



Economic diversification strategies: A key driver in Africa's new industrial revolution



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Economic diversification strategies: A key driver in Africa's new industrial revolution

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Key messages

- African countries can build on their recent economic growth achievements to initiate a new industrial upswing that will transform the continent's currently unbalanced economies towards increased manufacturing value added, currently accounting for less than 15% of GDP.
- Windows of opportunity for a renewed industrial effort are wide open with the ongoing recomposition of the global division of labour.
- The diversification of manufacturing industries cannot be achieved with a blueprint approach. A strategic, tailor-made mix of capacity building (CB), private sector development (PSD), service models for cluster development and global value chain (GVC) support is needed to boost industrial development in Africa.
- New industrial policy (NIP) can provide a platform for the specific design of these initiatives. In particular, it must address coordination problems, which impede industrialization in developing countries and which will not be resolved by market forces and a good investment climate alone.
- New industrial policy, in African settings, aims at restoring mature labour-intensive industries as well as targeting new, skill-intensive industries which have the potential to broaden the knowledge base and change the energy base of the economies (dual core).
- In this way, new industrial policy is a collective, evidence-based search process for new manufacturing ventures between the government and the private sector.
- The specific capacity development needs of public and private actors have to be addressed in the industrial policy making process, as they significantly increase the prospects of success.
- Trade policy and trade negotiations have to be aligned with the industrial policy requirements and potential trade-offs need to be made explicit.
- Harmonized regional industrial policy is key to successful integration of Africa's regional economic communities, jeopardized by imbalances and numerous NTBs.

1. Industrial development and diversification in Africa – what are the key challenges?

Something fundamental changed in most African economies since about the mid-1990s. Most of the economic debate in the early 2000s still focussed on “Africa’s growth tragedy”, but now Sub-Saharan Africa became the second fastest growing region of the world and convincingly responded to the challenges of the 2008/09 world financial crisis. By way of consequence, we can now talk about Africa’s economic, political and social problems, which remain daunting, in a very different way than years before, as economic leeway, range of financial sources and policy space for their solution have increased considerably. As far as industrial development is concerned, Africa now seems to be in a position to seriously address at least two issues:

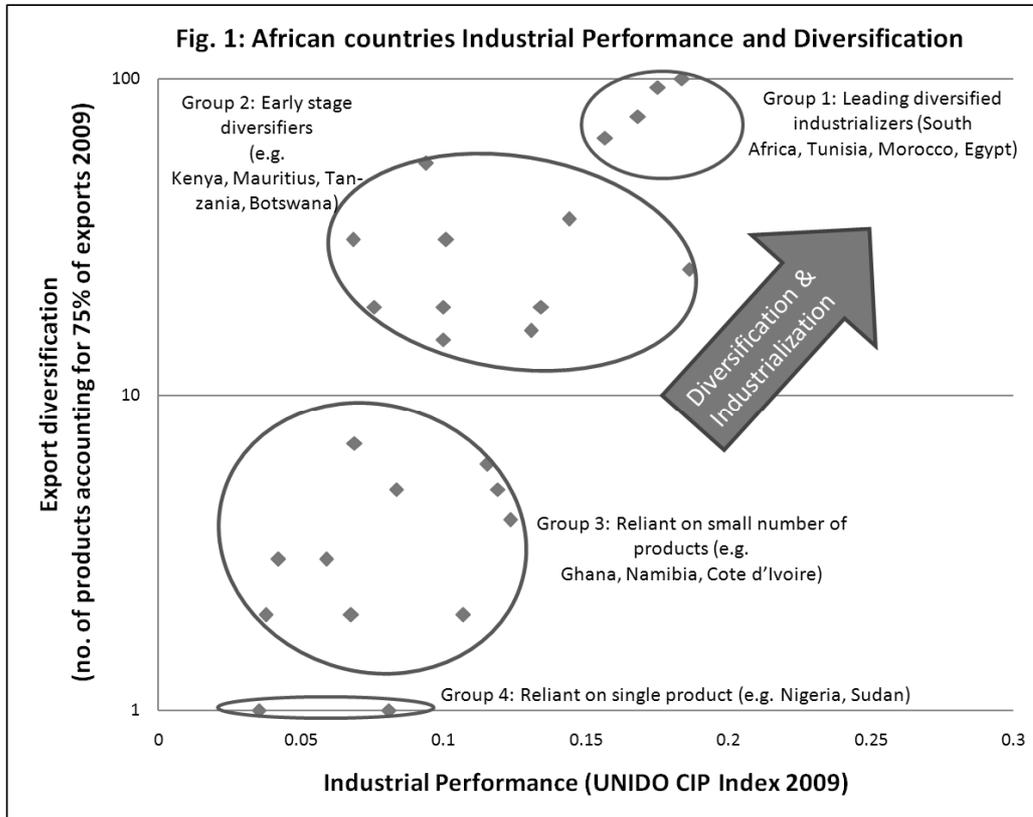
First, the fundamental economic challenge for Sub-Saharan Africa is a lack of decisive structural change: agriculture in general has not been modernized, and manufacturing stalled at around 15% of GDP (or 10% when subtracting South Africa), all through the 1960s to the 2000s, whatever policy prevailed (Lawrence 2005) (UNCTAD 2009). Manufacturing does not even mean ‘industry’ proper, as artisanal activities in much of the informal sector are counted along. So, de facto manufacturing industry hovers somewhere in the single digits - making the sector negligible in most African economies. Accordingly, African countries are still lagging behind other developing countries in their industrial performance, e.g. as measured by UNIDO’s Competitive Industrial Performance Index (CIP)¹ (cf. Figure 1).

Second, the degree of export diversification completes the picture of stagnant GDP structure. Export-related indicators actually reflect that most African countries offer relatively unsophisticated commodities, and concentrate on a small number of them. Figure 1 combines the export diversification of African countries with their industrial performance. The key finding here is that only the small group of countries which dominate African manufacturing today (South Africa and three North African countries), managed to diversify to a considerable degree. This group is followed by several less industrialized countries that qualify as *low-level diversifiers* (cf. UNIDO 2009; Imbs & Wacziarg 2003) which stand at an early stage of de-specialization (also cf. Fig. 2). However, the African industrial landscape is still predominantly

¹ The CIP index assesses industrial performance using eight indicators of a country’s ability to produce and export manufactured goods competitively in six dimensions (industrial capacity, manufactured export capacity, impact on world MVA, impact on world manufactures trade, industrialization intensity and export quality). The 2009 ranking includes 118 countries, with Singapore leading (with a score of 0.64), while Swaziland and South Africa are the leading African countries (with a score of 0.18).

characterized by a large group of countries that are heavily reliant on less than 10 unsophisticated products and in some cases even a single product only.

