

The industrialisation challenge for Africa: Towards a commodities based industrialisation path

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Abstract

Since the turn of the millennium many African economies have been reintegrated into the world economy on a positive note and experienced substantial economic growth. This growth has primarily been concentrated in commodity exports. The central question facing African economies is how to use economic growth to foster industrialisation and thereby facilitate general development. This paper discusses the extent to which developing backward and forward linkages to the commodity sectors can contribute to its industrialisation project, in light of the past de-industrialisation process and recent trends in global commodity markets. It then reviews the theoretical criticism to resource-based industrialisation and proposes elements for a commodities based industrialisation strategy, including an analysis of the benefits of such strategy for Africa, and the factors contributing to its success. © 2014 Afreximbank. Production and hosting by Elsevier B.V. All rights reserved.

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1. Introduction

Since the late 1990s, Africa has experienced positive economic growth due to improved macroeconomic management, higher domestic demand, and principally, higher commodity prices. Africa's central question is how to take advantage of this commodity boom and shift capital, labour and entrepreneurship away from subsistence agriculture and informal employment into the industrial sector. This paper focuses on whether developing backward and forward linkages to the commodity sectors can contribute to its industrialisation project.

2. Linkage development as a window of opportunity for Africa's industrialisation

Notwithstanding increasing contributions to GDP from manufacturing, financial, telecom and tourism sectors, Africa's economic growth has been mainly driven by primary commodity exports. Table 1 shows average indices of export product concentration and diversification for selected regions. The export product concentration index (or sectoral Hirschman index) measures the degree of export concentration within a country. The average index for Africa, excluding South Africa, was 0.51 in 2011. In comparison, the average indexes for Asia and Latin America were 0.12 and 0.13, respectively. The export diversification index measures the extent to which the structure of trade of a particular country differs from the world average. This index helps us to overcome a potential problem of the concentration index, that it is more susceptible to commodity price variations. All African countries have a diversification index equal to 0.5 or higher. For almost a third of them, the diversification index is

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Table 1
Comparative trade indexes, by region (1995, 2011).

	Export concentration index		Export diversification index	
	1995	2011	1995	2011
Developing economies: Africa	0.24	0.43	0.55	0.55
Africa excluding South Africa	0.34	0.51	0.67	0.62
Developing economies: America	0.09	0.13	0.36	0.34
Developing economies: Asia	0.09	0.12	0.32	0.24
LDCs: Asia	0.24	0.23	0.75	0.69
Low-income developing economies	0.14	0.25	0.57	0.47
Major exporters of primary commodities excluding fuels: developing America	0.14	0.18	0.61	0.64

Source: UNCTADStats, accessed in July 2012.

higher than 0.80. This is strikingly higher than Asia (0.24) and Latin America (0.34). Not only export concentration is high in Africa, but it had also increased compared to 1995. During the same period, the diversification indexes of Asia and Latin America, including the LDCs group, have improved. The extent of export concentration is high not only at sectoral level, but also at product level. The top three products represent more than 50% of total merchandise exports for half of the continent. In 8 countries, one single product accounts for more than 70% of total exports. Such export concentration on primary commodities reflects the dependence of African economies on natural resources and the weakness of Africa's industrial sector.

Thus far higher GDP growth rates have not proportionately impacted on poverty reduction. This was because growth failed to translate into commensurate job creation and social progress. Indeed, sub-Saharan Africa, particularly in Central and East Africa, has shown the lowest growth-poverty elasticity in the world (Fosu, 2011). The mineral and oil sectors are capital intensive hence have lower employment linkages than the manufacturing sector. Moreover the potential benefits accruing from higher revenues have often not materialised because of low tax regimes, tax evasion and financial mismanagement.

Africa needs to provide job opportunities to millions of young people. Only a massive industrialisation effort will enable Africa to eradicate poverty and achieve sustainable development. At the same time, this will facilitate dynamic processes of technological innovation, skills development, knowledge-intensification and capital accumulation. Linkage development to commodity sectors can open important opportunities in this respect.

By developing backward and forward linkages to the commodity sector, countries can maximise direct and indirect employment creation effects. Upstream and downstream manufacturing and service sectors offer market opportunities to small and large sized businesses, and mostly skilled and semi-skilled labour. Moreover, in the soft commodity sectors, resource-processing industries can stimulate raw material supply, which creates further employment in the agricultural sector.

By integrating forward linkages, African countries can expect to accrue higher export revenues and foreign exchange earnings.

Global value chains (GVCs) refer to the different value-added links, composed of many activities, required to bring a product from conception and design to its delivery to the final consumer and, finally, to its disposal (Kaplinsky and Morris, 2001). GVCs are composed of various stages characterised by varying levels of value addition and, crucially, by different entry barriers. Higher entry barriers, usually created by skills, R&D and technology, allow countries and firms to capture high rents, because there are fewer competitors. Rents are high in activities associated with design, marketing and distribution. Provided their resource-processing industries are internationally competitive and effectively integrated into GVCs, exporting countries can potentially move into higher rent value chain links (Kaplinsky and Morris, 2001; Gereffi et al, 2005).

Industrial development opens up opportunities for positive externalities that are difficult to quantify. African countries can promote a diversification of technological capabilities and of their skills base by developing backward linkage supply firms to the commodity sectors and resource-processing industries. The variety of technological capabilities and skills fostered in linkages also opens up opportunities for lateral migration into other sectors. However, policy makers need to carefully assess the competencies developed within a sector because some have more potential than others for horizontal linkages (Hidalgo et al., 2007). For example, engineering services and manufacturing competencies have a general applicability across a wide variety of sectors. Investment into building broad "engineering skills" is therefore crucial.

Moreover, because the natural resource sector often requires the development of infrastructure to extract and transport the commodities, the potential for linkages is enhanced. This tends to happen more often with high volume mineral resources which usually require roads and rail. As these are developed it becomes easier to develop supplier and resource-processing activities, which in turn increase the economies of scope for further infrastructure development. This positive externality however is rarer in the case of commodities such as oil, gold and diamonds, which promote enclave-type infrastructure (Perkins and Robbins, 2011).

Linkage development also creates the opportunity to maximise positive externalities derived from clusters. When supplier and resource-processing industries are located close to the extraction location, there are agglomeration effects. Efficiency gains for firms located in clusters include gaining access to a pool of specialised labour, and to a specialised network of suppliers. This is particularly important for Africa. By promoting specialised supply networks, buyers accrue advantages in terms of cutting costs, reducing stocks, shortening delivery times, and increasing their flexibility to adjust to new products. The efficiency gains of clusters increase when firms actively cooperate to increase mutual efficiencies. This can take place when firms cooperate to establish training institutes or business organisations, or when they engage in vertical suppliers–buyers cooperation. Clusters also allow governments to catalyse industrial policies, creating economies of scale for investment in skills, technologies, R&D and infrastructure.

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