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What does location choice reveal about knowledge-seeking strategies of emerging market multinationals in the EU?

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ABSTRACT

The European Union is one of the largest recipients of outward foreign direct investment from emerging economies. We apply different discrete choice models to analyze the location choice of 4555 emerging market firms in 93 sub-national regions of the European Union. In particular, we test to what extent these firms' location choices are related to agglomeration economies and knowledge externalities, because these have been suggested as potential sources to propel learning and technological catching-up. Our results indicate that emerging market firms' location choices are positively affected by agglomeration economies and knowledge externalities. In addition, we can identify differences in the valuation of various sub-national location factors as well as differences in the substitution pattern between alternative regions for firms originating from emerging markets. The evidence supports the argument that emerging market firms use outward foreign direct investment to augment ownership specific assets.

1. Introduction

The growth of outward foreign direct investment (OFDI) has been phenomenal in the recent era of business globalization. The role of developed-country multinational enterprises (DCMNEs) is generally considered pivotal to this development. Recently, however, emerging-economy multinational enterprises (EEMNEs) have progressively increased their share in the global OFDI. The global share of OFDI stocks from emerging markets rose from 4 percent in 1980 to around 16 percent in 2010 (UNCTAD, 2011). Among world regions, the European Union (EU) is a prime investment destination for EEMNEs.

A number of authors argued that EEMNEs are fundamentally different from their counterparts in developed countries (Child & Rodrigues, 2005; Dunning, 2006; Goldstein, 2007; Lall, 1983; Mathews, 2002; Ramamurti, 2012; Wells, 1983), and their location strategies are peculiar to their countries of origin (Dunning, 1998; Rugman, 2009). In addition to the traditional location determinants, scholars have argued for the importance of knowledge-seeking OFDI motives for the international ventures of EEMNEs (Luo & Tung, 2007; Makino, Lau, & Yeh, 2002; Mathews, 2002, 2006; Rugman, 2009). Specifically, it is argued that EEMNEs lack the strength of ownership advantages (e.g., international experience and technological, managerial and marketing competences) traditionally held by DCMNEs (Mathews, 2002; Ramamurti & Singh, 2009). Accordingly, this relative disadvantageous competitive position may prompt EEMNEs to improve their technological and commercial capabilities by following a learning-based knowledge-seeking OFDI strategies aimed at catching up (Li, 2010; Mathews, 2006; Narula, 2012; Rugman, 2009).

A number of studies scrutinize the relevance of EEMNEs' knowledge-driven OFDI strategies examining mainly determinants related to macro-economic environments at the national level of analysis (see among others Buckley et al., 2007; Makino et al., 2002; Mathews, 2006). However, economic geography teaches us that spatially bound agglomeration economies are crucially important in understanding the spatial distribution of firms (Fujita, Krugman, & Venables, 1999; Krugman, 1991; Venables, 1996). From a theoretical point of view, the technological accumulation approach towards firms' internationalization (Cantwell, 1989, 1995) accommodates these elements. It suggests that ownership advantages are not ex ante characteristics of the

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foreign parents, but are endogenously created by firms' strategic investments into production and technology in foreign locations, which are characterized by spatially bound externalities. Related empirical evidence already established the relevance of agglomeration economies and externalities as crucial factors which explain foreign firms' sub-national location pattern in the EU (Basile, Castellani, & Zanfei, 2008; Cantwell & Piscitello, 2002, 2005; Mariotti, Elia, & Piscitello, 2010).

If the arguments about knowledge-seeking strategies of EEMNEs in advanced economies hold, we would expect that agglomeration economies and spatially bound knowledge spillover should play a significant role in their location choice too, since they offer sources for local learning and capability formation. Currently, we lack evidence to which extent EEMNEs are attracted by agglomeration economies and knowledge externalities, and whether their sub-national location choice differs in that respect from location patterns observed for DCMNEs. Therefore, the main aim of this paper is to generate evidence on these two questions.

We utilize a comprehensive firm-level database pertaining to a total of 32,685 foreign owned affiliates that entered the EU27[1] between 1996 and 2010. From this, 4555 foreign affiliates (14 percent) have direct or indirect ownership by emerging market investors. In line with existing research of foreign firms' location choice (Basile et al., 2008; Chidlow, Salciuviene, & Young, 2009; Crozet, Mayer, & Mucchielli, 2004; Disdier & Mayer, 2004; Fallon & Cook, 2010; Hilbert & Voicu, 2010), we model different sources for agglomeration economies and knowledge externalities including industrial specialization and diversification, urbanization, public science and human resources in science and technology occupations. We also control for other region specific effects such as market size, wage level, infrastructure and geographic distance. Empirically, we employ a utility maximization framework to model location choice in a given set of 93 regions[2] within the EU using conditional-logit, nested logit and mixed logit estimation techniques.

