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Industrial Districts, Core Cities And Ownership Strategy Of Multinational Firms Investing In Italy

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INDUSTRIAL DISTRICTS, CORE CITIES AND OWNERSHIP STRATEGY OF MULTINATIONAL FIRMS INVESTING IN ITALY

ABSTRACT

This paper assesses the influence of spatial heterogeneity on the choice of entry modes by multinational enterprises (MNEs). We claim that the location of the target firm influences the choice of partial ownership, i.e., an MNE's choice to maintain a local partner. MNEs normally execute partial acquisitions to reduce their liability of foreignness and to preserve their target's inherent competencies, particularly in highly innovative and internationally competitive sectors. However, this phenomenon occurs less frequently if target firms are located in areas that are characterized by relevant externalities, such as core cities and industrial districts. In particular, core cities allow foreign MNEs to access not only a variety of information and knowledge, but also other externalities that are associated with international interconnectedness; industrial districts provide MNEs with easier access to industry-specific agglomeration economies (a local pool of skilled labor, local input-output linkages, and local knowledge spillovers). Thus, both types of locations reduce an MNE's need to maintain a local partner, although these locations provide substitutes for different aspects of the target firm's competences. Empirical evidence from foreign acquisitions of local manufacturing firms that occurred in Italy during the 2001-2010 period confirms these expectations.

Keywords: local externalities, agglomeration economies, ownership choice, foreign acquisitions, multinational enterprises

INTRODUCTION

Literature has emphasized the role of spatial heterogeneity in attracting multinational enterprises (MNEs) (McCann and Mudambi 2005). In fact, the geographical space may be a source of information and knowledge spillovers that strongly impact the location and agglomeration processes of MNEs (Alcácer and Chung 2007; Mariotti, Piscitello, and Elia 2010). In principle, the same rationale could be applied to any interplay between an MNE and its territory (Dicken and Malmberg 2001); however, little is known about the influence of spatial features on an MNE's choice of entry modes in a foreign country.

Within this context, the present paper seeks to investigate the influence of both characteristics of the local environment and relevant externalities on foreign acquisitions. In particular, we model the MNE choice to either maintain a local partner or conduct a complete acquisition of the target firm.

Previous research (e.g., Phene, Tallman, and Almeida 2012) has suggested that acquisitions are increasingly used as a way to access complementary information and knowledge that can enable the acquirer to engage in effective exploration. This phenomenon is particularly prevalent in sectors that are more likely to provide the acquirer with greater opportunities to learn, i.e., sectors characterized by high knowledge intensiveness and/or a relevant international competitive advantage. Accordingly, MNEs often prefer to engage in partial acquisitions instead of full acquisitions not only to preserve and absorb the distinctive competences of the foreign target firm, but also to reduce the uncertainty and risks that are produced by the MNE's liability of foreignness (Zaheer 1995). However, we claim that this scenario is likely to change if the characteristics of the local context are appropriately considered. If the context of an acquisition presents local externalities that allow a foreign acquirer to easily and freely access general and/or business-specific information and knowledge, then a foreign MNE's need to maintain a local partner should decrease. In fact, these types of externalities should allow foreign MNEs to reduce their uncertainty and risk and minimize their liability of foreignness. In particular, industrial districts, i.e., areas that are characterized by an industrial atmosphere that includes collective information and knowledge that is specific to the business, may allow the MNE to benefit from agglomeration economies that relate to collective learning, labor market pooling, and local buzz. Similarly, core cities facilitate the circulation of information and the movement of capital, labor, and a va-

riety of other tangible and intangible resources; moreover, these cities offer access to infrastructural hubs, highly educated employees and institutional networks and thus facilitate agglomeration and the creation of knowledge externalities.

To provide evidence for our conceptual framework, we analyze foreign acquisitions of local manufacturing firms that occurred in Italy during the 2001-2010 period. In particular, we investigate the role of different local externalities in influencing the ownership choices of the MNEs that engaged in these acquisitions by considering the nature/characteristics of the geographical contexts of the target firms of these MNEs. The results from our econometric analysis confirm that after industry- and firm-specific heterogeneity is considered, MNEs that acquire firms that are located in industrial districts or core cities are less likely to maintain their local partners.

The remainder of this paper is organized as follows. The next section provides our conceptual framework and testable hypotheses. The third section presents the data and descriptive statistics of this study, and the econometric models and variables that are employed in this investigation are described in the fourth section. The fifth section illustrates and discusses the study results, and the final section of this manuscript summarizes the main contributions and limitations of the paper.

CONCEPTUAL BACKGROUND

The ownership choice in acquisitions by multinational enterprises

MNEs are increasingly seeking to both augment and exploit their global competitive advantages. In particular, foreign entry through the acquisition of local firms has increasingly been depicted as a means through which foreign MNEs can access complementary resources and acquire information and knowledge that may otherwise be difficult to obtain (Meyer, Wright, and Pruthi 2009; Phene, Tallman, and Almeida 2012). Local firms can provide general information and knowledge that encompasses a broad array of the characteristics of the local context, including political regulations, legal restrictions, and the social norms for business transactions (North 1990); this information may be necessary to reduce the liability of foreignness for an acquiring MNE (Tse, Pan, and Au 1997). Local firms also provide acquiring MNEs with business-

specific information and knowledge with respect to both their distinctive competences and their business networks and relationships.

Given the aforementioned context, the extant literature has suggested several arguments to explain an MNE's decision to either fully take over a local target firm or maintain its local partner. According to the resource-based view (RBV) of the firm (e.g., Barney, 1991), the full acquisition of a local target firm allows foreign investors to acquire and access complex and organizationally embedded knowledge (Barkema and Vermeulen 1998). Similarly, transaction cost economics (TCE) (Williamson 1985) suggests that a higher level of control is needed to reduce the transaction costs that are involved in cross-border acquisitions (Madhok 1997). Thus, full acquisitions allow foreign entrants complete access to and ownership and control of the resources of a local firm (Meyer, Wright, and Pruthi 2009). However, various theoretical explanations have recently been proposed to justify the fact that MNEs frequently opt for partial acquisitions instead of full acquisitions (for a survey of these explanations, see Chari and Chang 2009). In this study, we rely on the increasingly convergent stream of literature that has been inspired by the RBV and new property rights theory of the firm; in this theory, the firm is regarded as a bundle of resources and capabilities that is held together by a nexus of incomplete contracts (Kim and Mahoney 2010). Relationships that are governed by incomplete contracts frequently concern resources and capabilities that are either difficult to contractually specify (such as the tacit knowledge and expertise that are embedded in human capital and firms' organizational routines) or highly cospecialized (Teece 1996) in ways that involve high risks of economic holdups (Williamson 1985). According to this perspective, owner-entrepreneurs and shareholders may enjoy residual claimant status, but these entrepreneurs and shareholders will find it difficult to appropriate the overall economic rent that is generated by human capital if a convergence of interests with managers and other key employees is absent. In fact, an employee's incentive to specialize to a firm's assets lies in his or her opportunity to become a valuable critical human resource for the firm and thereby extract a portion of the rent from the firm's stipulated contracts (Rajan and Zingales 1998). A firm can create these incentives by providing employees with access to the proprietary critical complementarities and resources that they require to develop their specific competencies and skills. However, this "corporate equilibrium" is quite precarious, and a takeover could break up the original owner-employee coalition

and produce ruinous effects on this equilibrium. If this phenomenon occurs, then from the acquirer's perspective, a substantial portion of the distinctive core competences that are embodied in the target firm could be dispersed or even destroyed.