Figure 1 Industrial performance and diversification of African countries

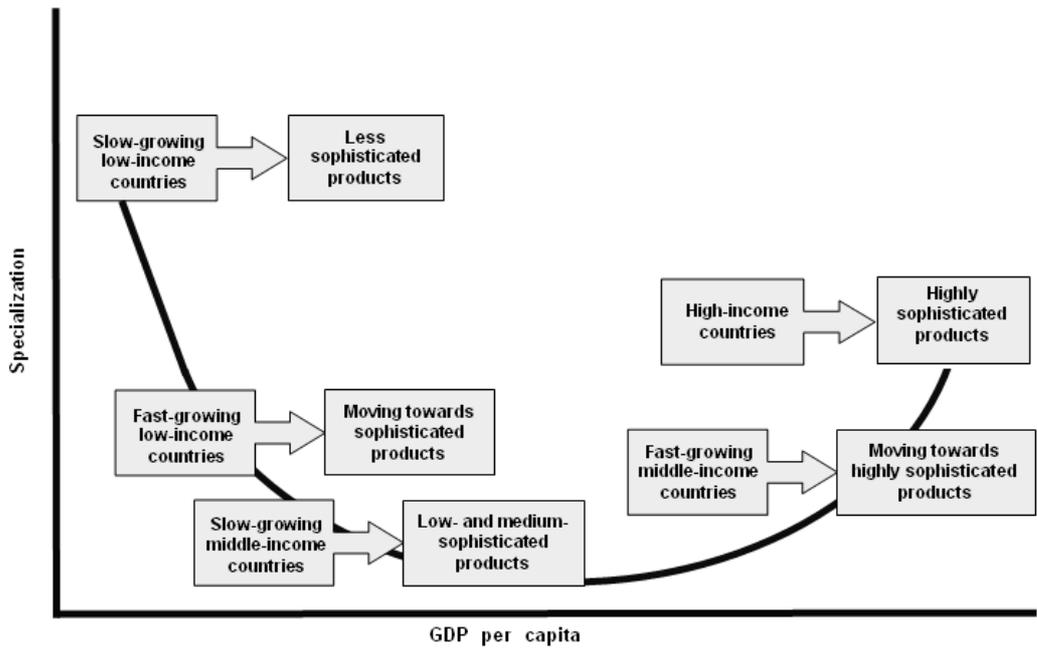


Source: Authors, based on data from UNIDO's CIP Index and OECD, African Economic Outlook 2011.

Note: the figure covers all African countries for which data is available for both indicators.

Industrial agglomerations in Africa remain a rare phenomenon, and at most a handful of manufacturing clusters south of the Sahara rose above artisanal levels into modern industrial production. As far as the diversification process is concerned, most African countries are still at a very early stage of industrial development where specialization is not a valid strategy but the expression of low levels of development, as depicted in Figure 2. African countries should strive for diversification in higher-valued products, while later on in their developmental trajectory, they may again specialise in a more limited range of products, which will mostly need to be highly sophisticated in nature. Sub-Saharan Africa, in the stylised pattern of (1) initial specialisation, (2) broad diversification, (3) new intra-industrial specialisation, lags not only by one stage (of broad industrialisation) but by two full stages of economic development. All the more remarkable is how much sustained growth Africa achieved over the last decade; and one easily foresees the future growth potential if next stage benefits are reaped.

Figure 2 U-shaped process of Specialization vs. Diversification in Economic Development



Source: UNIDO 2009.

In the light of this situation, existing policy prescriptions for Africa essentially boil down to two big families: 1) the classical comparative advantage led school; 2) the global value chain school:

The **first school** of policy advice, building on classical comparative advantage theory, recommends that Africa should not emulate broad industrial evolution in 19th century America and Western Europe (or late 20th century East Asia) but should build upon carefully managed mineral and agricultural riches. In other words, Africa should concentrate on fully exploiting the advantage from land, labour or resource factor endowment and specialize in the related products – the so-called natural resources development hypothesis. Unfortunately, the idea does not match well with the trait of modern intra-industrial world trade, depicted above, and with the characteristics of its successful players.

The **second school**, more plausibly, recommends increased participation in a broad range of global value chains (GVC), indeed starting with natural resource extraction and agro-industry but simultaneously searching for specific tasks within manufacturing GVCs to create more downstream value added in African countries. Uninhibited FDI flows will help Africa to take part in the globalized economy and, although the recent FDI inflow boom in Africa still

concentrates in a few mineral resource-rich countries, the booming Chinese investment in Africa gives an example by spreading wider across sectors and encompasses manufacturing (UNIDO 2005), (Brautigam 2009), (Asche/Schüller 2008). The Chinese investment behaviour fits with comparative advantage, as with rising wages and industrial sophistication in China mature light industries start shifting to countries with abundant unskilled labour. All that economic policy should do is facilitating this course of global markets by creating a conducive environment for doing business – in particular by refraining from any interference with sectoral choices or priorities. Neither diversification nor later (re-)specialisation is to be actively managed by economic policy.

This return to an old Turgotian motto: “laissez faire, laissez passer” actually became mainstream economic policy for Africa, which was designed to let the market decide where to invest, what to produce, and if a country will enjoy the presence of an adequate mix of firm sizes or is left with a few large-scale enterprises and a bulk of SMEs, with little in-between. Hence, economic policy had to be neutral with regard to (a) size (of firms), (b) sector (of investment), and (c) space, that is location of firms. We may call it **Triple-S neutral policy**. The 2009 UNIDO Industrial Development Report reckons that even the only broadly used locational approach so far – the creation of Special Economic Zones (SEZ) or Export Processing Zones (EPZ) – was no spatial development policy either, but rather a corollary of trade liberalization.

This all boils down to one single paradigm – a minimalist approach, as Altenburg/Drachenfels portrayed it (2006). Despite the slogans, related policies were nevertheless not neutral (Rodrik 2007), favoured certain sectors and depressed others, without making it explicit: in particular trade policy was in actual fact heavily skewed against the domestic formal sector, more precisely against non-traditional industrial exports. Thus, if Africa deliberately aims at diversification today, new industrial policies are needed that support the exploitation of industrial potentials. The remainder of this paper will discuss which policy content seems appropriate and how the process needs to be designed. Finally, it will shed some light on the importance of regional integration for this endeavour.

