious, given lower employment prospects in the tertiary sector and given the fact that labour-intensive industries seem to move westwards, towards Africa indeed. Some industrial leapfrogging actually occurs in Africa, for instance in telecommunication and energy-generation, but refers to consumer and policy choices within the industrial sector itself. A growing number of studies freshly identify concrete opportunities for Africa to attract agro-industrial and light manufacturing industries (Dinh, Palmade, Chandra et al. 2012; Fine, van Wamelen, Lund et al. 2012; Newman, Page, Rand et al. 2016; Oqubay 2015). These studies also give first answers to the question where in Africa new policies to attract and

promote manufacturing industries have started to get hold – in Ethiopia, Mauritius, Rwanda, and on a much smaller population base: Botswana and Namibia, to mention a few.

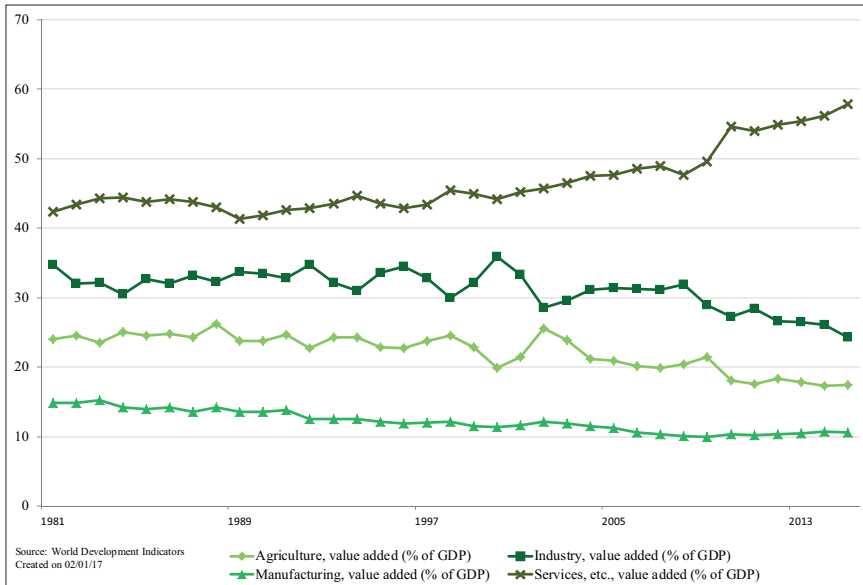
Hence, manufacturing industry, either in agro-industrial or mineral-resource value chains (“beneficiation”) or as stand-alone greenfield industry is back on the African development agenda. Now, the debate is on how to get there, more broadly and quickly. A long-established answer reads: by improving the investment climate across all businesses. An ever more conducive business environment and good infrastructure remain indeed fundamental challenges in African countries. Ambitious industrial plans remain futile in country settings where economic fundamentals are not in order. Yet, structural change and employment creation have remained limited even in such African countries that have made considerable headway along essential lines recommended in the World Bank’s Doing Business and the World Economic Forum’s Competitiveness rankings, or by earlier work of the Donor Committee on Enterprise Development. (DCED 2013) Therefore, structural industrial policy that goes beyond these horizontal approaches is freshly discussed– even in Africa.

Unfortunately, except for the East Asian experiences, old industrial policy had got a decidedly bad reputation, in particular for failed top-down interventions in Africa and Latin America. Conceptually, new industrial policy departs radically from top-down “government-knows-best” policies and over-reliance on monopolistic state-owned enterprises (SOE). It is centred on a national project of structural transformation (Altenburg and Lütkenhorst 2015) which requires firm political will in public and business quarters alike. A number of publications on the topic (e.g. Chang 2009; Cimoli et al., 2009; Lall 2004; Lin, 2012; Rodrik 2004, 2007; Szirmai et al., 2013; Weiss 2011 and long-standing UNIDO work) have sketched, based on relevant country experience, the contours of such modern industrial policy. From this body of literature, the essentials of new industrial policy design, which relate to content, process, and institutions, read about as follows:

- Identify the precise market coordination failures that hold up industrialisation, at times also government coordination failures.
- Target selected industries that have the potential to create employment and/or innovation and technological learning, with positive spillover effects.



Figure 2: The shrinking contribution of the manufacturing industry



- Consider systematically wider social and environmental consequences of targeted industries, including adaptation to and mitigation of climate change, making for sustainable Green Industrial Policy.
- Organise collective search for such industrial self-discovery, in structured and inclusive public-private dialogue (PPD), with both the domestic and the foreign private sector.
- Rely on a highest-level political principal to provide leadership and oversee implementing agents, who are in this policy field all too often prone to pursuit of self-interests.
- By the same, warrant embedded autonomy (Evans 1995) of the developmental state, through a highly competent steering agency which acts as custodian of governmental autonomy vis-à-vis vested interests, while entertaining close communication links with the private sector.
- Systematically identify the most binding constraints for new ventures, which are industry-specific and have to be overcome by policy support measures (example: rare technical skills, unnecessary special regulation, branch-specific excessive bureaucracy or quality infrastructure gaps).
- Turn firm-internal and branch-specific capacity constraints into well-targeted capacity development measures for the concerned sections of the private sector
- Combine well-calibrated protective

and competitive elements, thus ensuring policy coherence among industrial and trade policy.

- Make implementation of industrial policy a time-bound, performance-related and iterative process, with clear sunset clauses for trade protection and subsequent exposure to global competition.
- Consider, along with the (sub-) sector characteristics, the firm-size and spatial dimensions of various industries, as e.g. small and medium enterprise (SME) promotion is not always the best development choice, and spatial agglomeration (clusters, zones) can help or hinder industrialisation.

- The spatial turn of industrial policy comprises the use of the Regional Economic Communities in Africa as arenas to establish economies of scale, firm competitiveness and regional value chains, supported by harmonisation of standards and rules of origin, prior to full exposure to global competition. Regional trade agreements have to be conceived accordingly, which is at present controversial for the Economic Partnership Agreements with the EU.

- Institutionalise formative monitoring and evaluation which accompanies the entire industrial policy cycle and facilitates identification of success stories as well as swift error correction.

The list of essentials contains some elements of an answer, safeguards indeed, to the fundamental political economy problem associated with industrial policy, which cannot be emphasised too much. As any other selective policy – privatisation of public entities or licensing of services, for example – it is particularly exposed to political capture and rent-seeking under the structural conditions of political systems by which “Africa works”, also labelled “politique du ventre” or similarly. As such a set of institutions is partly endogenous to the absence of a competitive industrial structure and broad middle classes, new industrial policy typically represents attempts at breaking the vicious cycle of low-level development traps.

While these policy recommendations represent an emerging normative policy consensus, advice on which precise industries to aim at is not easily obtained from the industrial policy menu – despite earlier recommended sequences, e.g. moving from light to middle and then to heavy industries. This is nested in the inherent uncertainties of structural discovery and experimental



learning. A related controversy (Lin versus Chang and Rodrik) on which comparative advantage developing economies should look for – either existing / revealed or anticipated / hidden advantages – remains pending. As mature light industries, such as textiles, can be good for mass employment, but allow little technological learning, reliance on a dual core of industries, that is labour-intensive industries alongside a smaller knowledge-intensive core, appears as the best developmental fit. On the continent, South Africa manifestly has the best conditions for such a two-pronged approach and pursues it in its own industrial policy plans.

As whole industrial processes are being

recomposed between core industry and associated services, in particular logistics, up-to-date policy support has to consider both when targeting modern industry. The challenge is exacerbated by industrial processes that have begun to be re-structured in advanced countries with the advent of new-generation firm-internal and -external digitalisation (Industry 4.0; Internet of Things), which will arguably have consequences for number of global and regional value chains. Thus, advancing countries are well-advised not to follow well-trodden paths but to swiftly adapt to changing industrial patterns.

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