This disruptive process is more likely to occur during full acquisitions than during partial acquisitions because full acquisitions entail more radical changes than partial acquisitions. In full acquisitions, the previous owners of a company typically leave the firm or dramatically modify their status. For instance, these prior owners may become employed executives; this status shift would dilute these individuals' incentives to make firm-specific investments and perhaps nurture the opportunistic withholding of crucial information and tacit knowledge. Changes of ownership and organizational mergers often expose the target firm's executives to increased levels of competition from their peers in the acquiring company because the integration between the acquiring and target firms typically produces redundancies and the intra-firm mobility of employees. Thus, these executives may perceive the existence of an atmosphere of long-term instability and therefore choose to either retain their existing competences and underinvest in new competences or abandon the firm if the expected reduction in the value of their firm-specific investments is greater than the costs of switching firms. A vast body of literature has confirmed that turnover rates in acquired top management teams are significantly higher than normal turnover rates and that the exit of key managers after an acquisition involves the loss of not only critical knowledge assets, but also links and relationships to relevant business networks; these losses lower the performance of the target firm (Berg 2001; Cannella and Hambrick 1993).

This (unintentional) disruption of value in the target firm is likely to be amplified if the acquirer is a foreign MNE. Empirical research has indicated that turnover rates in firms that are acquired by MNEs are significantly higher than are those in firms that are acquired by other domestic firms; moreover, studies have revealed that foreignness is an important determinant of negative perceptions of a target firm's executives (Krug and Hegarty 1997). The integration of a target firm into an international network of subsidiaries increases an MNE's costs of coordination and contributes to the complexities surrounding the management and control of units that are located in foreign markets with distinct cultures, institutions, and competitive environments (Bartlett and Ghoshal 1989). To overcome these difficulties, foreign acquirers often impose their systems and practices on their target firms with little regard for the negative consequences of their actions on the preexisting corporate equilibria of these target firms (Jemison and Sitkin 1986).

Along this line of reasoning, the acquirer may prefer to adopt relatively subtle ownership modes that favor the post-entry learning process with respect to the target firm's business and its country-specific information, skills, routines, technologies, and organizational culture (e.g., Ahujia and Katila 2001; Piscitello 2004; Cassiman, Colombo, Garrone, and Veugelers 2005). This approach may avoid a reduction in the target firm's value and the loss of the target firm's managers and specialized employees after the acquisition (Dyer, Kale, and Singh 2004). In particular, co-ownerships may limit knowledge disruptions because relative to full acquisitions, the establishment of co-ownerships may involve less radical changes in resource and contract bundles and less invasive integration processes (Haspeslagh and Jemison 1991). Furthermore, partial acquisitions create a "hostage effect" (Williamson 1983) that reduces the information costs with respect to the ex-ante screening of targets and facilitates the ex-post enforcement of contracts by deterring opportunistic behaviors by sellers. In fact, the willingness of sellers to accept partial offers an ex-ante signal regarding the quality of their firms, and the remaining equity that is retained by these sellers constitutes a bond that restrains these sellers from committing ex post opportunism (Chen and Hennart 2004).

Thus, an MNE that wishes to avoid the dispersion of the collected information and knowledge that resides in target firms and the economic and social networks is more likely to engage in a partial acquisition in which the MNE maintains co-ownership with a local partner. However, this conceptual framework may be enriched by considering the role of spatial heterogeneity in the host country (i.e., the characteristics of the locations in which the target firms are located) and the more frequently investigated role of industry and firm heterogeneity in the learning processes that are associated with acquisitions. In particular, we claim that an MNE's need to maintain a local partner decreases if the local context of the target firm may (at least) partially substitute for the information, knowledge and relational capital that are embedded in the target firm. Indeed, as TCE and the RVB have suggested, under conditions of generous local spillovers/agglomeration economies, the full control of target firms allows MNEs to reduce their transaction costs and avoid both organizational complexities and difficulties in acquiring access to shared resources.

The role of spatial heterogeneity

Geographical space may present local externalities; the nature and extent of these externalities influence MNEs' acquisition behaviors and their ownership decisions. In particular, we focus on externalities that benefit firms that are located in industrial districts or core cities.

Industrial districts. An industrial district can be defined as “a socio-territorial entity which is characterized by the active co-existence of an open community of people and a segmented population of firms. Because the community of people and the population of firms live in the same geographical area, they will criss-cross one another. Production activities and daily life overlap.” (Becattini 1991, p. 111). The related cluster of firms in industrial districts refers to “a geographically proximate group of inter-connected firms and associated institutions in a particular field, linked by commonalities and complementarities” (Porter 2000, p.16). The district is a privileged place for the accumulation of social capital (Lorenzen 2007) that results from the multiple interactions among economic agents that belong to a local community with shared values and institutions. This social capital underlies the advantages of the co-location of firms. In particular, these advantages may be expressed in terms of the trinity of agglomeration economies that were originally suggested by Marshall (1920): a local pool of skilled labor, local input-output linkages, and local knowledge spillovers.

The theory of industrial districts provides a specific representation of the Marshallian metaphor of “knowledge in the air”, relating this metaphor to the concept of embeddedness that was proposed by Granovetter (1985) (e.g., Crewe 1996; Harrison 1991). The economic coordination that appears to be organized by impersonal calculative transactions in the neoclassical paradigm is transformed in the district model into an “embedded” transaction that is influenced by social ties and different variations of self-built trust, reputation, solidarity, norms, habits and co-evolved rules of conduct (Belussi and Sedita 2010). An industrial district incorporates all three of the critical dimensions of embeddedness (Hess 2004): (i) societal embeddedness, which refers to the historical, cultural and institutional attributes of the national and sub-national contexts in which a given economic actor is immersed; (ii) network embeddedness, which refers to the composition and structure of the network relations of economic actors; and (iii) territorial embeddedness, which refers to how economic actors are “anchored” in particular places at spatial scales that range from the national level to the local level.

By combining this theoretical perspective with the RBV, the competences of a firm that is located within an industrial district can be decomposed into three interrelated and mutually reinforcing components (Camisón 2004, p. 2230): (i) personal competences, i.e., the skills that are possessed by an individual or group of individuals within the organization, which may be potentially migratory and largely tacit in nature; (ii) corporate competences, which are combinations of knowledge and skills that are embedded in the procedures and organizational routines of the firm (in contrast to individual competences, corporate competences tend to permeate an organization in a manner that is largely independent from the individual and therefore remain within an organization after individuals or particular groups leave the organization in question); and (iii) shared competences, which include the assets of knowledge, information, and learning that are deposited in the district and may be regarded as an external space with resources and capabilities that the firm and other members of the district can freely access. In particular, shared competences consist of district-specific tacit knowledge that is inserted into the processes, networks, and institutions that exist within the district in question. These competences are not accessible to firms outside the district because these outside firms are not embedded in the community of people and networks within the district; this external status restricts the access of these firms to the common space for resources and capabilities. The combination of the three aforementioned components determines the competitive advantages and performances of firms within a particular industrial district.

The idea that embeddedness influences firms' competitive behaviors and performance levels is widely acknowledged in both the network literature (e.g., Uzzi 1996; Coleman 1988) and strategic management literature (e.g., Gnyawali, He, and Madhavan 2006; Zaheer and Bell 2005)¹. However, the notion of shared competences stresses the fundamental difference between districtual and non-districtual firms. For non-districtual firms, the external knowledge base is territorially dispersed; thus,

¹ A growing stream of literature has also stressed the risk of over-embeddedness (e.g., Bathelt, Malmberg, and Maskell 2004; Boschma 2005); in other words, an overly extensive reliance on embeddedness can generate lock-in effects and mitigate a firm's performance. Clearly, this issue is not a challenge for MNEs, which are not susceptible to over-embeddedness because they feature internationally open structures that combine cluster-internal relationships with external pipelines (Heidenreich 2012; Moodysson 2008; Trippel, Todtling, and Lengauer 2009).

managers and skilled employees have the pivotal role of using their relational-specific investments to create and maintain necessary ties and linkages to other economic agents and institutions. The non-contractability and inseparability of these human investments from the identities of insiders imply that a firm must strategically retain key employees not only to access the personal competences of these employees, but also to maintain and further develop the firm's societal and network embeddedness and absorptive capacity.