2. What can we say about industrial strategies and policy content?

The dominance of market-liberal policies in Africa up to the 1990s made that a whole series of classical questions on patterns of structural change, on sectors to choose according to technological capabilities or labour-intensity of industries only received a limited attention. Governments were not supposed to know ‘how to pick winners’ and thus better refrained from

any targeting of promising industries. With new industrial policy (NIP) coming of age, recognition spreads that ‘markets’ alone will not know better. In this diagnosis of the blocked or subdued mode of industrialisation, schools associated with NIP stress factors such as the problem of infant industry survival, information and knowledge externalities, coordination failures in inter-industrial input delivery or pecuniary externalities, that is: upstream domestic input suppliers are not investing in new firms as markets (= pecuniary rewards) are not assured, whilst downstream clients are not investing either, because inputs are not at hand. Such market failures, in the NIP view, are to be turned into as many opportunities for coordination and support. Accordingly, NIP authors have described tentative goals and a political economy framework for industrial policy. The framework comprises inter alia the following **design principles**:

1. Targeting for new activities / tasks, not entire old sectors
2. Clear benchmarks for success and failure of industries supported
3. Built-in sunset clauses for public support, tariff protection included
4. Support mainly for activities with spillover and demonstration effects
5. As mistakes (picking the losers) will occur, minimize the costs
6. Cycles of discovery to become ongoing.

Adapted from: (Rodrik 2004: 21-25)

Most importantly, identification of the new industries, which are to be temporarily protected and supported, shall be left to a collective search of government and private sector (see section on process, below). With choice of priorities left to such a joint process, what can our African trade and industry minister reasonably say on the content of her government’s future industrial policy – what *kind* of manufacturing to aim at? A priori, few answers can be found in New Industrial Policy (NIP) texts, no firm recommendation except that countries should look for something new. So, where to go? New industrial policy still requires that governments first introduce their own hierarchy of targets. They will stress economic along with concurrent social or environmental goals and arguably above all: poverty reduction. It follows that the appropriate **target system** displays *three* layers of orientation: 1) overarching developmental goals; 2) macro-economic targets (growth, employment, distribution, diversification, including a choice on the level of diversification – national or regional), 3) specific policy targets (efficiency, productivity, fiscal revenue). This hierarchically ordered target system, by identifying trade-offs, benchmarks and indicators, is the remainder of the “government knows better” philosophy of the old industrial policy, since democratically elected governments are legitimised and expected to table their own agenda, pre-determined on the grounds of a party

manifesto/programme. In fact meaningful industrial policy target systems stand out not by remaining blank but by being as specific as possible with regard to conflicting targets, winners/losers and ensuing dialogue needs with other actors in society. Industrial policy starts off with striking a proper balance between *different* goals, and establishing these *beforehand*. The African Union's AIDA offers a range of choices here (see box).

AIDA is a policy and a strategy document for the Accelerated Industrial Development in Africa setting industrialization priorities at continental, regional and national levels, with the intent to sensitize policymakers and other stakeholders for the window of opportunity that is presented to Africa now. Although requiring further refinement and prioritisation, AIDA is a very rich source of ideas and initiatives for imaginative industrial policy at all three levels, foreseeing private sector involvement in the mode of *industrial governance* outlined in the document.

Selecting activities and products

Following on the target system, a certain number of criteria for the choice of industries to be supported by industrial policy measures can be singled out for their particular relevance in the context of African industrialisation strategies:

- ***Comparative Advantage***

A developing country is well-advised to first exploit its absolute and comparative advantages to the maximum: by upgrading agro-industrial or mining industries and services. The classical logic of comparative advantage is one of full specialisation, whereas well designed industrial policy for developing countries aims at *diversifying* industrial structures. Indeed, successful developmental states searched for **dynamic comparative advantage** of their economies, i.e. for comparative advantage which is yet non-existent. This search goes beyond or even *runs counter* to existing and revealed advantage. Newly Industrialised Countries in East and South-East Asia were successful for exactly this reason. Such lookout for dynamic, *time-variant* comparative advantage is closest to the core business of industrial policy.

Box Competitive and comparative advantage

Competitive advantage in the sense of Michael Porter (Porter 1990; Porter 1998) refers to *an industry's* or *a firm's* cost structure which allows them to compete with an above average return in international markets. Comparative advantage in the strict sense of David Ricardo refers to cost structures that allow *a country's* industry A to compete relatively better in the international market than industry B of this country, with neither of them having necessarily an absolute cost advantage over anyone else.

The screening for advantages in global competition will also be informed by long-term considerations on new lead sectors that drive accelerated economic growth. With information and communication technology (ICT) lead arguably coming to an end, an upcoming sixth long growth cycle will be driven (or underpinned) by the transition to *renewable* energies – Green Growth. This debate is of importance for developing country policymakers, as they may want to explore how their countries / regions can benefit from the new technologies and can possibly take on some tasks in emerging chains of production.

- ***New or renewed industries?***

In the light of the consideration above, looking for new activities instead of eternally granting protection to old ones is a priori the right way to do modern industrial policy. Yet, favouring “new” sectors often means *local innovations*, or reshaping activities as fields of investment for Africa. Such a reshape entails the **industrial restoration** of existing capacities in the sense of industrial modernisation, not of conservative protectionism. In this perspective, the ongoing relocation of light industries from Asia to Africa may signify more than a short lived exploitation of AGOA- and EBA-like preferences, rather the long expected “second boat coming” with the perspective of lasting relocation of mature light industries to Africa. With rising wages and transport costs in/from China, traditional consumer industries in Africa face a window of opportunity for their rehabilitation, *now*. Such a direction of search also accepts, from the target system, employment and thus the concern with labour-intensive industries as a valid criterion for industrial policy. Indeed, the Washington mainstream in the early 1990s accepted even the search for particularly labour-intensive technologies as one strategic option to increase employment and reduce poverty along with basic social services and safety nets. Only the latter two remained on the agenda, not the labour issue.

Similarly, the pharmaceutical industry offers relocation chances for those generic products whose technology is ripe for transfer, though not entirely patent-free. The cases of mature light

industries and of new industries taken together demonstrate an overall criterion of strategic choice: governments may want to include options for support to the relocation of old industries along with the exploration of options for new, advanced technologies as a **dual direction of search**. Both are intelligent options in industrial policy.

