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Mining-based growth and productive transformation in the Democratic Republic of Congo: What can an African lion learn from an Asian tiger?

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ABSTRACT

The impressive recent GDP growth performance in DRC has not contributed to significantly reduce the high levels of initial poverty that were inherited from long years of war and mismanagement. Using a CGE-microsimulation model of the DRC, this study assesses the economywide growth and distributional effects of mining-based growth. Unlike other studies, this paper went a step further by comparing the results of mining-led growth to an alternative more broad-based development strategy where DRC develops shared capabilities required to engineer growth in the manufacturing sector. The findings suggest that mining will remain the key driver of DRC exports but not possibly the source of economic growth. The most plausible reason is the existence of the Dutch disease and the structural change that it generates. These structural effects will remain permanent even in the long-run unless the government implements a deliberative industrial policy. Interestingly, the results highlight the possible role of artisanal mining and demand for domestic agricultural and food products in improving the welfare of poor rural households. Finally, the findings show that policies to develop shared capabilities required to engineer growth in the manufacturing sector generate a productive transformation that produces pro-poor effects.

1. Introduction

Two things make East Asian-style economic development important and relevant for Africa, especially for the Democratic Republic of Congo (DRC). First, economic growth in Asia, especially in China, has increased the demand for natural resources and led to the expansion of mining capacity of DRC through Foreign Direct Investment (FDI). In 2008 China sealed a historical deal worth US$ 8.5 billion with DRC to exchange 10.6 million tons of copper and 6,00,000 tons of cobalt against 3215 km of railroads, around 7000 km of roads, 177 hospitals and health centers, two hydroelectric dams, two universities, 5000 accommodation units, and mining related infrastructures.[1]

Second, the experience of East Asia has validated the role of diversification into higher value added products for sustaining economic growth.[2] Therefore, economic diversification has received plenty of attention in the policy discussion and empirical research in the last decades, especially with regard to African economies. The argument in support of this is that concentration of exports to few commodities has increased volatility of export revenue, reducing productivity and employment (Ghosh and Ostry, 1994; Bleaney and Greenaway, 2001). This implies that African countries need to diversify their export structure away from primary products to manufacturing or high productive service in order to build resilience to external shocks (Amin Guitierrez de Pineres and Ferrantino, 2000) and sustain growth (McMillan and Harttgen, 2014).

A second argument in favor of economic diversification lies on the fact that diversification is needed to sustain growth and reduce poverty significantly. This argument is supported by the fact that export diversification toward manufacturing is linked to increased employment, exports, and GDP growth (Agosin, 2007; Herzer and Nowak-Lehmann, 2006; Lederman and Maloney, 2007). Moreover, recent theories on structural change suggest that producing high valued-added products is a condition for sustained growth (Hausmann and Rodrik, 2003; Hausmann and Klinger, 2006; Hausmann et al., 2006). This is because development has been associated with the movement of resource from lower productivity sectors to higher productivity sectors (McMillan et al., 2014; McMillan and Rodrik, 2011).

For instance, East Asian countries have diversified their exports

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[1] This contract created a lot controversy in political and donor spheres, given that DRC accumulated about US$ 12 billion of debt as of 2008. Another possible reason would have been the fear of repeating the pattern of economic disaster that DRC experienced between 1975 and 2000 due to the mismanagement of natural resource revenues and rent-seeking activities.

[2] Traditional models of economic development, such as structural models (Syrquin, 1989; Chenery, 1979) and endogenous growth models (Matsuyama, 1992), show that diversification from primary products to manufactured exports is a condition for sustained growth.

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into labor intensive, export-oriented manufacturing due to its large availability of cheap labor, before starting to climb up the quality ladder. In recent years, these countries are focusing on high-skill content goods such electronics, automotive products, heavy equipment, and consumer durable goods. China, as the leader of manufacturing exports, has been moving away from labor intensive goods and specializing on automobiles, industrial equipment and heavy machinery. In this regard, recent findings have shown that there is a U-shaped relationship between export basket and economic development (Naudé and Rossouw, 2011; Imbs and Wacziarg, 2003; Hesse, 2008). The implication of these finding is that exports diversification yield positive effects only at early stages of development, until the turning points of about US $9000 per capita, after what countries must specialize.

The movement up the quality ladder of China and the factory Asia creates new initial conditions for Africa to industrialize. This new initial conditions for African manufacturing growth are different with the East Asian tigers, who benefited from a rapidly expanding manufacturing sector. African needs to industrialize in an era where the nature of global trade is characterized by a high productive service (manufacture related service) sectors and by high specialization in small tasks due to the fragmentation of production. Nonetheless, the new initial conditions for industrial development offer exploitable possibilities for Africa to industrialize, as African economies still contribute a small proportion of low value added labor intensive activities in the global manufacturing value chain. In this regard, Page (2012) argued that rising costs and demand in Asia can serve as an opportunity for Africa to industrialize. Similarly, UNIDO (2013) pointed out that Africa faces openings in low-tech labor-intensive industries such as agroindustry, textiles, and clothing and apparel.

