POLICY BRIEF

The FDI-Growth Nexus: A Comparative Analysis of Resource-Rich and Resource-Scarce African Economies

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Abstract

To capture the impact that cross-country resource endowment differences may have on the FDI–growth relationship, this study investigates the FDI–growth nexus in Africa by categorizing the countries as resource-rich and resource-scarce, for the period 2000–2017. Thus, the study is a modest attempt to answer the following main questions: a) Does FDI inflows contribute to economic growth in the host country after controlling for endogeneity? b) Does being natural resource abundant/scarce country alter the FDI–growth nexus? Using a System GMM, both the direct and interaction effects of FDI on growth are investigated in

a comparative framework across resource-rich and resource-scarce African countries. The results show that the effects of FDI on economic growth vary depending on resource richness of countries. While FDI is found to affect growth positively and significantly in resource-scarce African economies, no significant effect of FDI on growth is identified for the resource-rich category.

Introduction

Foreign direct investment (FDI) inflows are important for growth in developing countries mainly for two reasons. First, as they represent one form of capital inflow to host countries, they increase the domestic capital stock which is scarce in these economies (De Mello, 1997; Jude & Levieuge, 2015; Akadiri et al., 2019). Second, they are believed to have positive spillover effects to productivity improvements and economic growth through the introduction of new technologies, human capital development, and export promotion through access to foreign markets (Jude & Levieuge, 2015; Iamsiraroj, 2016; Akadiri & Ajmi, 2020; Nguyen et al., 2021).

Several theoretical arguments have been postulated in the literature on the positive contributions of FDI on economic growth in host countries. The empirical evidence so far on the growth impacts of FDI, however, has not provided a conclusive result. Some studies have reported a positive effect of FDI on economic growth (see, e.g., De Gregorio, 1992; Balasubramanyam et al., 1996; Blomström et al., 1996; Basu et al., 2003; Hansen & Rand, 2006). Others argued that, although FDI is found to have a positive growth impact, the degree to which it positively affects growth depends on the availability of several factors in the recipient country. Such factors include, host country's level of human capital development (De Mello, 1997; Borensztein et al., 1998), initial level of per capita income (Borensztein et al., 1998), the complementarity between FDI and domestic investment (De Mello, 1997), financial system development (Hermes & Lensink, 2003; Alfaro et al., 2004; Durham, 2004), openness and policies towards FDI (Balasubramanyam et al., 1996), the sectoral target of the incoming FDI which in turn is influenced by natural resource abundance in FDI host country (Dutt, 1997; Akinlo, 2004; Ayanwale, 2007), and the quality of institutions (Durham, 2004; Jude & Levieuge, 2015). On the other hand, some other studies have reported either a negative effect or the lack of robust positive effect of FDI on growth (see, e.g., Akinlo, 2004; Carkovic & Levine, 2005; Herzer et al., 2008; Belloumi, 2014).

The FDI–growth relationship has been explored from many aspects. As noted above, several studies have shown that the FDI–growth nexus is conditional upon many other relevant factors; and variations in these factors substantially alter the FDI–growth relationship. This study considers one such factor, i.e., the influence of host countries' natural resource endowment differences on the FDI–growth relationship, which is largely overlooked by most cross-country studies on the FDI–growth nexus in Africa.

The impact of natural resource abundance on economic growth is widely investigated; and studies show that countries that are natural resource-rich tend to grow slower than countries that are natural resource-poor (Sachs & Warner, 2001). In the literature, this phenomenon is known as 'natural resource curse'. Several studies have also explored the role of natural resource abundance in attracting FDI (see, e.g., Aseidu & Lien, 2011; Anyanwu, 2012). However, the question of the impact of being resource-rich or not on the FDI–growth nexus is largely ignored, as most previous cross-country studies pooled all different countries in one sample and overlooked to control for such differences in empirical analysis.

There are several arguments explaining the channels through which natural resource abundance may alter the FDI–growth relationship. First, while resource richness is a factor in attracting FDI (Aseidu, 2006), it is expected to result in lower levels of FDI inflow in the non-resource tradeable sector of the economy. The aggregate level of FDI inflow is expected to fall because of increased resource sector (Aseidu & Lien, 2011). This will result in lowering the levels of capital accumulation in the economy and, ultimately, will result in lower economic growth. Thus, FDI is not expected to have the positive spillovers of job creation and technology transfers because countries that are resource-rich generally channel FDI to the natural resource industries (Aseidu, 2006).

The second channel of natural resource abundance impact on the FDI-–growth relationship is through the capital accumulation in the natural resource sector. Natural resource abundance alters the FDI inflow position of a country in favour of the natural resource sector at the cost of non-resource tradeable sector (Poelhekke & van der Ploeg, 2013). This will result in greater capital accumulation in the natural resource sector and will increase natural resource exports further. Natural resource exports are associated with slower growth rate (Sachs & Warner, 2001), therefore such accumulation of FDI in the resource sector is expected to fuel the natural resource curse further and deny any potential growth-inducing effect of FDI. An increased activity in the resource sector due to accumulation of FDI in this sector will make firms operating in the non-resource tradeable sector less competitive. This, in turn, is expected to deny any potential positive impact of FDI on growth.

Natural resource curse also takes shape by lowering institutional and governance quality of the country which, ultimately, adversely affects economic growth (Sala-i-Martin & Subramanian, 2008; Busse & Gröning, 2013). This also reduces the potential growth-inducing effect of FDI because studies have shown that countries with better institutional quality tend to receive higher FDI-induced economic growth (Jude & Levieuge, 2015; Hayat, 2016). Donato and Mariana (2012) found that the high degree of resource exports is associated with worse government effectiveness and reduced level of competitiveness.

Thus, in an attempt to capture the impact that resource richness may have on the FDI–growth relationship and modestly close the gap in literature noted previously, this study uses an analytical classification of African countries, with each being characterized as natural resource abundant (resource-rich) or natural resource-scarce and explore whether the FDI–growth relationship differs across such groupings. Hence, this study attempts to answer the following main research questions: does FDI inflow contribute to per capita gross domestic product (GDP) growth in the host country after controlling for endogeneity? And more importantly, does being resource-rich/ resource-scarce alter the FDI–-growth nexus in Africa?

This study uses the World Bank's (2019) classification of countries as resource-rich and resource-scarce. Resource-rich countries are those where fuel and mineral exports contribute over 20% to their GDP during the period 2000–2017 for the list of countries). However, resource richness of countries has changed over the sample period in several cases. This has been considered in the analysis by carrying out various robustness checks using alternative sample of countries.

The general pattern of FDI inflows in Africa

Over the past three-and-half decades, FDI inflows to the various regions of the world have grown substantially, as shown in Table 1 (United Nations Conference on Trade and Development [UNCTAD], 2020).

Table 1: Annual inward FDI flows (US$ billion)

Economy	Year			
	2000	2010	2017	2019
World	1359	1372	1868	1430
Developed economies	1121	680	1133	712
Transition economies	6	64	64	47
Developing economies	232	629	670	671
Africa	10	47	53	42
America	80	167	140	151
Asia	142	413	475	476

Source: UNCTAD (2020).

The total world FDI inflows grew significantly from US$13 billion in 1970 to reach an all-time peak of nearly US$2 trillion in 2015 (UNCTAD, 2020). Global FDI inflows fell by 23% in 2019 compared to the amount registered in 2017, but with considerable variation between the various regions and country groups, and stood at US$1.43 trillion in 2019 (UNCTAD, 2020 in Table 1). Like the patterns in the global FDI inflows, FDI flows to developing countries reached their all-time high of US$744 billion in 2015, which represents 39% of the global FDI inflows for the same year (UNCTAD, 2020). In

2019, the inflows of FDI to the developing world stood at US$671 billion. However, the overall increase in the developing economies' FDI inflows is predominantly a developing Asia story. Developing Asia constitutes the lion's share (nearly 67%) of the total FDI flows into developing economies in 2019 (UNCTAD, 2020 in Table 1).

In Africa, FDI inflows amounted to an all-time high of US$58.1 billion in 2008. Following some ups and downs, FDI stood at US$42 billion in 2019, which is 28% and 21% decline from the historic high recorded in 2008 and the amount of FDI inflow registered in 2017, respectively, (UNCTAD, 2020 in Table 1). Such a decline is associated with the weak oil prices and harmful lingering effects from the commodity bust, especially in the larger commodity-exporting African economies (UNCTAD, 2018). The overall surge in the FDI flows to the continent in the last four decades is, to a large extent, related to investments in extractive industries, although these flows have risen in various service sectors of the economy too (UNCTAD, 2020).

The main conclusions that can be made about the recent trends of FDI in Africa are the following. First, although the volume of FDI to Africa has increased significantly over the years, Africa's financial globalization with the rest of the world remains very marginal. For example, by 2019, Africa's total FDI stock stood at US$867 billion, which is not that significant when compared to the US$951 billion FDI that developing Asia received for just two years (2017 and 2019) (UNCTAD, 2020). Second, the distribution of FDI in Africa is extremely skewed. Africa's top five FDI destination countries take more than 50% of the FDI inflows to the continent. Third, the sectoral distribution of FDI to Africa is concentrated in the primary sector—mainly in oil and gas extraction. Fourth, rising intra-African FDI (mainly from South Africa), expansion by emerging-market firms (largely from East Asia) and non-traditional actors (private equity), and growing consumer markets in Africa (particularly the food and beverages industry) are among the most important drivers that shape FDI trends to Africa (UNCTAD, 2016).

Conclusion

Whereas several studies have shown that Africa is endowed with rich natural resources that have historically been the source of attraction to foreign investors (Levine et al., 2000; Hermes & Lensink, 2003; Asiedu, 2006), little has been done to explore the impact of such resource richness on the FDI–growth relationship in the region. This study modestly attempts to contribute to the FDI literature by comparatively investigating the FDI–growth nexus using an analytical classification of African countries into two categories: resource-rich and resource-scarce. In so doing, the study sought to depart from the approach taken by most FDI–growth relationship studies which pool different countries in one sample regardless of FDI host countries natural resource endowment differences that may have an impact in the nature of the FDI–growth relationship. In addition, this study considers the role of institutional and political factors in the

FDI–growth nexus, which oftentimes are overlooked in previous studies. Moreover, the study investigates, not only the direct effects of FDI on growth, but also explores the interaction effects of FDI on economic growth of FDI host countries. The issue of endogeneity is also accounted for in the empirical analysis.

By using a System GMM dynamic panel estimation approach, for the period 2000–2017, the study provides reasonable evidence supporting that, in Africa, the FDI–growth relationship appears to depend on whether analytical emphasis is on the resource-rich or resource-scarce countries. The results suggest that: (1) FDI does not spur economic growth for all countries, and hence FDI is not virtuous by itself for growth; (2) there is a variation in the FDI–growth relationship across the analytical country classification used in this study, and thus natural resource abundance is key in altering the FDI–growth relationship in the region; (3) if countries' heterogeneity based on resource richness are taken into account, the estimated effect of FDI on real GDP per capita growth is positive and significant only for resource-scarce economies; the effects of FDI on growth is insignificant in resource-rich economies, however; (4) the effect of FDI on economic growth is found to be strong in the group of countries where there is better absorptive capacity (in the form of human capital), better quality of institutions, and political stability (embodied in rule of law and property rights, regulatory quality, and political stability); and (5) the effects and sizes of the other determinants of growth are found to be sensitive to whether a country is resource-rich or resource-scarce, suggesting that African countries require multidimensional policy strategies depending on their nature of resource abundance to be able to stimulate both overall growth and FDI-induced growth. Some of the policy options for promoting the positive influence of FDI on growth in Africa are given hereunder.

First, given the finding that the growth effects of FDI vary across countries depending on their natural resource endowment differences, African countries in general need to look carefully and critically at the type of FDI inflows they receive. For example, in resource-rich countries, while countries use their natural resource sector as an instrument to attract FDI into their economies, these countries face the dilemma of experiencing the resource curse in the form of watered down FDI-induced growth. Therefore, resource-rich countries need to try at the same time to attract FDI into the non-resources sector to keep the relative size of the natural resource sector low as to avoid hampering the FDI-induced economic growth. Second, in resource-rich countries, a premium emphasis on improving the quality of institutions and better political stability should be placed to stimulate both overall growth and FDI-induced growth. These should include the formulation and implementation of well-functioning legal institutions that support regulatory quality and rule of law and property rights. Third, measures to ensure political stability in the region should be intensified. For example, conflict and instability, often generated because of natural resources in resource-rich African countries, must be addressed to promote the benefits that can be gained from such resources. Finally, investment in the development of basic and productive infrastructures should be

encouraged both in resource-rich and resource-scarce African economies. The findings on how increasing human capital is associated with growth point to the need for Africa in general to pursue educational policies that harness the stock of such capital.

This study has attempted to comparatively explore the FDI–growth nexus in resource-rich and resource-scarce African economies using dynamic and robust panel estimation methods, but reasonable care should be applied in drawing inferences from the results. This is so considering the inherent limitations of a dynamic estimation technique in a small-sample study like this. As more complete and comprehensive data on FDI and growth determinants become available over time, studies aimed at investigating the FDI–growth nexus in the region are encouraged.

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