- ***Beneficiation and sophistication: going down the value chain?***

Exploiting downstream possibilities of raw product refinement, according to some NIP authors, is not a promising economic option: that a West African country grows cotton does not predetermine competitive apparel-making; that a South African country has coal and iron does not mean predestination for making special-steel products. In many cases, this represents a valid objection against too much emphasis on downstream beneficiation. Making in-country production for global value chains longer can however still give guidance to industrial policy. Why? In the absence of broad pre-existing industrial networks, collective search will tend to single out such “near-by” activities. Commodity producers may have already acquired knowledge on supplier and client markets in the value chain and on downstream or upstream technologies that can be put to use. “Near-by” can have the described vertical meaning, as much as a horizontal and a diagonal one (Fine 2009). In this regard it has been shown (Lall, Weiss et al. 2006) that upward mobility in the sophistication hierarchy is *non-linear*: i.e. it is easier to add value to already sophisticated than to primary products (also UNCTAD 2008: 64), reflecting the finding, well known from East Asia, that firms with an established degree of technical sophistication are also best placed to move diagonally into other, higher technology levels of production, using acquired general skills. Conversely, this provides a strong argument for government intervention to *facilitate initial sophistication*, though value added may be limited, as these first steps of sophistication are often the most difficult to make.

- ***Going up the chain: Intermediate input producers***

The search for common domestic industrial inputs – intermediate products used in several industries – is another key dimension of industrial policy. The central idea here is that the aggregate demand of several manufacturing sub-sectors for the same supplies/inputs might justify local production. Accordingly, these demands as well as the feasibility of local production need to be analysed as a basis for industrial policy decisions. Although these sectors do not always produce exports directly, they do qualify as modern tradable goods and thus deserve similar attention. In open economies such intermediate inputs can simply be imported, one might argue, recent research has shown that Africa does not really take part in global trade in intermediate goods, and hence coordination failures between potential input suppliers and

downstream clients are real. In fact, the “non-tradability of a range of differentiated, intermediate inputs used in the ‘advanced sector’ of the economy” (Hoff and Stiglitz 2001: 409) constitutes a core problem of most African countries today: either they cannot afford to buy abroad inputs they need and domestically they are non-existent, or the technical absorption of sophisticated inputs is difficult mostly because of the pre-existing technological knowledge required. In sum, contrary to what even NIP authors from Harvard suggest, there are *not* always markets well-supplied for intermediate and capital goods. The weakness of the “it’s all tradable” assumption for inputs becomes apparent in industrially backward countries. Here we talk of new industries that should preferably be run by the private sector, but need the public sector to start. In this vein we should ponder the reintroduction of an African **intermediate and investment goods industry** as part of the overarching policy target system. African countries do already produce intermediate inputs (a) into *non-tradables* sectors, e.g. standard building material, or (b) tools for *traditional* agriculture, but both client sectors do not force the input suppliers to struggle for global competitiveness. This observation gives more precise direction to the search, which is intermediate and capital goods industries for producers of *non-traditional exports*. Not even sophisticated packaging industries are everywhere in place, but ultimately this relates to special equipment and machinery, as subsumed under ISIC groups 26-29 and group 33 for installation and maintenance.

Basic technological capabilities

The production of industrial inputs in-country facilitates diverse sophistication trajectories. But why exactly? It is more than just high-valued goods, it is about technological learning and adaptation: producing a good is more than acquiring a blueprint and the technology embodied in the productive assets; it is the acquisition of ‘tacit’ knowledge, the mastery of processes that is needed to make production lines run effectively. While ‘tacit’ knowhow applies to all products, what distinguishes intermediate and investment goods from both primary and final goods, is that they are excellent carriers of common technological knowledge. Often providing **generic inputs** for several industries, capital goods production in-country allows and requires mastery of embodied and non-embodied technology. So capabilities in **basic technologies** are (and at all historical stages were) needed to produce a whole range of goods, not necessarily meaning that countries will *actually* produce all these things, rather having the *potential* to produce them (cf. the idea of ‘shadow industries’ in Cimoli, Dosi et al. 2009: 544). Needed is the capability to apply the technology to any product, but then to specialise intra-industry wise. African import-substituting industrialisation, as UNCTAD (2009: 147-148,152) evidences, has been particularly unsuccessful in intermediate and capital goods production, in particular when

compared to East Asia. So which are these basic technological capabilities precisely and what is most lacking in Sub-Saharan Africa? Some of the knowledge is about *lead technologies*, which is cutting edge at a global scale and is driving economic growth across various sectors: an obvious candidate is information and communication technology (ICT), but beyond ICT we now have “industrial biotechnology, nanotechnology, advanced materials, photonics, micro- and nano-electronics, and advanced manufacturing systems [that] can provide the basis for a wide variety of new processes and goods and services, including the development of entirely new industries over the next decade.” (European Commission, Communication 2010(614):13).

Nevertheless, if most likely innovation in Africa of today still is local innovation, then we look for the key *locally* enabling technologies. Cutting edge ICT or nano-technologies may not be the most needed for broad-based learning and local innovation in an African country today, rather what is known as **general purpose technologies**, on which the literature offers various taxonomies. Industrial and technology policies can build on the observation that several general purpose technologies are embodied in a sub genus of capital goods i.e. machine tools. In fact machine tools are “at the heart of any country’s technological capabilities.”(Alcorta 2000: 1657). Machine tool production can be an ideal combination of several general types of technology and carry them over to machine-users, why we might want to introduce them as an advanced core in a likely industrial strategy. A machine tool cluster however requires a critical mass of producers and is very likely to need governmental support as well as a large regional market to succeed.