In contrast, districtual firms are part of a business community that shares localized competences to a significant degree, and the organizational routines and procedures of these firms are deeply rooted in local social networks. The role of individuals as catalysts for embedded social networks is not particularly important because the mobility of people who share experiences, capabilities and linkages is higher in the district than in the general economy and because a flexible labor market exists to provide substitutes for insider employees (Power and Lundmark 2004). Instead of destroying bridging ties and linkages, labor flows within the district provide a major method of locally creating a knowledge base and diffusing competences among firms in the business community of interest².

A full acquisition of a firm endangers the different types of competences to different degrees. Based on our conceptual framework, a full acquisition will involve a high risk of losing certain key personal competences. In addition, aspects of corporate competences can be jeopardized if an acquisition is accompanied by the process of restructuring a target firm's existing activities and strongly integrating the target firm in the parent organization. However, with respect to district firms, the risk to lose shared competences will be definitely lower, as the acquirer can maintain and further develop preexisting networks and relationships with institutions, allowing the acquirer to absorb the freely circulating externalities that can be regarded as an essential source of the target firm's competitive advantages³. Another important consideration is that in an ac-

² Breschi and Lissoni (2009) outline the fundamental contribution of mobile skilled workers to the diffusion of knowledge across firms and within cities or regions. However, these researchers found that the mobility of certain individuals, such as technologists and inventors, is bounded in space; thus, organizations must be located within industrial clusters to benefit from the knowledge that is possessed by these individuals and embedded in their network ties. See also Eriksson (2011).

³ Evidence from Italian districts confirms that the strategy by MNEs that acquire districtual firms is to become deeply immersed in the industrial atmosphere of the district, to capture novelties and market changes,

quisition that targets a firm within an industrial district, sufficient resources exist to compensate for the loss of personal competences in the target firm; in particular, the acquiring firm can take advantage of the aforementioned intra-district mobility of individuals and can locally poach managers, technicians and skilled workers from the industrial district by offering lucrative salaries and favorable labor conditions (Combes and Duranton 2006)⁴. In other words, the quality of the target firm's competences getting lost in a full acquisition are higher when the firm is not located within an industrial district because non-districtual target firms rely only on personal and corporate competences and because external substitutes for these competences are rare or nonexistent. Thus, the buyer may engage in a partial acquisition because this purchasing firm may have a higher interest in preserving the firm-specific competences of the target company. In contrast, in an industrial district, shared competences and other local externalities provide advantages that exist both within the target firm and in this firm's environment; these advantages function both as complements and as substitutes for other firm-specific competences. Thus, for acquisitions involving target firms that are in an industrial district, a full acquisition can be an effective strategy to optimize the trade-off between ensuring full access to and control of the firm-specific assets of the target firm and risking the loss of a portion of the personal and corporate competences of this target firm; this potential loss is counterbalanced by the opportunity to access the competences and resources of the target firm's industrial district.

Core cities. According to economic geography studies, metropolitan cities host the bulk of foreign MNEs (McCann and Acs 2011). Moreover, dense urban areas are the primary loci of M&A activities (Rodríguez-Pose and Zademach 2003), which have produced the greatest share of global FDI flows, particularly in developed economies (UNCTAD 2011). In each nation, these activities and FDI flows are most frequently observed in a selected group of *core cities*, which have also been referred to as "gateway" cities (Drennan

and to absorb the contextual knowledge that is produced locally (e.g., Belussi and Asheim, 2010; Biggiero, 2002).

⁴ The poaching strategy is particularly suitable for MNEs because of these firms' superior performance and oligopolistic rents. Empirical studies provide strong evidence that a wage premium exists in foreign-owned firms. In particular, after controlling for firm-specific characteristics, foreign firms pay higher wages than domestic firms in both developed and developing nations (Lipsey and Sjöholm 2005).

1992; Johnston 1982; Short, Breitbach, Buckman and Essex 2000; Taylor 2004). This terminology has entered the globalization literature; in particular, the “core cities” term generally refers to cities that are the entry points to their countries and serve as links between the national economy and the wider world. In other words, core cities are the nodes of the worldwide city network in which specialized knowledge regarding abilities and possibilities in the local market intersect with global flows of information and ideas. These cities give rise to highly concentrated pools of knowledge and knowledge-creation networks through which flows of information, ideas, best practices, and personnel circulate at a global level. Core cities inherently possess outward-facing perspectives; because of their sophisticated communications networks, these cities both absorb and circulate information from around the world.

The emergence of core cities relies on not only urban agglomeration economies that are based on sharing, matching and learning mechanisms with respect to knowledge, labor and goods (Duranton and Puga 2004), but also global interconnectivity or “archipelago economies” and local concentrations of economic and political decision-making power (Rodríguez-Pose and Zademach 2006). A related consequence of this structure of core cities is that the subsidiaries of MNEs that are located in core cities benefit from productivity advantages compared to MNE subsidiaries that are located in more peripheral areas of a host country (for a survey and summary of the existing findings regarding this topic, see Melo, Graham, and Noland 2009).

Agglomeration economies that originate and flourish in core cities are important generators of variety in the form of cross-industry spillovers, recombinant innovations, diversified labor markets and the inter-mobility of personnel. Urban density has historically “helped solve the risk of insufficient variety, as it brings with it diverse labor markets, diverse networks of firms and colleagues, concentrations of diverse types of information on the latest developments, and so on” (Sassen 2009, p. 57). Core cities offer access to infrastructural hubs, highly educated employees and institutional networks, and these cities can and do play a critical role in the creation of information externalities by allowing for tremendous movements of capital, labor, and other tangible and intangible resources (Glaeser, Kallal, Scheinkman, and Shleifer 1992). Core cities benefit from local “buzz” (Storper and Venables 2006), i.e., the interactive information and communication ecology that is created by face-to-face contacts and by the co-presence and co-location of people, diversified firms, services, government entities and international agencies. Unsurprisingly, the most globalized cities also feature the greatest quantities of localized buzz because the highest levels of international business inter-

actions by MNEs require a combination of close and distant interactions to function efficiently, i.e., these MNEs must insert themselves into locally centered business and government networks and must also obtain access to global pipelines (Bathelt, Malmberg, and Maskell 2004).

In summary, a distinctive feature of core cities is that they provide a spatially concentrated knowledge base that includes information that is relevant to many different industries and activities, i.e., “related variety” (Frenken, Van Oort, and Verburg, 2007) rather than simply variety *per se*; thus, these cities offer genuine and fungible externalities to firms in a wide range of sectors⁵.

In this context, MNE subsidiaries that are located in core cities are important points for the accumulation of knowledge and general information regarding the host country’s economy and its institutional environment; this information circulates in the internal network of MNEs and is partly transmitted through business relationships between MNEs and other international investors. These MNE subsidiaries can become a fundamental part of the core city, virtuously nurturing the local knowledge base and attracting new investments by both foreign and domestic firms.

Thus, the spatial externalities that MNEs benefit from if they are located in a core city reduce their need to completely preserve the information and competencies that are embedded in the routines, human resources and business networks of the target firm. Furthermore, the readily accessible nature of core cities facilitates frequent exchanges of personnel and managerial control among organizations; thus, full acquisitions may be selected more frequently by MNEs in core cities than in more peripheral regions.

In summary, locations in both industrial districts and core cities reduce an MNE’s need to maintain a local partner in a host country. However, an industrial district primarily provides access to industry-specific

⁵ We refer to the emerging literature that extends beyond the traditional debate regarding MAR (Marshall-Arrow-Romer) *versus* Jacobs externalities (Boschma and Frenken 2011). The relevant studies argue that related variety in a region fosters effective interactive learning and innovation but that variety *per se* may not produce these effects because variety in general also includes unrelated variety, i.e., portfolios of activities that do not share substantial complementary competences (e.g., Boschma and Iammarino 2009; Bishop and Gripiaios 2010; Cainelli and Iacobucci 2012).

knowledge and skills; thus, the effect of an industrial district on the MNE's choice of acquisition options is restricted to acquisitions of firms that operate within the cluster of activities in which the district in question is specialized. In contrast, a core city provides access to not only general information about a nation's business and institutional environment, but also more diversified and cross-fertilizing competences (i.e., related variety), which produce pervasive effects across various sectors. Thus, our hypotheses may be stated as follows:

Hypothesis 1: The likelihood that an MNE will engage in a partial acquisition instead of a full acquisition will decrease if the target firm is located in an industrial district that is specialized in the same industry of the target firm.

Hypothesis 2: The likelihood that an MNE will engage in a partial acquisition instead of a full acquisition will decrease if the target firm is located in a core city.

The role of industry and firm heterogeneity

According to the literature, firms' choices between full or partial cross-border acquisitions to access knowledge and complementary resources are dependent on the types of economic activity, strategies, and structures of the firms that are involved (e.g., Brouthers and Hennart 2007).

First, industries clearly differ with respect to knowledge intensity. Chen and Hennart (2004) argue that relative to other acquisitions, acquisitions in R&D-intensive industries typically involve target firms that are more likely to possess proprietary technologies and to offer learning opportunities to the acquirer. However, the transfer of know-how to the new owner requires full cooperation from the seller; in accordance with our previous reasoning, leaving the seller with a stake in the firm helps to ensure a smooth and complete knowledge transfer. Thus, one would expect that an MNE that is entering a local industry that is characterized by higher R&D intensity should be more likely to participate in a partial acquisition instead of a full acquisition. The same hypothesis applies not only to other types of knowledge-intensive assets, such as specialized human assets, intangible market assets, innovative organizational techniques and routines, and similar factors (e.g., Yin and Shanley 2008), but also to industries in which the host country has important competitive advantages and is particularly notable in the international context. In these industries, MNEs will perceive opportunities to both enhance their existing capabilities and develop new capabilities through the ac-

quisition of local firms that are likely to provide valuable complementary competences. Therefore, in accordance with the previous literature, we expect that an MNE will be more likely to engage in the partial acquisition rather than full acquisition of a local target firm in knowledge-intensive or internationally renowned industries than in other industries.

Second, MNE choices regarding ownership can vary over the course of the industry life cycle. In the literature, the industry life cycle theory has been extensively applied to explain changes in innovation and industrial structure and dynamics (for a recent survey, see Penttinen 2011). In particular, the phases of the industry life cycle have been correlated with propensities for M&As (Klepper 1997; Maksimovic and Phillips 2008), alliances and partnerships (Cainarca, Colombo, and Mariotti 1992), regional development (Markusen 1985), variations in agglomeration externalities (for a survey, see Boschma and Frenken 2011; Neffke, Henning, Boschma, Lundquist, and Olander 2011; Potter and Watts 2011), and the territorial clustering of firms (Audretsch and Feldman, 1996; Dalum, Pedersen, and Villumsen 2005). However, there is a dearth of studies that relate the industry life cycle to ownership decisions.

Building on the extant theory, we claim that ownership choices depend on the phase of the relevant industry. In particular, the introduction stage is characterized by market, technology and production uncertainty, and the extent and trajectories of changes are unpredictable. These characteristics will make partial acquisitions (and alliances) more desirable during the introduction stage of an industry because these acquisitions and alliances are less expensive and easier to reverse than full acquisitions (Yin and Shanley, 2008). During the subsequent industry stage, namely, the growth stage, technology and markets stabilize, innovation declines, the entry and exit of new firms slows, and a shakeout of producers eventually occurs. During this phase, firms seek to internalize their competitive advantages and extend the monopolistic rents that are associated with exclusive proprietary assets, whereas requirements for flexibility become less stringent. Acquisitions become intense in most industries (Klepper 1997), and full ownership typically prevails over partial ownership because the proprietary control of assets becomes crucial to ensure that the greatest possible preservation of appropriability and technological rents will occur. In the maturity phase, the consolidation of technologies and markets first becomes more intense and then eventually terminates. Opportunities for learning from acquisitions decline, although efforts by industry incumbents to diversify product and market and to

“scrape the barrel” for their monopolistic rents could revitalize the propensity toward acquisitions to a certain extent. Finally, the decline phase is marked by the exhaustion of the technological and market potential of an industry and brings the life cycle of the industry to a close. Write-offs and the selling of firms are frequent, and takeovers that seek to access new competencies and assets are more likely to occur outside the sector of interest. In this phase, partnerships and alliances can be used to jointly rationalize operations, create defensive collusions or realize soft divestments. In summary, we expect that there will be the greatest likelihood of the partial acquisition instead of the full acquisition of a target firm during the introductory phase for an industry; this likelihood should decrease in subsequent industry phases, which feature reduced opportunities for post-entry learning.

Finally, the literature has already emphasized the role of firm-specific characteristics and strategies in the entry and ownership choices of MNEs in foreign countries (for a review, see Brouthers and Hennart 2007). In particular, the previous international experience, national culture, and strategic orientation of the parent company (Nielsen and Nielsen 2011) and the size of the local target firm (Chen and Hennart 1997) have been considered to be among the main characteristics that impact an MNE’s chance to reduce its uncertainty and liability of foreignness (Chari and Chang 2009), although the empirical results regarding these traits have not always been completely consistent. The effect of MNE experience on entry mode choice, for example, is ambiguous. Previous experience in the host country is likely to facilitate an MNE’s search for a partner with suitable complementary resources and to improve the MNE’s capabilities to manage its co-ownerships with local partners; however, the prior accumulation of country-specific information and knowledge renders local partnership less necessary (Meyer, Wright, and Pruthi 2009). Furthermore, MNEs that have accumulated experience in previous local acquisitions may have learned and developed specific organizational routines for integrating acquired local firms, thus causing full acquisition to be a more attractive option for these MNEs (López-Duarte and García-Canal 2004). With respect to an MNE’s country of origin, the literature on emerging countries reveals that MNEs from these nations severely suffer from not only their poor business-specific competences (Ramamurti 2009) and liabilities that relate to their country of origin (Ramachandran and Pant, 2010), but also a severe liability of foreignness. Thus, these MNEs tend to expand abroad mainly through partnerships and joint ventures (Wells, 1983) because these entry modes enable them to leverage foreign firms’ resources and learn from their capabilities (Mathews 2006).

The literature has also suggested several concordant hypotheses about the relationship between an acquirer's propensity to participate in a partial acquisition and the size of the target firm. In particular, the financing constraint hypothesis predicts that acquirers may prefer to engage in minority acquisitions instead of full acquisitions if the target firm is large (Whited 2006). Furthermore, because larger target firms involve more irreversible investments, a partial acquisition may help to reduce the costs and risks of exiting an acquisition and/or allow an acquiring firm to quickly react to market changes (Balakrishnan and Koza 1993; Tse, Pan, and Au 1997). Under conditions that include indivisibilities and economies of scale, partial acquisitions can be associated with either a "strategy of small losses" (Sitkin 1992) or a gradual approach in which a partial stake provides the acquirer with a platform to scale up its commitment to the market by completing a full acquisition of the target at an appropriate time (Folta, 1998).

Our expectations are in accordance with the predictions of previous studies. In particular, we conjecture that compared to acquisitions in general, acquisitions that involve either MNEs from emerging countries or larger target firms are more likely to involve the partial acquisition rather than full acquisition of the target firm; however, the relationship between acquisition type and an MNE's previous experience is a priori uncertain.

DATA AND DESCRIPTIVE STATISTICS

The sample

Our sample encompasses all of the 868 acquisitions by foreign MNEs that occurred in Italy in 90 manufacturing industries (in particular, industries 151 to 372 in the Nace Rev. 1 classification of economic activities) between 2001 and 2010. The data on foreign acquisitions are obtained from the Reprint database⁶, which is compiled by the Politecnico di Milano and sponsored by the Italian National Institute for Foreign Trade. The 868 examined acquisitions include 548 (63%) full acquisitions and 320 (37%) partial acquisitions.

The spatial dimension

⁶ Since 1986, the Reprint database has provided a census of the foreign affiliates of Italian firms and the Italian affiliates of foreign firms. This database is updated annually (for details, see Mariotti and Mutinelli, 2010). The database contains various information regarding relevant MNEs and their affiliates, such as entry mode (greenfield vs. acquisition), ownership structure, and location choice.

To identify industrial districts and core cities, we relied on a database that was constructed by the Italian Office for National Statistics (ISTAT); this database decomposed the Italian territory into “Local Labor Areas” (LLAs). LLAs are aggregations of neighboring municipalities that are classified based on daily commuting flows from residences to workplaces. LLAs are largely self-contained: within a given LLA, both the share of residents who work locally and the share of employees who reside locally must be at least 75% (ISTAT 2006).

This definition is consistent with both standard definitions of urban areas, which are based on commuting patterns, and the notion of a “functional region”, which may be defined as “a territorial unit resulting from the organization of social and economic relations in that its boundaries do not reflect geographical particularities or historical events” (OECD, 2002). The standards for determining Italian LLAs also roughly follow the criteria that are used to define Metropolitan Statistical Areas in the US; Travel to Work Areas in the UK; metropolitan areas and employment areas in France; and Urban Employment Areas in Japan. In 2001, 686 LLAs were identified in Italy. These LLAs had an average population of 83,084, although the LLA populations featured a standard deviation of 222,418.

Using this classification, subsets of LLAs can be identified that indicate the industrial districts (IDs) and core cities (CCs) of Italy.

Industrial districts. We adopted the official classification system for IDs that was proposed by ISTAT based on its Cluster Mapping Project (ISTAT 2006). To identify IDs, this project assumed that IDs would fulfill certain criteria and selected appropriate indicators to proxy the intrinsic nature of these districts: the degree of industrialization, the presence of small and medium enterprises (SMEs), and the degree of production specialization (for details, see Annex 1). In total, 156 LLAs were identified as IDs.

The IDs were also classified by ISTAT into eight different macro-industries based on each ID’s specialization (henceforth, “specialized industries”). Table 1 reveals that most of these IDs belong to industries in which Italy has built an international competitive advantage during recent decades (De Benedictis 2005). In terms of employment, the largest cluster of IDs is that of those associated with metal products, machinery and equipment; the next largest clusters are found in the textiles and apparel industry and leather and footwear industry. Notably, each ID hosts a large number of manufacturing firms and employees in industries that do not pertain to the district’s specialization (henceforth, “other industries”). According to our conceptu-

al framework, the effects of a target firm's location within an ID on an MNE's acquisition strategy should greatly differ for these two categories of industries.

***** Table 1 goes about here *****

Core cities. To define CCs, we selected the leading Italian cities that were participating in the world city network, building upon the approach and database of Taylor (2004) (for details, see Annex 2). By combining indicators of both international connectivity and the local presence of MNEs, we identified four cities and eight relevant LLAs as CCs: Milan (in particular, the five LLAs surrounding the city), Turin (one LLA), Bologna (one LLA) and Rome (one LLA).

Figure 1 illustrates the localization of IDs and CCs in Italy. Notably, both IDs and CCs are relatively equally spread across the northwest, northeast, and central regions of Italy, whereas southern Italy and the Italian islands are underrepresented. Table 2 also indicates that the overall share of total manufacturing employees who work in the IDs and CCs is equal to 55%; this share ranges from 11% in the south regions and islands to 76% in the northwest regions. Most importantly, if only the employees who work within the specialized industries of each ID are considered, then this share decreases to an overall average of 31%, ranging from 4% in the south regions and islands to 40% in the northwest regions. Although IDs and CCs must clearly be regarded as key areas of the country, the above data imply that these regions do not encompass all of the most developed portions of Italy. Instead, particularly in the north and central regions of the country, other LLAs host a number of internationally competitive and knowledge-intensive firms that constitute tempting targets for foreign MNEs.

***** Figure 1 and Table 2 go about here *****

The spatial distribution of acquisitions

Table 3 presents the distribution of the 868 acquisitions of our sample across the different spatial/industrial categories, i.e., the specialized industries of IDs, other industries of IDs, CCs and the remaining areas. In accordance with the aforementioned empirical evidence regarding the location

choices of MNEs (Mariotti and Piscitello 1985; McCann and Acs 2011; Rodríguez-Pose and Zademach 2003), CCs account for the 28.6% of the total deals, a percentage that is nearly twice as large as the share of total manufacturing employees in Italy who work in CCs. However, the other three categories host acquisitions in a proportion that is similar to the share of employees that fall within each category.

With respect to the distribution of full versus partial acquisitions, it is notable that the share of full acquisitions hosted by CCs is rather high (68%) with respect to the shares hosted by other areas; this result appears to provide evidence in favor of Hypothesis 2 of this study. In contrast, with respect to the shares of full acquisitions in both the specialized industries (63%) and other industries (61%) of IDs, there are only slight differences in acquisition choices compared to acquisition choices in non-districtual areas. However, this lack of evidence for Hypothesis 1 cannot be regarded as surprising, as the ownership choices of MNEs may also be affected by firm- and industry-specific heterogeneity. The need to control for the latter heterogeneity justifies the use of an econometric analysis.

***** Table 3 goes about here *****

EMPIRICAL ANALYSIS: MODEL AND METHODOLOGY

Dependent variable (*Partnership*)

Our dependent variable, *Partnership*, is a dummy variable that takes a value of 1 for partial acquisitions and a value of 0 otherwise (i.e., for acquisitions that result in 100% ownership by the acquiring firm).

Explanatory variables

Spatial heterogeneity

Industrial districts. The variable *District_specialized* is a dummy that takes a value of 1 if the target firm is located in an ID and has a specialization that is the same as the specialized industry of its ID; otherwise, this dummy takes a value of 0. The variable *District_other* is a dummy that takes a value of 1 if the target firm is located in an ID but has a different specialization from the specialized industry of its ID; otherwise, this dummy takes a value of 0. In accordance with Hypothesis 1 of this study, we expect to observe a negative correlation between the *District_specialized* dummy variable and *Partnership*, the dependent vari-

able of this investigation, and an insignificant correlation between the *District_other* variable and *Partnership*.

Core cities. The variable *Core_city* is a dummy variable that takes a value of 1 if the target firm is located in a CC and a value of 0 otherwise. In accordance with Hypothesis 2 of this study, we expect to observe a negative correlation between the *Core_city* dummy variable and *Partnership*, the dependent variable of this investigation.

Industry heterogeneity

Knowledge intensity. We used the innovation expenditures-to-sales ratio to measure the knowledge intensity for each of the 90 industries in which acquisitions occurred. Innovation expenditures include costs related to intramural and extramural R&D; the acquisition of external knowledge (the purchase or licensing of patents and non-patented inventions, expertise, and other types of knowledge from other enterprises or organizations); the acquisition of advanced machinery; industrial design; the marketing and advertising of new products; and personnel training for new products and processes. The data that are required to calculate this ratio are obtained from the Community Innovation Survey that was performed by ISTAT (2003). These data reference the expenditures and sales of Italian firms in the year 2000, which is immediately prior to the period that is considered in our study. According to our conceptual framework, we expect to observe a positive correlation between the *Knowledge intensity* variable and *Partnership*, the dependent variable of this study.

