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

Mike Morris a,*, Judith Fessehaie b

a PRISM, School of Economics, University of Cape Town, South Africa
b Department of Economics and Econometrics, University of Johannesburg, South Africa

Received 4 March 2014; accepted 1 October 2014
Available online 24 November 2014

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.

Keywords: African economies; Commodities; Exports; Industrialisation; Linkages

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...
Table 1

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


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.

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.
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات