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FDI from emerging markets and the productivity gap—An analysis on affiliates of BRICS EMNEs in Europe

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ABSTRACT

This paper analyses differences in productivity of foreign affiliates of emerging market multinationals (EMNEs) from the BRICS against their counterparts from developed countries and domestic MNEs. Based on a large database on foreign affiliates in Europe, results find EMNEs at the bottom of the productivity ladder, with an average productivity gap of around 30 percentage points compared to more established competitors. The paper also shows that this effect is not homogeneously distributed since it varies in terms of sectorial distribution and technology intensity of activities performed, as well as by geographic destination. Moreover, firms' heterogeneity plays a key role given that productivity differentials are largely accounted for the least productive firms, while those at the top of the distribution tend to reach similar performances than their more established competitors, especially in services.

1. Introduction

The literature on the internationalisation strategies of Multinational Enterprises (MNEs) has, to date, been built on the idea that such firms invest abroad on the basis of the possession of a superior set of assets compared to domestic firms. This view was initially supported by studies largely based on the "internalisation" theory (Caves, 1996; Hymer, 1976) and on the so-called Ownership-Location-Internalisation (OLI) paradigm (Dunning, 1993). The latter theory assumes that the decision of firms to invest abroad depends, among other factors, on the ownership of firm-specific resources which can be exploited in foreign markets. Such competitive advantages have been defined as unique capabilities proprietary to the organisation, which can be built upon product or process technology, marketing or distributional skills (Dunning, 1993; Rugman, 2007; Sharma, 2010, 2011, 2013). Given the fact that, for the most part, they are intangible in their very nature, such competitive advantages are more easily transferred through internalisation between parents and affiliates, rather than through arms' length transactions. This characteristic generally makes foreign affiliates more productive and profitable when compared to domestic firms. More recent literature on heterogeneous firms further emphasises the relevance of company-specific endowments in determining their internationalisation strategies. These studies theoretically and empirically support the existence of a productivity sorting among firms, and that the most productive firms are those with foreign affiliates abroad (Helpman, Melitz, & Yeaple, 2004).

A recent body of empirical research has followed with the aim of measuring the productivity premium and the performance of foreign affiliates. To date, this literature has focused on the role of MNEs from developed countries, which, generally speaking, show results consistent with the theory. A number of analyses go somewhat further and note the productivity leadership of US MNEs' affiliates compared to other firms (Bloom, Sadun, & Van Reenen, 2012; Criscuolo & Martin, 2009)[1].

Strikingly, no analysis checks the provisions of existing theories on the group of the Emerging Markets Multinational Enterprises (EMNEs), despite FDI flows from emerging and developing economies have risen steadily over the past decade (and actually accelerated during the financial crisis) and represent now 21 per cent of the global FDI stock (UNCTAD, 2013). The recent rise of EMNEs has attracted a great deal of attention in the literature because of their "unconventional" patterns, characterised by early internationalisation strategies driven by the need to develop,

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[1] Bloom et al. (2012) attribute the US advantage to superior capacity in "IT intensive" industries and better management. Criscuolo and Martin (2009), in contrast, argue that US leadership reflects a tendency of US MNEs to "cherry pick" the best plants in host countries.

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rather than exploit, the firm's resources. Some of the literature on EMNEs has pointed out that, as latecomers in international markets, they often invest abroad with little or no prior experience, lacking internal management capacities and a deep knowledge of Western-style managerial practices and the social and economic aspects of the host country markets.

The unconventional traits of EMNEs usually get mentioned when an investment is directed at a developed country, i.e. where *asset-exploring* strategies are more likely to be undertaken than traditional *asset-exploiting* strategies (Amighini, Rabellotti, & Sanfilippo, 2010; Mathews, 2002). These investments, aimed at sourcing assets not fully developed at home, are changing the traditional direction of knowledge flows (Narula, 2010), giving rise to a "reverse positive spillover" from the affiliate to the parent (Chen, Li, & Shapiro, 2012). Recent case-study based evidence and cross-country regression analyses confirm the relevance of asset-augmenting motivations (Buckley et al., 2007; Luo & Tung, 2007), and highlights that a common objective of these firms is to invest overseas in order to accelerate their catching-up process with the established competitors from advanced countries (Chen et al., 2012).