International competitiveness. As a proxy for the international excellence of an industry within the host country, we utilized the Revealed Comparative Advantage (RCA) index, which was originally suggested by Balassa (1965). The RCA index is defined as follows:

$$RCA_{ij} = (X_{ij}/\sum_j X_{ij}) / (\sum_i X_{ij} / \sum_{ij} X_{ij})$$

where X_{ij} are exports in sector i from country j .

The numerator and denominator represent the share of a given sector i in national exports and world exports, respectively. Thus, the RCA index measures the international performance of sectors as a result of the mix of competitive advantages that exist with respect to the distinctive competences of the country's firms. This index varies around unity; RCA values greater than one suggest that an industry is comparatively advantaged

relative to other industries, whereas RCA values less than one are indicative of a position of comparative disadvantage relative to other industries. The relevant data for the calculation of RCA values are obtained from the Italian National Institute for Foreign Trade for all 90 of the industries that are considered in the present paper. These data are used to determine the average RCA value for the five years before the year of each observed foreign acquisition in Italy; for instance, the mean RCA value for the 1996-2000 period is used for investments that occurred in 2001, whereas the mean RCA value for the 2005-2009 period is used for investments that occurred in 2010. This approach allows us to control for possible contingent fluctuations in international and national economic trends⁷. According to our conceptual framework, we expect a positive correlation between the *International_competitiveness* variable and *Partnership*, the dependent variable of this study.

Life cycle. To classify industries into different life cycle stages, we adopted the approach that was suggested by Audretsch and Feldman (1996), which is based on the idea that the different stages of the industry life cycle can be associated with the type and degree of innovative activity that is occurring in the industry in combination with the type of firm that is generating innovations. To examine product innovation intensity, we use the following criteria: (i) the innovation rate, which is defined as the share of innovative firms (out of the total number of firms) in the industry; and (ii) the relative innovative advantage of small firms *vis-à-vis* large firms. To calculate this innovative advantage, the small-firm innovation rate is defined as the share of innovative small firms (< 250 employees) out of the total number of small firms in the industry, and the large-firm innovation rate is defined as the share of innovative large firms (\geq 250 employees) out of the total number of large firms in the industry. Consequently, the four stages of the life cycle are defined as follows:

- introduction, if the innovation rate of the industry is in excess of the mean and small firms have the innovative advantage over large firms;

⁷ The highest RCA values are evinced by “made in Italy” sectors (homebuilding materials and furniture; leather, textiles and clothing; and machine tools and other machinery); in other words, sectors in which Italian firms enjoy international leadership (De Benedictis 2005). In contrast, the lowest RCA values are observed for high-tech sectors (the electronics and electronic instruments, computers, communication equipment, basic chemicals, and aerospace sectors); in these sectors, Italy lags far behind most other advanced countries.

- growth, if the innovation rate of the industry is in excess of the mean and large firms have the innovative advantage over small firms;
- maturity, if the innovation rate of the industry is below average and large firms have the innovative advantage over small firms;
- decline, if the innovation rate of the industry is below average and small firms have the innovative advantage over large firms.

The data that are used to quantitatively assess the two aforementioned criteria are obtained from the Community Innovation Survey that was conducted by ISTAT (2003). These data refer to Italian firms that introduced product innovations during the 1998-2000 period. From these data, 9 sectors (out of the 90 sectors that are considered in the present paper) are in the introductory phase, 29 of the examined sectors are in the growth phase, and 32 and 20 of the examined sectors are in the maturity and decline phases, respectively. Thus, 53 acquisitions (6.1% of the total acquisitions) occurred in industries that were in the introductory stage, 424 acquisitions (48.8%) occurred in industries that were in the growth stage, 289 acquisitions (33.2%) occurred in industries that were in the mature stage, and 102 acquisitions (11.7%) occurred in industries that were in the decline stage.

We constructed four dummies (*Introduction*, *Growth*, *Maturity* and *Decline*) that take a value of 1 if an acquisition pertains to a sector in the relevant growth phase and take a value of zero otherwise. We expect to observe a positive correlation between the *Introduction* dummy variable and *Partnership*, the dependent variable of this study, but a negative correlation between each of the other dummy variables and the dependent variable.

Firm heterogeneity

Parent company's experience. To account for the previous experience of the MNE in the local context, we used the variable *Experience*, which measures the number of years that have elapsed since an MNE's first investment in a country (data obtained from the Reprint database). As discussed in the conceptual section, we do not have any *a priori* expectations with respect to the impact of the MNE's previous experience on the dependent variable of this study.

National culture. To account for the MNE's nationality, we used the *Emerging* dummy variable, which takes a value of 1 for firms from countries that were classified as emerging by the World Bank at the beginning of the period that is examined in our analysis⁸; otherwise, it takes a value of 0. From the previously published literature, we expect to observe a positive relationship between the *Emerging* dummy variable and the dependent variable.

Size of the target firm. We constructed the variable *Target_size*, which is defined as a target firm's number of employees (during the year of an acquisition), and we expect that the likelihood of a partial acquisition will be positively correlated with this variable. Data regarding the size of the target firm are obtained from the Reprint database.

Finally, we controlled for the year in which acquisitions occurred by adding nine dummy variables (*year_t* for $t = 2001, \dots, 2009$; thus, 2010 was used as a benchmark).

The model

To test our hypotheses, we employed the following equation model:

$$Partnership_i = \beta_0 + \beta_1 Spatialheterogeneity_i + \beta_2 Industryheterogeneity_i + \beta_3 Firmheterogeneity_i + \beta_4 Controls + \varepsilon_i$$

where $i = 1, 2, \dots, 868$ are the acquisition events; *Spatial heterogeneity* refers to both *Core_city*, *District_specialized* and *District_other*; *Industry heterogeneity* refers to *Knowledge_intensity*, *International_competitiveness*, and the dummy variables that serve as proxies for the phases of the industry life cycle (*Introduction*, *Growth*, *Maturity* and *Decline*); *Firm heterogeneity* refers to the *Parent_experience* variable, the *Emerging* dummy variable and *Target_size*; *Controls* refers to temporal dummies; and ε is the error term. Given the binary nature of our dependent variable, we employed a probit econometric model and assumed that observations are independent across continents (i.e., we clustered observations for Asia, Western Europe, Eastern Europe, North America, Latin America and Oceania) but not necessarily within continents; this

⁸ In accordance with the World Bank Atlas method of classification, a country was considered to be developing in 2001 if its per-capita gross net income was less than 9,205 US\$.

approach allowed for intragroup correlations of standard errors and relaxed the typical requirement that mandates the use of independent observations⁹.

Table 4 provides the descriptive statistics for the dependent and explanatory variables, and Table 5 presents the correlation coefficients among these variables.

***** Tables 4 and 5 go about here *****

RESULTS

Table 6 reports the results from our econometric model; in this table, the explanatory variables have been standardized to facilitate comparisons among the estimated coefficients. First, it is notable that the variables that proxy for spatial heterogeneity are highly significant (at $p < .01$). In particular, the *District_specialized* and *Core_city* variables both negatively affect the likelihood of a partial acquisition (at $p < .01$), thus confirming that local externalities that relate to both industry-specific agglomeration economies (Hypothesis 1) and variety (Hypothesis 2) may actually substitute for different types of competences that reside in a target firm. Conversely, *District_other* does not impact an MNE's ownership decision. In other words, the location of the target firm in an industrial district does not significantly change an MNE's propensity to undertake a partial acquisition if the target and district are differently specialized, thus confirming the industry-specific nature of the fungible externalities among firms within a district.

