



Foreign multinationals and domestic innovation: Intra-industry effects and firm heterogeneity



Riccardo Crescenzi^a, Luisa Gagliardi^{a,b}, Simona Iammarino^{a,*}

^a Department of Geography and Environment, London School of Economics, UK

^b Centre for Regional Economics, Transports and Tourism (CERTET), Bocconi University, Italy

ARTICLE INFO

Article history:

Received 13 June 2014

Received in revised form

20 November 2014

Accepted 19 December 2014

Available online 27 January 2015

JEL classification:

O33

F22

Keywords:

Multinational Enterprises

Innovation

Technological change

Intra-industry knowledge diffusion

Community Innovation Survey

United Kingdom

ABSTRACT

This paper looks at foreign Multinational Enterprises (MNEs) investing in the UK and at their impact on the innovation performance of domestic firms active in their same sector. By employing data on Foreign Direct Investments matched with firm-level information the paper develops a direct measure of capital inflows at a three-digit industry level. In order to capture innovation in both manufacturing and services the paper relies on a broader proxy for firm innovativeness based on the Community Innovation Survey (CIS). The results suggest that domestic firms active in sectors with greater investments by MNEs show a stronger innovative performance. However, the heterogeneity across domestic firms in terms of internationalization of both their market engagement and ownership structure is the main driver of this effect.

© 2014 Elsevier B.V. All rights reserved.

1. Introduction

Over the last few decades the importance of Multinational Enterprises (MNEs) in the global economy has grown substantially, stimulating the attention of scholars and policy makers. MNEs are amongst the main ‘creators’ of new technology – see among other Cantwell (1994) and Cantwell and Iammarino (2000) – since they represent the largest source of technology generation, transfer and diffusion in the world economy (Iammarino and McCann, 2013).

Countries increasingly compete to attract MNEs on the ground of the potential benefits that may stem from their presence and activities in the host economies. Scholars have long debated the rationale of these policies by investigating the effects of MNE investments on the recipient economies. However, the empirical evidence on the impact of MNEs on local firms in advanced economies is still mixed and inconclusive (see, for example, the reviews in Rodrik, 1999 and Smeets, 2008).

The aim of this paper is to provide new empirical evidence on the impact of MNE investments in the UK. By building on a novel database that merges data on foreign direct investments (FDI) with firm-level information, we test whether the innovation capacity of domestic firms operating in the same industrial sector as foreign enterprises benefits from their presence and activities. The paper contributes to the existing literature in a number of ways. First, we look at the impact of MNEs on the probability that domestic firms carry out innovation by employing a measure of innovativeness that accounts also for innovation in services. Previous studies have mainly focused on productivity or patent outputs, failing to grasp the full impact on recipient economies – such as the UK – characterized by a strong relevance of services. Second, we measure the impact of MNEs also in terms of the magnitude of their investments, rather than only on the basis of their mere physical presence as in the majority of existing studies. Third, and more importantly, we shed light on how the heterogeneous characteristics of domestic firms shape their capability to benefit from MNE activities. In so doing the paper aims to contribute to the (still) scant literature modelling spillover mechanisms as two-way relationships rather than as unidirectional flows (Barnard and Cantwell, 2007).

* Corresponding author.

E-mail address: S.lammarino@lse.ac.uk (S. Iammarino).

A large body of existing literature has looked at the impact of MNEs with inconclusive findings, in particular with respect to intra-industry effects (Harris and Robinson, 2003). Our analysis suggests that foreign firms are indeed carriers of positive externalities in the recipient industries, but their effect varies significantly across typologies of domestic firms. We find that the positive impact of MNE investments is particularly strong for less internationalized firms, that is those serving regional and national markets (as opposed to firms active also on international markets). Consistently, domestic firms that are part of multinational groups are less affected by the positive externalities originating from other MNEs: such firms have arguably already access to capabilities and infrastructure channelling the diffusion of global knowledge.

The paper is organized as follows: the next paragraph briefly reviews the recent empirical literature on the impact of MNE investments with the aim of identifying some key gaps in the existing studies. Sections 3 and 4 discuss respectively the data and the methodological approach adopted to estimate the effect of the activities carried out by foreign enterprises in the recipient industrial sectors. Section 5 presents the results and robustness checks, while Section 6 concludes with some remarks on policy implications and further steps for future research.

2. Background literature

There is a wide empirical literature on the impact of MNE investments on the economic performance of domestic firms, investigating the existence of positive externalities associated to the presence of foreign enterprises. The motivation behind this expectation arises from the long-standing assumption that MNEs possess more advanced technology due to their access to superior knowledge (Caves, 1974; Dunning, 1980; Cantwell, 1989).