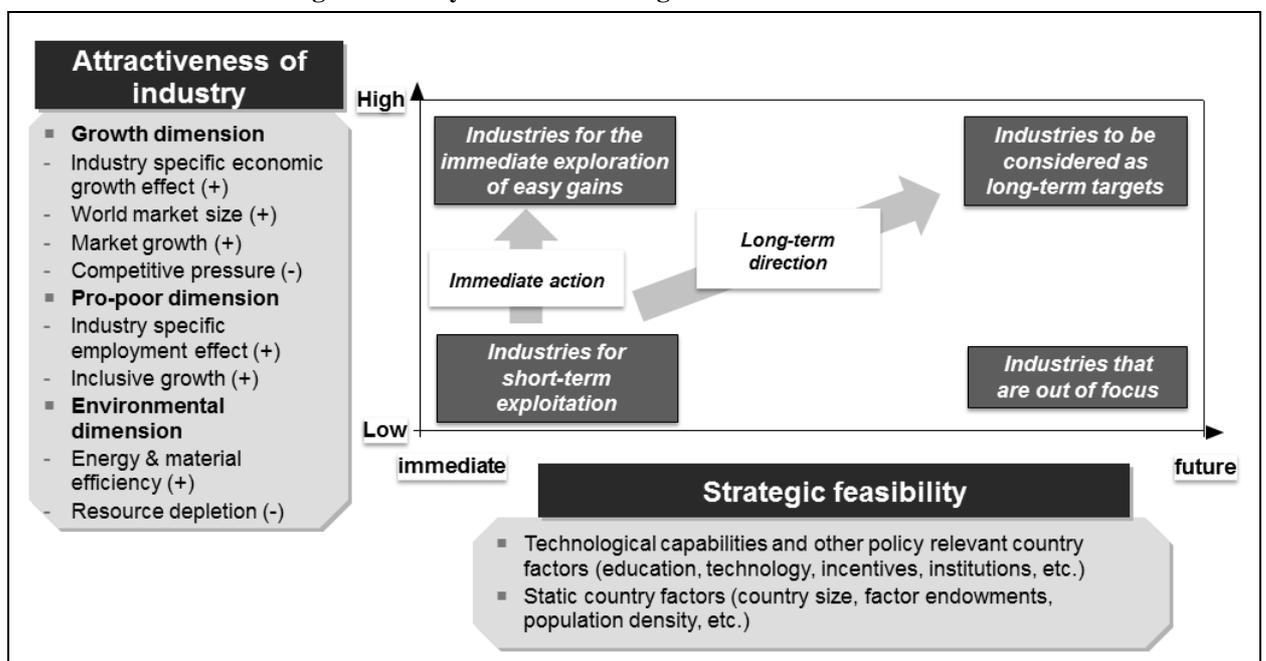
The need for a dual core

Contrary to the earlier paradigm of seemingly allocation-neutral facilitation of industrial investment, new industrial policy is **Triple-S specific** by definition: it singles out strategic Sectors or industries, firm Size and geographic Spaces for targeted support and flags them out as political priorities. In reality, investment promotion in Africa will not boil down to these flagship projects. Most African countries still face a severe overall shortage of foreign direct investment; and the propensity of the average foreign investor to come to Africa will certainly not grow when told that he can expect official support only if his project fits into a prefixed industrial policy frame. Given the *random* element in foreign investor behaviour, a policy to attract willing investors almost indiscriminately by means of an investment promotion agency (IPA) and/or SEZ may be in order (we term it **Type I** projects). Beyond this, subordinating IPAs and other agencies to the national industrial target system is the prime condition to implement the core industrial policy that comes with a deliberate triple selection of industries /

activities to promote (**Type II** projects). As it is reasonable to rely on existing firm resources and market opportunities, part of the industrial policy will consist of **rehabilitation and upgrading** of established sectors (“old” industries becoming “renewed” ones) (**Type IIa**). Beyond this exercise, actual “new” industries, in particular those having the potential of skill deepening and second order **acquisition of technological capabilities** will be sought for (**Type IIb**). Such a nucleus of advanced industries is likely to be small, capital- and skill-intensive rather than labour-intensive, and therefore likely not coherent with the industrial tissue of older industries. Thus a **dual core** industrial policy appears desirable in many high-unemployment settings of Africa, focussed on (a) mature labour-intensive and (b) new skill-intensive industries (with implications for the appropriate tariff structure).

As discussed in more detail in the latest Economic Development in Africa Report 2011 (UNIDO & UNCTAD 2011), the different trajectories resulting from the dual needs of industrial policy can be located in UNIDO’s framework for the comparative assessment of manufacturing activities:

Figure 3 UNIDO framework for the comparative assessment of the relative attractiveness and strategic feasibility of manufacturing activities



Source: UNIDO. See also (UNIDO & UNCTAD 2011:41).

3. How to get the industrial policy process right?

New industrial policy recognises that manufacturing industry lacks in most developing countries and that an answer to the question “how to get it” is anything but trivial. Although we accept today that the government hardly knows better than the private sector how to pick winning options, market failures imply incomplete information for private firms, too. Asymmetric information is thus the key argument for the necessity of a *collective search process* that aims at the evidence-based definition of industrial priorities (Rodrik 2004; 2007). Although their information might not always be fully complementary, governments and private sector representatives should a) bring the available evidence on the table in order to jointly self-discover feasible new ventures and b) agree on the required additional information that could be obtained with joint efforts in the future.

Embedded autonomy for Industrial Policy in Africa

With collective search at centre stage, the relationship between the government and the private sector is obviously a key issue. Accordingly, a key prerequisite for successful new industrial policy is a sovereign government that is at the same time autonomous and open for ideas, feedback and critique from private industrial actors. This “embedded autonomy” (Evans 1995) was undoubtedly the key to success of Korea’s and Taiwan’s developmental state but does unfortunately not well portray African realities. Thus, Africa needs to find a middle ground between the two extremes of inexistent public-private dialogue on the one hand and clientelistic state-industry collusion on the other hand. However, given serious capacity constraints and fragmentary information for both the state bureaucracy and the private sector, this is not a simple recipe. In fact, two challenges have to be taken seriously when referring to embedded autonomy in the African context:

- Firstly, an *autonomous* technocratic bureaucracy that is devoted to national interest instead of special interest and influences cannot be taken as given in any global setting. However, recent cases of successful Industrial Policy in Korea, Singapore, Taiwan and China have shown that an alliance between two very small elites – i.e. a few far-sighted state officials and a few local industrialists – can successfully carry forward a national project of development (Evans 2010).
- Secondly, with a few exceptions, a sufficient layer of *economically* well-capacitated public servants is not available in most African countries – making it easy for neo-classical and institutional economists to justify their rejection of pro-active industrial policy in Africa. Nevertheless, second-best institutions and policies did not prevent several industrialization success stories (cf. Chang 2002) and even more importantly, capacities can be developed

over time. It is this conviction which leads us to propose that industrial diversification through industrial policy is possible with public institutions and policy-making capacities *improving as you go*.

Private sector capacity to participate

Successful Industrial Policy making in Africa does not only require extensive improvements in policy making capacities in the public sector, but also in the private sector. While too much big-business influence on policy making is the key concern in most industrialized countries, the lack of active private sector participation in industrial policy making is the greater challenge in the African context. In fact, despite the circumstance that doing business is becoming more and more convenient in the continent, the absence of any coherently organized domestic interest group remains a key challenge (cf. Van de Walle 2001). On the same lines, the chairman of the East African Business Council recently bemoaned the “lack of an active private sector involvement in formulating trade policy” as a key impediment to business in the region.² Thus, while everyone agrees that business influence should not become the dominant factor in policy making, too little organised business representation and a general lack of coherent interest articulation is the key issue in Africa today. However, while New Industrial Policy demands appropriate business representation in the collective search process, the question how this can be achieved in Africa has not been answered to date. Business associations, and in particular associations of manufacturers would be the natural counterparts in the industrial policy design process, and therefore they deserve to be considered in this regard.