These results provide insight into "how" MNEs enter different territorial areas of the host country; this topic is rather neglected in the literature that addresses the geography of international activity, which has primarily focused on "why" and "where" MNEs locate across and within different countries (McCann and Mudambi 2005).

Our findings also confirm the influence of industry heterogeneity on MNE acquisition choices. In particular, acquisitions that occurred in industries that are more likely to involve post-entry learning by the acquirer are also more likely to occur through partial ownership; as evidence to support this conclusion, both *Knowledge_intensity* and *International_competitiveness* do come out positive and significant, at $p < .10$ and

⁹ However, this procedure affects the standard errors and variance-covariance matrix of the estimators (but not the estimated coefficients).

$p < .05$, respectively. Similarly, in accordance with the industry life cycle theory, the likelihood of the partial acquisition of the target company is highest in industries that are in their introductory phase but decreases in subsequent industry cycle phases (as evidenced by the fact that the coefficient for the *Introduction* variable is positive and significant, whereas the coefficients for *Growth* and *Maturity* are negative, although these coefficients are not significantly different from zero).

Thus, not only territorial and industrial systems but also relevant differences in industry dynamism and degree of maturity have roles in shaping the interactions between firms and territories (Dicken and Malmberg, 2001).

With respect to firm heterogeneity, our estimation confirms that MNEs from emerging countries prefer partial acquisitions that allow them to maintain a local partner; in particular, the *Emerging* variable demonstrates a positive and significant coefficient (at $p < .01$). This preference most likely reflects the phenomenon that these MNEs are using these partial acquisitions to reduce their liabilities of foreignness and origin. Similarly, MNEs that are already familiar with the host country are also more likely to maintain a local partner (the estimated coefficient for *Experience* is positive and significant at $p < .01$). Finally, the variable *Target_size* also possesses a positive and significant coefficient (at $p < .01$); this result confirms the expectations and results of previous empirical research.

Because the coefficients in this estimation have been standardized, it is possible to compare their magnitudes and assess the relative weights of the variables that are associated with spatial, industry and firm heterogeneities. Notably, the country of origin of MNEs has the greatest impact on their attitudes towards partial ownership (the variable *Emerging* demonstrates the highest coefficient of 0.859); the stage of the industry lifecycle (the coefficient of the variable *Introduction* is 0.469) and local externalities (-0.273 for *District_specialized* and -0.202 for *Core_city*) produce the next largest impacts on these attitudes. The marginal effects that are reported on the right side of Table 6 confirm these results.

Finally, it appears that the model predicts our dependent variable rather well, with a success rate of 69%.

***** Table 6 goes about here *****

CONCLUSIONS

In this paper, we have investigated foreign acquisitions that occurred in Italy during the 2001-2010 period. In particular, we have analyzed the MNEs' choices with respect to the degree of ownership that they assume in local target firms. Foreign MNEs that wish to access local competences and resources through the acquisition of local target firms often rely on partial acquisitions to reduce the risk of destroying these resources and competences. However, this phenomenon is less frequently observed if target firms are located in areas that are characterized by relevant externalities, such as core cities or industrial districts. In particular, core cities allow foreign MNEs to access a variety of information, knowledge, and other externalities that are associated with international interconnectedness, whereas industrial districts provide MNEs with easier access to industry-specific agglomeration economies (a local pool of skilled labor, local input-output linkages, and local knowledge spillovers). Thus, both of these areas reduce an MNE's need to maintain a local partner, although these two types of areas substitute for different aspects of a target firm's competences.

We believe that our results contribute to the literature on the *firm-territory nexus* (Dicken and Malmberg, 2001) in several ways; in particular, we conceptualized how the entry strategies of highly mobile firms (i.e., MNEs) are intertwined with local externalities. However, we also contribute to theories of firm boundaries. The RBV of the firm and TCE suggest that MNEs should select full ownership in local target firms to access the entire bundle of these target firms' competences and to reduce the transaction costs that may be associated with the *ex ante* and *ex post* opportunistic behaviors of local partners. Other conceptual approaches instead suggest that MNEs frequently engage in partial acquisitions because of their need to avoid the dispersion/destruction of the target firm's distinctive competences and because these MNEs wish to improve the effectiveness of the post-entry learning process. However, empirical evidence has not solved this controversy; instead, empirical results have been mixed and have frequently been inconclusive (Chari and Chang 2009). The divergence of results is intriguing because it suggests that in theory, the observed variability may be examined by including certain omitted factors in analyses of this issue. In fact, our findings allow us to claim that if target firms are located in geographical areas that provide foreign investors with favorable spillovers with respect to both general and business-specific knowledge, these spillovers might well substitute for competences that are embedded in the local target firm. In these situations, a foreign MNE need not

rely upon a local partner; instead, in accordance with the suggestions of both TCE and the RBV of the firm, this MNE may be more likely to engage in full target firm acquisitions.

Similarly to all other research, our study has certain limitations that provide opportunities for future research. In particular, we are aware that in our exercise, various other dimensions of heterogeneity remain unobservable. This issue is particularly applicable with respect to factors that relate to firms' strategies and structures. Among other considerations, these factors include the specific motivations that underlie an acquisition by an MNE; the type of target firm that is acquired (in terms of organizational structure, in-house knowledge, and various other characteristics); and the degree of complementary and relatedness between the assets that are controlled by the MNE and target firm. In addition, we distinguished among various local contexts in terms of the international interconnectedness and industrial variety of these contexts, but these locations also differ with respect to the breadth and depth of their specific portfolio competencies and knowledge infrastructures; these differences might also impact the attitudes of MNEs towards their subsidiaries. Thus, the consideration of additional facets of heterogeneity is a high priority for our future research because this consideration would allow the effects of spatial heterogeneity to be more readily disentangled from those of other contingent variables. Although we have striven to examine the intersection of micro-heterogeneities on the territory, sector, and firm levels and to join these heterogeneities with models of agglomeration economies, a deeper examination of these heterogeneities will be a crucial aspect of future research in economic geography (Ottaviano 2011). However, we hope that our results can contribute to the ongoing but inconclusive dialogue among geographers, economists and business analysts that seeks to construct a unified body of theory and a common epistemology (Duranton and Rodríguez-Pose 2005).

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FIGURES AND TABLES

Table 1: Distribution of the IDs by industrial specialization

Industrial specialization	No. dis- tricts	No. employees (manufacturing industries)		
		Specialized industries	Other indus- tries	Total
Textiles and apparel	45	204,340	333,095	537,435
Metal products, machinery and equipment	38	334,380	252,940	587,320
Housing products ¹	32	53,123	329,209	382,332
Leather and footwear	20	84,754	101,926	186,680
Food and beverages	7	9,318	23,986	33,304
Luxury and leisure ²	6	33,482	83,468	116,950
Paper and publishing	4	7,663	28,333	35,996
Chemicals, rubber and plastics	4	10,515	38,070	48,585
TOTAL	156	737,575	1,191,027	1,928,602

¹ Wood products, furnishing, glass, tiles, ceramic goods and other non metal products.

² Jewellery, musical instruments, sport goods and toys.

Source: our elaboration of results from ISTAT (2006).

Table 2: Distribution of IDs, CCs and relevant manufacturing employees, across Italian macro regions

Macro regions ¹	Italy		Industrial districts				Core cities			
	Total employees		No.	Employees in specialized industries		Employees in other industries		No.	Employees	
	No.	%		No.	%	No.	%		No.	%
	Northwest	1,829,123	100	39	337,351	18.4	462,069	25.3	2	587,015
Northeast	1,408,006	100	42	204,397	14.2	450,449	32.0	1	95,565	6.8
Centre	870,475	100	49	166,333	19.1	217,524	25.0	1	99,351	11.4
South and Islands	798,711	100	26	29,494	3.7	60,985	7.6	-	-	-
Total	4,906,315	100	156	737,575	15.0	1,191,037	24.3	5	781,931	15.9

¹According to NUTS-1 classification.