In the light of the above discussion, this paper aims at measuring differences in Total Factor Productivity (TFP) for a group of foreign affiliates of EMNEs from Brazil, Russia, India, China and South Africa (BRICS) against their counterparts from developed countries as well as domestic-owned MNEs. Empirically, this is done by means of different approaches, including cross-company regressions, quantile analysis and semi-parametric tests, based on propensity score matching, an approach which is particularly useful in this context since it allows the building of a comparison group which reflects the characteristics of EMNEs' affiliates based in Europe. If, as suggested by the literature, the early internationalisation strategies of EMNEs are characterised by a lack of experience in diverse economic and cultural contexts, and it is explicitly driven by asset-exploration strategies, this should translate into significant differences in the performance of their affiliates, especially when they are based in more developed markets. The results of this paper confirm this hypothesis showing that EMNEs' affiliates in Europe are still at the bottom of the productivity ladder, holding a productivity gap around 30 percentage points (p.p.) with more established competitors, a gap which rises up consistently (around 45 p.p.) when they are compared with United States (US) affiliates.

The analysis goes further, however. Exploiting the richness of the data and employing different estimation techniques, it is shown that this effect is not homogeneously distributed and that it varies in terms of sectorial distribution and technology intensity of activities performed, as well as by geographic destination. Moreover, firms' heterogeneity plays a key role given that productivity differentials are largely accounted for the least productive firms, while those at the top of the distribution tend to reach similar performances than their more established competitors, especially in services.

The remaining sections of the paper are structured as follows. Section 1 introduces the research background. Section 2 presents the data used for the analysis and some descriptive evidence of the presence of EMNEs in Europe as well as the methodology adopted to calculate the different indicators of firm-level performance, with particular attention to TFP. The methods adopted for the empirical analysis and the results are discussed in Section 3. Section 4 concludes.

2. Background

So far, the evidence on the productivity premium of MNEs' subsidiaries has been mainly explained by the parent's capacity to transfer their superior assets, especially intangibles, such as better management and organizational techniques or knowledge and technologies (Bloom et al., 2012). Given that most of the existing evidence has been focussing exclusively on subsidiaries from advanced countries' MNEs, this is still an unexplored issue for EMNEs. Most of the existing literature on EMNEs, in fact, has so far been looking at their location choices (Buckley et al., 2007; Carvalho, Duysters, & Costa, 2010) and entry modes (De Beule, Elia, & Piscitello, 2014; Rui & Yip, 2008), putting emphasis on some of their unconventional features. For the purpose of this work, two of these features can contribute to explain the differences in performance of their foreign subsidiaries relative to MNEs from developed countries.

The first is the prevalence of asset-*exploring*, rather than asset-*exploiting*, motivations, especially when they invest in more advanced markets. This is nowadays a stylized fact in the literature, and it is especially true in the case of Mergers and Acquistions (M&As), often used to acquire the strategic resources needed to offset their competitive disadvantages (Luo and Tung, 2007; Nicholson & Salaber, 2013). According to the resource-based view of the firm (Barney, 1991), in fact, existing resources (including acquired ones) translate into the competitive advantage of firms and are therefore a determinant of their performance. One of the key characteristics of EMNEs has to do with the nature of their competitive advantage. While MNEs from developed countries are most likely to possess advantages based on the ownership of key assets, such as technologies, brands and other intellectual properties, which give them an edge on productivity, EMNEs seem to rely much more on advantages related to production capabilities, networks and relationships and their organisational structure (UNCTAD, 2006). In addition, country-specific factors that give rise to idiosyncratic competitive advantages play a role in the internationalisation strategies of these firms (Ramamurti, 2009). Related to this, it has been showed that EMNEs invest abroad to get access to the strategic assets they miss with the final objective of acquiring such resources, generating so-called "reverse" spillovers flowing back from the affiliates to the parents (Chen et al., 2012; Giuliani, Gorgoni, Gunther, & Rabellotti, 2014). This has a direct implication on the affiliates' performance. If the aim of the investors is to acquire assets, reverse spillovers shall contribute to improve the performance of the parent company rather than of the foreign affiliate. But, while there is already some evidence showing how FDI do contribute to enhance the EMNEs' performance back home (Chen et al., 2012; Gubbi, Aulakh, Ray, Sarkar, & Chittoor, 2010), little is still known on what happens at the subsidiary's level. A case study based analysis on EMNEs investments in Europe has brought some direct evidence on their "predatory" behaviour, which result in a negative effect at the level of the subsidiaries (Giuliani et al., 2014). Since, as mentioned, this strategy is more likely to be pursued through M&As, only a few studies have so far looked at the post-acquisition performance of foreign affiliates. The work by Chari, Chen, and Dominguez (2012) shows interestingly that after having been acquired by an EMNE, US firms experience a restructuring resulting in a reduction in their scale, including capital and sales. Buckley, Elia, and Kafouros (2014), on the other hand, look at EMNEs' acquisitions in advanced economies, and show that a negative impact on the performance of the acquired firms is correlated with the level of inexperience of EMNEs.

Indeed, the second feature of EMNEs' internationalization has to do with the difficulties encountered by many EMNEs in their investment process, especially when their affiliates are located in more advanced economies. As latecomers in international markets (Mathews, 2006), EMNEs often invest abroad with