Despite the increasing natural resource related capital inflows in Africa and the substantial evidence on the role of manufacturing exports in achieving rapid convergence, however, very few studies have investigated the impact of natural resource boom on income distribution in Africa, and there is still a general lack of research on the potential impact of manufacturing led growth in natural resource-rich African countries. Therefore, this study makes a major contribution to research on the importance of diversification away from mining and provides an empirical investigation on how Africa can strategically industrialize, based on its structure and future market prospects. Using a top-down CGE-microsimulation model for the economy of the DRC as a simulation tool, this study proceeds by demonstrating that growth fueled by mining generates structural effects of Dutch disease that constrain sustainable growth. To highlight the transmission mechanism of the Dutch disease, the results of the natural resource led growth are compared with an alternative strategy for growth and diversification, based on a balanced promotion of manufacturing.

I organize the remainder of this paper as follows. I first discuss how the recent economic growth has been high but employment growth weak. Then, I explain the current changes in the economic structure by showing that DRC continues to export old primary commodities to new destinations like China (Section 3). Next, I describe the current state of DRC's manufacturing sector, which presents an enormous potential of productivity growth (Section 4). After that, I present the poverty and inequality profile which is characterized by a slow pace of poverty reduction and persistent income disparity (Section 5). In the last three sections, I first describe the modeling framework and data. Then, I report the findings that mining growth leads to unproductive transformation through the Dutch disease. Finally, the last section concludes.

2. Economic growth in DRC has been high but job growth weak

Mining is the only industry which has attracted foreign investment in the economic development history of DRC. The most significant reason is that DRC has static comparative advantage and endowment in natural resources. As matter of fact, FDI inflows to resource-rich African countries has picked up in the last decade, with DRC experiencing a sharp rise since 2007. In 2012, DRC was among the five top listed countries in Africa for having received more than US$ 3 billion of inward FDI, just behind Nigeria, Mozambique, and South-Africa (UNCTAD 2013b). Inflows to DRC picked up in 2007 by more than 500 percent, amounting to an estimated US$ 1.8 billion which was 18 percent of the GDP (Fig. 1). FDI declined notably in 2009 – even if it was still higher than before 2007 – as a result of the financial crisis, but DRC saw a spectacular rebound of FDI in 2010. As a consequence, DRC stock of inwards FDI increased 3 times compared to its 2000 level.

DRC is a primary commodity exporting country, with its volatile exports being increasingly more concentrated in a handful of products. As a corollary, much of the GDP growth in DRC is driven by the boom in commodity prices and the demand for raw materials as growth depends on the export of primary commodities. Major export products, which represented about 92 percent of total exports in 2012, include copper, crude petroleum, and cobalt. Other export products include wood, rubber, and palm oil, among others. In the 2000s, 90 percent of DRC exports were concentrated in only five products, while the ten largest exported products accounted for 96 percent in the DRC export portfolio.

After a period of relatively unstable and low economic performance, DRC achieved, since 2002, unprecedented levels of economic growth. For the first time in its post-independence economic history, DRC was capable of growing by an average rate of 6 percent and maintained a positive GDP growth for more than 5 years. The mining sector accounted for 32 percent of the Congolese GDP growth between 2001 and 2005. The contribution of mining to GDP growth fell to 12 percent during 2006–2010 due to the commodity price shock that occurred in 2007-08. In 2009, exports of goods and nonfactor services declined by 30 percent. Imports declined by 40 percent as financing dried up. In early February 2009, gross foreign exchange reserves were almost completely exhausted.

Sadly, this recent growth has been jobless, as it did not bring enough structural change capable of creating employment and reducing poverty significantly (AfDB et al. 2013; UNECA, 2013). According to the recent report by UNCTAD (2013a), countries with faster GDP growth achieved this with relatively less employment creation. In addition, employment elasticity declined to about half of the Least Developing Countries (LDCs) in the period 2000–2008, and that elasticity tended to fall more frequently in precisely those

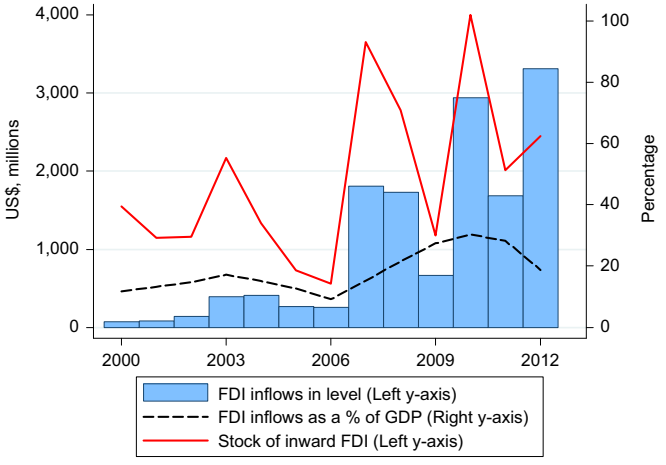

Fig. 1. FDI inflows in DRC. Source: Author's based on UNCTADSTATS (UNCTAD, 2014).