Business associations

Few people would oppose to the assertion that business associations are too weak and fragmented in most of Africa. Some key findings of the research on their role in Africa point to serious capacity constraints that prevent an active involvement in industrial policy making:

- 1) There is no lack of business associations in Africa, but they rarely act according to the expressed interests of members;
- 2) well-established coordination mechanisms between state and private sector are very rare;

² Faustin Mbundu at the launch of the Common market project of the EAC, as quoted by The Citizen, Tanzania (Nov 23, 2009).

- 3) the perceived balance of power between the state vs. business often jeopardizes cooperation;
- 4) Ironically, coordination worked best where business associations are represented by a different ethnic background from that of the government;
- 5) In most countries, business was mistrusted due to a political “socialism” and fear of a capitalist class that could become a powerhouse independent from the ruling political elite;
- 6) Business associations have always been fragmented between the diverging interests of manufacturing companies vs. traders;
- 7) Structural adjustment weakened traditional manufacturers and their associations, even if BAs initially preferred the forced liberalisation;
- 8) Several countries once deemed crucial for Africa’s industrialization (e.g. Côte d’Ivoire, Zimbabwe) now show especially low levels of trust and consultation between government and private business.

Altogether, the capacity problem preventing successful industrial policy making in Africa is *double*: state *and* business. Simply increase articulation, i.e. embedding of state policies into business interests, will not do the trick. Business representation in Africa today is woefully inadequate to strategically analyse and address the key constraints for industrial development and thus needs wide-ranging capacity building with targeted support of the appropriate multilateral and bilateral agencies.

One additional fundamental issue in the public-private dialogue for industrial policy making that goes beyond capacity constraints is the tension between exporters of manufactures and agricultural goods on the one hand, and importers or mining exporters on the other hand, within the business associations, with the latter taking the front bench and the former the back bench. Without elaborating the details of this class structure of business interest we can adhere to the statement that “there appears to be a dichotomy between industry objectives and trade liberalisation objectives” (Shilimela 2008: 11). Addressing this conflict of interest systematically is part of good policy. As a bottom line, an ideal-type bi-partisan approach between government and business will not be realistic in Africa, because separation of both parties is very relative. Accordingly, further talk about “government” and “private sector” has to be taken with caution, but this does not invalidate the basic idea of collective search.

Process design

Each country (and regional community) will organise the process of collective search for industrial opportunities in the way it deems appropriate, but some important general directions are at hand. On the one hand, the government certainly wants to introduce its strategic goals and political targets. On the other hand, the private sector wants to react and describe opportunities and problems for further investment from its perspective. A stylized industrial policy dialogue might contain two parts – one general and one specific:

1. Public and private actors look at the *general* advantages and constraints that industrialisation faces. Reviews of progress made in improving the overall investment climate or the business environment have their place here. When going deeper, the discussion and analysis most often tries to deploy some kind of the most binding constraints analysis, e.g. according to a Hausmann-style decision-making tree of constraints. Furthermore, stakeholders in the process may want to single out generally conducive measures such as SMQT, in order to accelerate industrial development across the board.
2. Subsequently, the fundamentals *specific* to industrial policy will need to be addressed. This can include:
 - a. surveying market and technological trends in order to overcome information gaps that are difficult to close by single (private) actors,
 - b. related R&D or training needs which are not feasible to address for private actors because of spill over effects,
 - c. estimates of specific infant industry protection needs and durations,
 - d. addressing the coordination problem of private-to-private domestic input deliveries, where downstream industries are not created because key inputs are not readily available and simultaneously upstream inputs are not produced for a lack of existing customers,
 - e. dealing explicitly with trade-offs like the one between short-term employment creation and long-term technological capacity building.

Importantly the self-discovery of industrial potential does not simply boil down to “doing business” or “investment climate” review exercises and also does not stop with the identification of the most binding constraints to industry in general (e.g. energy supply). In fact, the identification of particular national or regional industrial flagship projects requires the identification and tackling of *sector-specific* constraints.

Top down and bottom up – or: content versus process

Earlier national economic planning exercises in Africa, as pure top-down processes, were inspired by classical socialist central planning ideology. These times are long gone, and participatory planning has become almost the rule at all levels of policy-making. However, degrees of stakeholder participation still vary widely. Looking out for new industries and new ways of inter-industrial cooperation is an iterative search process that requires an open architecture approach, regarding both content and process. This runs counter to how most industrial policy documents in Africa depict the process. On a general note, many of them look *most* similar to classical top down planning among available policy documents, although they should *least* do so, given the nature of industrial self-discovery. An example is AIDA, the African Union's apex plan, which despite its importance as an inspirational source, looks similar in its attempt to be as comprehensive as possible.

However, despite the importance of an open-ended and participatory process, the **government's initiating role** goes beyond presenting general principles and overall policy targets, and might even include preselecting industrial projects or programmes on the basis of their economic attractiveness and feasibility. The key difference to top-down planning approaches should be that such lists will be subject to further cost-benefit analysis and private sector scrutiny as to their economic realism, and thus run the explicit risk of being rejected. Politicians have to *accept iteration*. In other words, there is a case of (pre-determined) content versus (open-ended) process. Initial short lists, presented by governments or regional bodies, may be needed to give industrial policy political appeal and contours. The usual long lists, however, enumerating everything desirable in Africa, from aircraft making to uranium refining are all the more superfluous as they do not even fulfil the political function of attracting public attention, not to talk about injecting confidence in a government's economic discretion.

Stakeholders

Even if we agree that Industrial Policy is an intrinsically participatory exercise, the question remains which other actors, beyond the government and the manufacturing sector, should be involved in the search, implementation and monitoring phases of industrial policy making? Without a doubt, there is a role to play for 1) the financial sector; 2) trade unions; 3) research institutes and think tanks; 4) parliament; 5) foreign investors; 6) technical cooperation agencies and development banks; 7) cooperative associations representing the wider social business

sector; and finally 8) civil society at large (representatives from CSOs, NGOs, churches etc.). Although they were largely disregarded in some East Asian industrial development experiences, the emerging civil society represents (a) consumer interests, (b) social and (c) environmental standards and (d) norms of transparency and accountability that contribute to the quality of industry and cannot be ignored anymore. For Africa, their inclusion becomes ever more compelling as the emerging middle class on the continent supplements civil society with domestic social foundations, more solid than foreign-funded NGOs standing in. Industrial governance needs a strong argument to exclude them (and other civic actors) from the inner circle of industrial policy-making; it may be more adequate to conceive their inclusion in terms of sequencing.