The remainder of the paper proceeds as follows: In the next section, we set out the theoretical framework and develop our hypotheses about the role of technological and knowledge spillovers for the knowledge-seeking OFDI location choice. In Section 3, we provide data information on the extent of OFDI projects in the sub-national regions of the EU. In Section 4, we explain our econometric methodology employed to test our main hypotheses. Section 5 shows and explains main results. We discuss our empirical findings and conclude in the final section.

2. Literature review and research hypotheses

2.1. Theoretical framework

Early international business theory accentuates the role of firms' ex-ante ownership advantages in exploiting foreign markets, essentially by offsetting the costs of foreign entry at host locations (Caves, 1971; Dunning, 1977; Hymer, 1976). From this perspective, ownership advantages constitute a net cost advantage to foreign owned firms over indigenous firms in the relevant local market. However, this generic definition 'implies a comparison that is neither easy to do, nor appropriate where MNEs are embedded in multiple locations and global markets' (Narula, 2012, p. 190). Firms moving abroad are faced not just with competition from host country firms in the same industry, but also with MNEs of other nationalities located in that market. In addition, the lack of perfect information acts as a constraint in estimating the relative value of firm specific advantages to those of incumbent firms of whatever nationality (Narula, 2012).

The assumption of ex-ante ownership advantages as a precondition for internationalization has been challenged by the technological accumulation approach (Cantwell, 1989, 1995). Instead, it suggests that ownership advantages are endogenously created by firms' strategies to invest in multiple locations. This capability based approach links firms' competitiveness to technological accumulation that results from internal economies of scale due to the transfer of innovation within the internal MNE network and external economies associated with the absorption of spatially bound spillover and externalities available at foreign host country locations. Thus, firms may not only *exploit* but also *augment* capabilities at foreign host locations (Cantwell & Piscitello, 2005, 2014; Kuemmerle, 1999).

The knowledge-seeking context of the OFDI has been also emphasized in regard to the distinct ownership characteristics of EEMNEs (Dunning, 2006; Hennart, 2012; Ramamurti, 2009; Rugman, 2009). Scholars have argued that EEMNEs are relatively newer in international business, start from relatively earlier levels of value added activities and lack organizational experience (Clarke, Tamaschke, & Liesch, 2012; Johanson & Vahlne, 2009). It should be noted that this newness is not unique to EEMNEs, since we also find new or 'infant' MNEs originating from developed economies (Narula, 2012). However, it is further suggested that the ownership characteristics of firms are idiosyncratic to their home countries (Dunning, 1998; Ramamurti & Singh, 2009). Such country-specific idiosyncrasies discern the location choices of EEMNEs from their international business peers (Rugman, 2009).

In contrast to conventional multinational firms, EEMNEs generally arise from highly imperfect markets with lower levels of technological and institutional development, and rely mainly on the home country-specific benefits for the earlier stages of their international activities (Kogut, 1985; Rugman, 2009). Many EEMNEs have developed unique capabilities in low-cost, large-scale production and benefit from cheap input factors, preferential access to local resources and government support. Policies and institutions associated with import substitution have played an important role in the formation of their ownership specific assets (Narula, 2012). For example, closed domestic markets meant that DCMNEs seeking access were obliged to offer access to technologies in exchange. Limited competition led to subsequent underinvestment in technological areas and EEMNEs primarily developed products and innovations best suited to their home markets in the early stages of their internationalization (see among others Luo, Zhao, Wang, & Xi, 2011; Zhou, Wu, & Luo, 2007). However, the opportunity to generate rents through pseudo-monopolies created cash rich domestic players from emerging markets that later were able to expand abroad (Narula, 2012).

However, the dependence on home country-specific benefits is only temporarily viable, and firms need to enhance firm-specific ownership assets in order to be globally competitive in new markets (Dunning, 1977). Arguably market reforms in emerging economies have acted as an important push factor for the upgrading of ownership assets, going hand in hand with accelerated internationalization (Cuervo-Cazurra, 2008). For example, increased inward MNE activity led, through linkages and spillovers, to positive effects on the asset portfolio of more competitive emerging market firms. Other domestic firms allied with foreign MNEs to survive in their home markets, while simultaneously upgrading their existing assets to weather the increased competition through greater investment in R&D (Narula, 2012).

[1] In our analysis we use the term EU27 and EU interchangeably. EU27 includes all states have been members of the EU in our period of observation. Therefore, Croatia is not yet considered as an EU states in this analysis.

[2] We refer to 'regions' as sub-national rather than supra-national units as in Rugman and Verbeke (2004, 2005).