Source: our elaboration of results from ISTAT (2006).

Table 3: Distribution of the 868 acquisitions across four different categories and by type of ownership

Categories	Full Acquisitions			Partial Acquisitions			Total		
	No.	% (row)	% (column)	No.	% (row)	% (column)	No.	% (row)	% (column)
Districts – specialized industries	87	62.6	15.9	52	37.4	16.3	139	100	16.0
Districts – other industries	115	61.2	21.0	73	38.8	22.8	188	100	21.7
Core cities	168	67.7	30.6	80	32.3	25.0	248	100	28.6
Other areas	178	60.7	32.5	115	39.3	35.9	293	100	33.7
Total	548	63.1	100	320	36.9	100	868	100	100

Source: our elaboration.

Table 4: Descriptive statistics

	No. obs.	Mean	Std. Dev.	Min	Max
<i>Dependent variable</i>					
Partnership	868	0.631	0.482	0	1
<i>Spatial heterogeneity</i>					
(2) District_specialized	868	0.160	0.367	0	1
(3) District_other	868	0.215	0.411	0	1
(4) Core_city	868	0.311	0.463	0	1
<i>Industry heterogeneity</i>					
(5) Knowledge_intensity	868	0.038	0.044	0.000019	0.328727
(6) International_competitiveness	840	1.689	1.127	.04	12.022
(7) Introduction	868	0.061	0.239	0	1
(8) Growth	868	0.488	0.500	0	1
(9) Maturity	868	0.332	0.471	0	1
(10) Decline	868	0.117	0.321	0	1
<i>Firm heterogeneity</i>					
(11) Experience	868	8.490	8.177	0	19
(12) Emerging	868	0.126	0.332	0	1
(13) Target_size	868	150.319	357.262	1	4740

Table 5: Correlation matrix

	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
<i>Dependent variable</i>												
Partnership	-0.076	0.021	-0.061	0.031	0.021	0.063	-0.037	0.005	0.003	0.046	0.178	0.109
<i>Spatial heterogeneity</i>												
(2) District_specialized	1											
(3) District_other	-0.083											
(4) Core_city	0.031	-0.138										
<i>Industry heterogeneity</i>												
(5) Knowledge_intensity	-0.012	0.027	0.064									
(6) International_competitiveness	0.017	0.005	-0.112	-0.242								
(7) Introduction	0.013	0.017	0.041	-0.068	-0.204							
(8) Growth	0.011	-0.054	0.050	0.263	-0.044	-0.251						
(9) Maturity	-0.005	0.058	-0.064	-0.193	0.090	-0.176	-0.715					
(10) Decline	-0.021	-0.015	-0.014	-0.081	0.090	-0.084	-0.341	-0.003				
<i>Firm heterogeneity</i>												
(11) Experience	0.032	-0.004	0.018	0.014	0.082	0.027	0.025	-0.046	0.040			
(12) Emerging	-0.019	-0.004	-0.002	0.001	0.005	-0.047	-0.010	-0.178	-0.008	-0.313		
(13) Target_size	-0.033	-0.010	0.050	0.065	-0.058	0.007	0.012	-0.109	-0.063	-0.008	0.022	

Table 6: Econometric findings, probit model (dep. var. = Partnership)

Variable	Coeff.	Robust Std. Err.	Marginal effect
<i>Spatial heterogeneity</i>			
District_specialized	-0.273	0.059 ***	-0.098
District_other	-0.011	0.045	-0.004
Core_city	-0.202	0.049 ***	-0.074
<i>Industry heterogeneity</i>			
Knowledge_intensity	0.049	0.024 *	0.018
International_competitiveness	0.053	0.026 **	0.019
Introduction	0.469	0.262 *	0.183
Growth	-0.057	0.167	-0.021
Maturity	-0.011	0.171	-0.004
<i>Firm heterogeneity</i>			
Experience	0.148	0.002 ***	0.055
Emerging	0.859	0.112 ***	0.332
Target_size	0.138	0.023 ***	0.052
Year dummies	yes		
No. of observations	838		
% of observations correctly classified	68.97		
Log pseudolikelihood	-510.910		

Note: Variables have been standardized

* p<0.1, ** p<0.05, *** p<0.01

Annex 1 - Industrial districts (IDs)

To identify the IDs among the 686 LLAs, ISTAT (2006) developed a Cluster Mapping Project that utilized the four criteria described in the following paragraphs.

In this annex, total employment is indicated by E , LLAs are denoted by the subscript j , each manufacturing sector is represented by the subscript i , and the entire manufacturing industry is indicated by m .

A specific LLA is identified as ID if it fulfills the following four conditions:

$$[1] \quad (E_{jm}/E_j)/(E_m/E) > 1,$$

which states that the share of the manufacturing employment on the total employment must be higher in the area in question than at the national level.

$$[2] \quad (E_{jm,small}/E_{jm})/(E_{m,small}/E_m) > 1,$$

where the subscript *small* indicates employment in firms with less than 100 employees. Thus, this condition specifies that the share of the employment in small and medium enterprises on the manufacturing employment must be higher in the area in question than at the national level.

$$[3] \quad (E_{ji}/E_{jm})/(E_i/E_m) > 1,$$

which requires that for at least one sector, the specialization index of the area, i.e. the ratio between the share of the sector employment on the manufacturing employment in the area, and the corresponding share at the national level, must be greater than one.

$$[4] \quad (E_{ji,small}/E_{ji})/(E_{i,small}/E_i) > 1,$$

which states that in at least one sector for which the specialization index of the area is greater than one, the share of the employment in small and medium enterprises on the sector employment must be higher in the area than at the national level.

Using these conditions, ISTAT identified 156 LLAs as IDs.

Annex 2 - Core cities (CCs)

CCs are identified from Taylor's database, in which international leading cities are classified and ranked by their degree of connectivity to the world city network in the year 2000 (see Taylor 2001 for the methodology of this approach and Taylor 2005 for the relevant data). Only four out of the nine Italian cities that were included on the list possessed degrees of connectivity above the first quartile of the distribution of the leading cities that were examined. In particular, these four cities were Milan, Rome, Turin and Bologna. Unsurprisingly, the LLAs that included these four cities also ranked as the Italian areas that hosted the highest shares of manufacturing and service affiliates of MNEs (see Table 1A).

As illustrated in Table 1A, by a large margin, Milan is the Italian city that is the most connected to the world city network; Milan also includes the lion's share of the total affiliates of foreign MNEs that exist in Italy. In fact, in addition to the specific LLA of Milan itself, the metropolitan area surrounding this city includes at least four other LLAs that are highly interconnected adjoining territories (namely, Bergamo, Busto Arsizio, Seregno and Varese; see Figure 1 in the main text of this paper). These LLAs constitute the industrial belt of the city; the two main international airports that serve the metropolis of Milan (Malpensa and Orio al Serio) are also located in this industrial belt.

In summary, we consider the eight LLAs that surround the aforementioned four cities to be CCs.

Table 1A – Core cities in Italy, 2000.

City	Connectivity index ¹	World city network Worldwide ranking	Share of MNE affiliates (% of total in Italy)	Italian rank in terms of MNE affiliates
Milan	60.4	8	20.5	1
Rome	36.3	53	7.8	2
Turin	13.1	192	6.3	3
Bologna	11.1	213	2.8	4

¹Maximum value = 100.

Source: Our elaboration of results from Taylor (2005) and Mariotti and Mutinelli (2010).