Taking all observations together, a multi-layered, (multi-)staged process is needed. Given the initial or acquired weakness of some key players, in particular some manufacturers associations, targeted capacity building will be needed. And given the interlaced interest structure of the majority of actors, particular measures on the transparency of their impact on the industrial policy outcome are to be conceived. High-level political shielding of the Joint Steering Committee at the centre of industrial policy-making against vested interests will be another key measure to take. The choice of an appropriate (inter-)national mediator able to position himself equidistant between the parties is a third one. Given the deep-rooted convictions that long tarnished related debates, there are not many bilateral and multilateral agencies able to fill this role.

4. Which role for regional integration?

Regional economic integration is progressing in Africa at three different levels:

1. Formal intensification of African intra-**regional** economic integration within and across the regional economic communities (REC).
2. Actual, often informal and fairly intensive integration **across** formal national and regional borders, including goods, labour, capital, land takes various geographical configurations, among them (a) regional *corridors*, (b) micro-regional *clusters*, cutting across formal borders, (c) sectoral *networks*, most noticeably the establishment of regional communication and energy networks,
3. Intensification of **inter**-regional integration (EPA, AGOA, BRIC agreements). In these processes, African regional economic communities strive to become the interlocutors of external partners, and some actually are.

The processes are often lumped together as 'New Regionalism' and signify the considerable dynamism injected into regional cooperation since two decades. Regional economic integration along all these three lines is potentially important for accelerated industrialisation in Africa. National African markets, even of the most populous nations, are small in size. At least for those industries where economies of scale matter, RECs represent a prima facie logical solution. **Regional industrialisation** and supporting policies have the potential to bolster the move of many African governments to revamp their manufacturing industry.

Yet, trade theory and empirics argue that

- a) Even the biggest RECs in Africa are small in comparison, and global trade liberalisation might be the better alternative for industries looking for big markets.
- b) New trade creation within a REC should exceed trade diversion from 1st class suppliers outside Africa to 2nd class producers in Africa, enforced by external barriers. Yet, low intraregional trade in Africa, still at around 10% of total trade, does not point to much trade creation in the communities.
- c) Agglomeration logic makes that industries tend to cluster with the regional champion (South Africa, Kenya, Nigeria, Côte d'Ivoire before the turmoil), in particular in developing regions where the general factors for new greenfield industries are scarce. At levels of limited overall agricultural and industrial development, clustering does not lead to intra-industrial specialisation, either, where every member country's industry can find their specialty. Fierce competition over the same range of products ensues, with non-tariff barriers etc. regularly used as means of support of national producers, despite formal free trade agreements.
- d) Regional integration with sizeable external tariff protection comes in static comparison with a measurable loss in consumer welfare.

In sum, when there are few dynamic benefits in terms of fresh industrialisation and trade creation, the economic rationality of intensive regional integration is everything but assured. In consequence, two models of regional integration increasingly compete in Africa:

- **Deep integration** along the classical linear-staged model: PTA, FTA, CU, CM, MU, EC (not necessarily followed through step by step), with a comprehensive set of regional institutions, common border controls, dispute settlement mechanisms, and the like.

- **Light integration**, concentrating on transport corridors, energy pools, trade facilitation, region-wide standardisation etc. with a light package of institutions and no common external protection. The proposed COMESA/EAC/SADC free trade zone is the prime example.

While the positive measures associated with the light integration are highly welcome, African leaders will have to decide what model to opt for: only light or also deep integration. Why? While Africa holds for agriculture, services like tourism or extractive industries considerable natural advantages that can well be competitively exploited in the ‘light integration’ setting, the same is not true for manufacturing industry. As the empirical experience has shown, even with the investment climate massively improved in many African countries, manufacturing stagnates or regresses. National industrial policy is the first order instrument to deal with the challenge. But regional industrial policy may be the better solution for all African countries, even the large ones like Ethiopia, Nigeria, DRC or South Africa. Reasons are:

- a) **Opportunities offered**, in the form of regional standardisation, regional R&D or marketing efforts, etc. Importantly, a somewhat shielded, while large regional market is the ideal training ground for young industries, before going global. Born global players are rare in reality.
- b) **External constraints**. Regional integration in Africa was long portrayed as a “spaghetti bowl” of wildly overlapping memberships. Rationalisation of these multiple memberships is underway. For customs unions (CU) with common external tariffs (CET) this is mandatory; a country can only adhere to one CU. Now, some African RECs have a common external tariff; hence a number of support instruments for new industries are not nationally available anymore, especially import tariffs or export taxes (used as incitement for industrial transformation of commodities). However, without a commonly agreed agricultural and industrial policy, the tariff bands and also the exceptions agreed within the REC have no rational economic foundation. They are just rules of thumb.

Example: The new EAC CET is criticised by informed scholars for preserving a pattern of tariff escalation, so that tariffs increase with the stage of processing. This is intended to protect final stage producers, but this path towards vertical integration is hardly appropriate, when seeking to be involved in global production chains. Countries should instead seek out their comparative advantage all along the whole production chain, and not protect the final stage. (Bigsten, Kimuyu et al. 2010: 247) The critique is valid but must not be accepted, *provided* there are realistic, time-bound projects of new final consumer industry concretely identified in the regional industrialisation industry.

Also, the spirited defence that African governments mount on certain contentious issues in EPA negotiations (MFN clause, export taxes and subsidies, sensitive products, infant protection, public procurement, RoO) gains if informed by strategically defined targets: which industries to promote, which industries to open. Here, trade policy is tributary to industrial and agricultural policy. African policy-makers are thus faced with a strategic choice: tackle industrialisation problems proactively, and accept the deep regional integration mode; or better renounce both in favour of an open-source, light integration environment, which clearly has its appeal for investors, too.