The view that attracting foreign subsidiaries of MNEs will generate advantages for the host economies builds on the belief that positive pecuniary and knowledge externalities arise from foreign activities and spread out to domestic firms. The benefits of MNE presence for host locations have been broadly classified into two types: productivity-enhancing externalities and market access externalities. The former kind of effect is the result of tougher competition following foreign entry, which may create incentives for local firms to introduce new technologies and organizational practices in order to compete with the new entrants. In addition, MNEs make it possible for local firms to access new technologies and skills by means of backward and forward linkages, as well as personnel exchanges, R&D collaborations, and a number of other knowledge channels. Market access externalities come from the experience and knowledge that MNEs have of global and geographically distant markets, international R&D, commercialization and marketing, distribution networks, institutional diversity and political and lobbying power. As a result of their own operations, MNEs may therefore pave the way for local firms with relatively limited capabilities to enter the same export markets, either because of the infrastructure created or because of the diffusion of knowledge and information (McCann and Acs, 2011). These positive effects have found broad support in recent empirical analyses, suggesting that foreign owned enterprises tend to be more productive, invest more in R&D and generate more knowledge (Castellani and Zanfei, 2007a; Dicken, 2007; Criscuolo et al., 2010) that can potentially be transmitted to or spill over into domestic firms.

A number of alternative mechanisms mediate the impact of MNEs on domestic firms and the existing literature has identified intra-industry and inter-industry channels. The former category encompasses demonstration, competition and labour market effects. Demonstration effects rely on the benefits arising from the exposure of domestic firms to the superior technology of MNEs

subsidiaries (Girma et al., 2001; Gorg and Greenaway, 2004; Crespo and Fontoura, 2007; Smeets, 2008). Competition effects are triggered by the entry of foreign firms that push domestic firms to use available resources and existing technology more efficiently (Blomstrom and Lipsey, 1989; Wang and Blomstrom, 1992). Finally, labour market effects are mainly mediated by inter-firm labour and human capital mobility within the sector (Driffield and Taylor, 2000; Fosfuri et al., 2001; Gorg and Strobl, 2005). Inter-industry interactions between foreign and domestic enterprises are instead reliant mainly upon the existence of backward and forward linkages. Firms operating in different vertically connected industrial sectors are more likely to benefit from positive externalities (Ernst and Kim, 2002; Javorcik, 2004; Crespo and Fontoura, 2007; Javorcik and Spatareanu, 2008, 2009; Blalock and Gertler, 2008).

Despite the economic rationale underlying the likelihood of positive effects of MNEs activities on domestic firms, a number of critical views have emerged in the empirical literature. In the case of intra-industry dynamics perverse effects may derive from problems for domestic firms in absorbing of the latest technologies (Castellani and Zanfei, 2002), market-stealing effects by MNE subsidiaries (Aitken and Harrison, 1999; Crespo et al., 2009), and limited labour mobility due to higher wages paid by foreign enterprises. More univocal are instead the predictions about inter-industry interactions: except for some caveats regarding the net effect on upstream sectors (Javorcik, 2004; Bitzer et al., 2008), general agreement emerges on the central role of backward linkages. The positive impact of foreign enterprises seems in fact to be more pronounced in related industries rather than within the highly competitive industry in which MNEs operate (Harris and Robinson, 2003; Harris and Moffat, 2013).

The lack of conclusive results on the impact of foreign enterprises in particular in the intra-industry case has stimulated further research. In this context, the heterogeneity across foreign enterprises with respect to the nature and characteristics of their internationalization strategies has been regarded as a key determinant of the lack of clear-cut results (Greenaway and Kneller, 2007). The literature has increasingly looked at MNEs as firm-specific portfolios of locational attributes pursuing knowledge augmentation strategies that are aimed at sourcing strategic resources in recipient economies (Chen and Chen, 1998; Luo and Tung, 2007; Crescenzi et al., 2014). Thus, MNEs differ widely in terms of accumulation of technological capabilities due to endogenous choices to invest in knowledge (Castellani and Zanfei, 2007b) as well as in their attitude towards cooperation and interest to access external knowledge to enrich internal competencies (Cantwell and Iammarino, 2000).

In a complementary perspective, technological learning and the development of innovative capabilities – and therefore the impact of MNEs on host economies, particularly in advanced industrial systems – are strongly dependent on the characteristics of domestic actors and their environment, that are highly diversified within national boundaries. As a consequence, the potential heterogeneity across domestic firms also deserves a thorough investigation. Some contributions in this direction have suggested that the likelihood of benefitting from external knowledge is inversely related to the cost of its acquisition (Harris and Robinson, 2003), implying a key role of firms' absorptive capacities (Borensztein et al., 1998; Blomstrom and Kokko, 2001; Glass and Saggi, 2002; Liu and Buck, 2007).

This view, despite highly reasonable, seems to provide only a partial explanation of the recent efforts to model externality mechanisms as bidirectional exchanges. It remains debatable whether firm-specific conditions such as the possession of superior knowledge by MNEs and the existence of adequate absorptive capacity by domestic firms, are both necessary and sufficient conditions to determine the emergence and effectiveness of positive externalities. Even if knowledge originates elsewhere or is carried by external actors, the receiving node has to play an active role to

Download English Version:

<https://daneshyari.com/en/article/10483128>

Download Persian Version:

<https://daneshyari.com/article/10483128>

[Daneshyari.com](https://daneshyari.com)