In the end, it is only regional industrial policy that allows solving a particularly damaging coordination failure in African RECs: Broadly spread industrialisation is held up by incomplete regional trade and factor liberalisation, whereas full and deep regional integration is stopped by fear that existing rudimentary industries will be damaged by liberalisation, in particular in weaker member states. In this regard, regional industrial policy is more than any other common strategy in your REC. It will be quintessential for the success if not the survival of African RECs, which otherwise will have to deal with growing imbalances at low overall levels of industrialisation and the usual erratic policy reactions to it. Unwilling regional champions pursuing their national industrial strategies without systematic consideration for their responsibility for the coherence of the region (and the necessary collective action), aggravate wittingly the regional inequalities. The policy status of RIP has therefore to be higher than just ‘supporting’ competence, as it would be called in the EU, and must rise to the status of ‘shared’ competence between the community and the member states, with all that entails.

What regional industrial policy is NOT: a prescriptive policy mode, in the futile attempt to force domestic, let alone foreign investors to invest in one country and not in the other, in one industry and not in the other. What regional industrial policy IS: a systematic and coordinated

encouragement of *additional* investment in otherwise neglected spaces, sectors and firm size-segments, which are flagged out as regional industries. (see example in box)

Regional fertilizer industry (a fictitious case study, based on a real proposal from Rwanda): Agriculture in most African countries suffers since 2007, because along with food and fuel prices, fertilizer prices went up and hampered possibilities of farmers to respond to the incentive of higher producer prices. The problem is exacerbated by massive devaluation of African currencies, as most African countries have no fertilizer production (any more) and have to import most farm inputs. A regional fertilizer plant can source inputs from various countries in a REC. Chemical industry is sensitive to economies of scale and thus needs a large regional market. As currencies are volatile and global competition sharp, a regional fertilizer industry project may need support by some time-bound and performance-related external protection. A fertilizer plant is not particularly labour-intensive; as a mature industry it is not skill- or knowledge-intensive, either; but it may save the region a considerable amount of foreign reserves, and increase policy space in exchange rate and inflation management. Widely discussed smart subsidies for farmers as e.g. proposed by (Banerjee and Duflo 2011) may accompany the move and secure the market for the new factory.

Regional industries in this sense are a golden opportunity to exploit backward and forward linkages or the distribution of various industrial tasks across the region, gradually achieving a coherent industrial fabric, which avoids reoccurrence of massive imbalances within the region and vis-à-vis external competitors.

References

- Alcorta L.: New Economic Policies and the Diffusion of Machine Tools in Latin America. *World Development*. 28 (9): 1657-1672. 2000.
- Altenburg, T. et von Drachenfels, C.: The "New Minimalist Approach" to Private-Sector Development: A Critical Assessment. *Development Policy Review*, 24: 387-411. 2006.
- Asche H. et Schüller M.: China's Engagement in Africa – Opportunities and Risks for Development. Study by order of GTZ. 2008.
- Banerjee A. V. et Duflo E.: *Poor Economics. A Radical Rethinking of the Way to Fight Global Poverty*. New York: Public Affairs. 2011
- Bigsten A., Kimuyu P. et Söderbom M.: Chapter 10: The Manufacturing Sector. In: Adam C., Collier P. et Ndung'u N.: *Kenya: Policies for Prosperity*. Oxford University Press and Central Bank of Kenya. 2010.
- Brautigam D.: *The Dragon's Gift: The Real Story of China in Africa*. Oxford: Oxford University Press. 2009.
- Chang, Ha-Joon: *Kicking Away the Ladder – Development Strategy in Historical Perspective*. London: Anthem Press. 2002.
- Cimoli M., Dosi G. et Stiglitz J.E. (eds): *The Political Economy of Capabilities Accumulation: the Past and Future of Policies for Industrial Development*. Oxford: Oxford University Press. 2009.
- Evans P.: *Embedded autonomy: states and industrial transformation*. Princeton: Princeton University Press. 1995.
- Evans, P. Constructing the 21st century developmental state: potentialities and pitfalls. Constructing a democratic developmental state in South Africa. Potentials and challenges. Omano Edigheji. Cape Town, HSRC Press: 37-58. 2010.
- European Commission : *An Integrated Industrial Policy for the Globalisation Era - Putting Competitiveness and Sustainability at Centre Stage*. Communication 614, 2010. Internet Access 14/11/2011: http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/files/communication_on_industrial_policy_en.pdf
- Fine B.: Submission to the COSATU Panel of Economists on "The Final Recommendations of the International Panel on Growth" (the Harvard Panel). *Transformation*, (69): 5-30. 2009.
- Hoff K. et Stiglitz J.E.: Modern Economic Theory and Development. 2001. In: Meier and Stiglitz: 389 – 459.
- Imbs J. et Wacziarg R. : Stages of Diversification. *American Economic Review*, American Economic Association. 93(1): 63-86. March, 2003.
- Lall S., Weiss J. et Zhang J.: The Sophistication of exports: a new trade measure. *World Development*, 34(2). 2006.
- Lawrence P.: Explaining Sub-Saharan Africa's Manufacturing Performance. *Development and Change*. 36(6): 1121–1141. November 2005.

- Mayer J.: The Fallacy of Composition: A Review of the Literature. *The World Economy*. 25(6): 875-894. 2002.
- Porter M. E.: *The Competitive Advantage of Nations*. New York: Free Press. 1990.
- Porter, Michael E. (1998). *On Competition*. Boston Mass., Harvard Business Review Book.
- Rodrik D.: Industrial Policy for the Twenty-First Century. *Working Paper Series rwp04-047*. Harvard University, John F. Kennedy School of Government. 2004.
- Rodrik D.: Industrial Development: Stylized Facts and Policies. In: United Nations, *Industrial Development for the 21st Century*. New York: U.N., 2007.
- Shilimela R.: *Monitoring Economic Integration in SADC, 2006/2007. Overlapping Memberships of Regional Economic Arrangements and EPA Configurations in Southern Africa*. Botswana Institute for Development Policy Analysis. Gaborone. 2008.
- UNCTAD: *Economic Development in Africa Report, 2008: Export Performance Following Trade Liberalization: Some Patterns and Policy Perspectives*, 2008.
- UNCTAD: *The Least Developed Countries Report 2009. The State and Development Governance*. New York and Geneva. 2009.
- UNIDO: *Africa Foreign Investor Survey, 2005: Understanding the contributions of different investor categories to development. Implications for targeting strategies*. 2005.
- UNIDO: *Industrial Development Report, 2009: Breaking In and Moving Up: New Industrial Challenges for the Bottom Billion and the Middle-Income Countries*. 2009.
- UNIDO & UNCTAD: *Economic Development in Africa Report, 2011: Fostering industrial development in Africa in the New Global Environment*. 2011
- Van de Walle N.: *African Economies and the Politics of Permanent Crisis, 1979-1999*. Cambridge: Cambridge University Press. 2001.



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