

**VALUE CREATION AND APPROPRIATION THROUGH GEOGRAPHIC  
STRATEGY: EVIDENCE FROM FDI**

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## **ABSTRACT**

Choosing where to expand is an important firm strategy. We review and structure research in international location choices. First we categorize research based on the motive for expansion, distinguishing market-seeking and resource-seeking explanations. Within these two categories we assess the progression of the literature towards an increased acknowledgement of strategic interaction among firms. We also evaluate work that begins to account for different modes of expansion. This emerging research explores the role of geography in acquisitions and begins to incorporate firms' often complex geographic configurations. Building on these developments, we highlight the following areas for future research: examining further the role of location in acquisitions, exploring the role of geography in post-expansion restructuring, and investigating the interaction of vertical and horizontal spillovers to entrants.

## **Introduction**

Geographic location can be an important determinant of firms' value creation and capture. As a result, choosing where to expand is an important firm strategy.

In this paper, we review and provide a structure to research on international location choices. In the international context, location decisions have been a central topic of study because, by definition, a multinational enterprise is an enterprise that operates in more than one geographic market. Nevertheless, many of the underlying mechanisms that determine location choice in the international setting are also prevalent in domestic contexts. Therefore, our discussion highlights papers that are not explicitly international in focus when they help describe and explain international location choices.<sup>1</sup> Moreover, the structure we provide also frames location choice research, in general.

To categorize existing research and structure our review, we first make the distinction of location choice motivated by access to customers (i.e., market seeking) or access to inputs (i.e., resource seeking). Moreover, within these two classifications we address 'simple' assessments of location superiority and more 'complex' assessments that explicitly consider strategic interactions with other firms. We also summarize work that begins to incorporate elements in many realistic empirical settings that can affect location choices. This includes differentiating amongst location choices related to establishing new plants and related to acquiring firms. Among acquisitions, this includes

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<sup>1</sup> We do not attempt to make a comprehensive review of literature on location choice in non-international settings.

differentiating amongst acquisitions of single-location targets from acquisitions of multi-location targets, which add multiple geographic locations in one action.

After reviewing the literature, we discuss several avenues for future research.

### **Location choices when seeking markets**

Seminal research on foreign direct investment (FDI) proposes a rationale for expansion based on then exploitation of a firm's advantage in new markets (e.g. Caves 1971, 1982; Buckley and Casson, 1976). Building on Coase's (1937) work, it proposes that when markets in intermediate products are imperfect, firms have incentives to bypass them by creating internal markets under common ownership and control (Buckley & Casson, 1976). This internalization of markets across national borders creates multinational enterprises (MNEs). The significance of transportation costs is inherent in this explanation, because if negligible, firms could supply distant markets through exports. At more fine-grained geographic units of analysis, location choice research finds that increased market size attracts new plants (e.g. Coughlin, Terza & Arromdee, 1991; Woodward, 1992). In addition, empirical evidence shows that, in manufacturing industries, firms expand through acquisitions into large single markets (e.g. Friedman, Gerlowski & Silberman, 1996; Roberto, 2004).

This literature tends to assume that market size and other geographic characteristics are exogenous. However, geographic attributes of locations may be affected by firms' entry. For instance Krugman's (1991) model illustrates that when firms move into a new

market, the entry itself alters the size of the market (e.g. as employees increase local demand through a second order effect).

The logic of firms seeking large foreign markets has been complemented by research elucidating strategic interaction among expanding firms in their choice of market.

Notable in the FDI literature is Knickerbocker's (1973) evidence of defensive behavior where rivals in oligopolistic U.S. manufacturing industries quickly match the location of each other's foreign direct investment<sup>2</sup>. Empirical work by Yu and Ito (1988) in the U.S. tire and textile industries and by Terpstra and Yu (1988) in the U.S. advertising industry further supports that in oligopolistic industries firms' location choices are based on the behavior of rivals, in addition to host country factors such as market size.

Although this research shows how firms in highly concentrated industries follow each other into foreign markets in a move-countermove fashion, it does not examine more complex strategic interdependence across multiple markets among firms present in them. Firms can engage in multi-market contact with competitors to benefit from reduced rivalry resulting from mutual forbearance (Edwards, 1955). Firms' recognition of their rivals' ability to retaliate reduces their motivation to attack aggressively resulting in mutual deterrence. In addition, by increasing a firms' familiarity with rivals' strategies multi-market contact can also facilitate tacit coordination (Gimeno & Woo, 1999).

Empirical evidence supports these arguments (e.g. Gimeno, 1999; Gimeno & Woo, 1999).

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<sup>2</sup> Much earlier location theory modeling by Hotelling (1929) focused on the strategic interactions between firms' location decisions. Moving away from perfectly competitive markets, this work noted the tendency for competitors to match each other locations.

## **Location choices when seeking inputs**

Another early stream of FDI research discusses input-seeking expansion in natural resource industries.<sup>3</sup> Early work by Pugel (1978) and Owen (1982) notes that resource-intensive manufacturing industries invest larger proportions of their assets abroad. Stuckey (1983) finds the aluminum industry to contain MNEs integrated from mining to production. In this industry, high switching costs stemming from transaction specific investments in production - alumina refining facilities need to be tailored to specific ores - and physical proximity needed between the deposits and facilities to minimize transportation costs, prevent arm's-length market transactions. Research on the oil industry emphasizes the cost of supply disruption faced by nonintegrated firms in petroleum extraction or refining (e.g. Penrose, 1968; Greening, 1976; Teece, 1976). In this industry the need of refineries to operate at full capacity combined with the large cost of inventory leads firms to backward integrate. Backward integration also reduces cost of capital as integrated firms may be able to borrow more cheaply than those exposed to disruption (Greening, 1976).<sup>4</sup>

A motivation related to accessing inputs that has drawn more recent and extensive focus is the need to access skills and capabilities that reside in other countries. This rationale

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<sup>3</sup> Caves (1996) provides an in-depth review of its empirical evidence. We only highlight some of his key insights here.

<sup>4</sup> Caves (1996), building on Arrow (1975), notes a special case of transaction-cost theory of vertical integration of MNEs in such industries based on failing markets for information. In this logic, producers of a raw material which likely have the cheapest access to information on availability and future price of it have an incentive to overstate its availability to a prospective customer (who must plan its capacity on some assumption of price and availability). The more capacity customers build the higher they will bid for any given quantity of the raw material. Therefore, vertical integration may occur in order to evade such problem of information asymmetry.

has been called asset-seeking or capability-seeking FDI (e.g. Kogut & Chang, 1991; Wesson, 1999; Anand & Delios, 2002). Here, skills and capabilities sought are uniquely available in a foreign location. There are regional pockets of expertise that develop due to peculiarities of ‘national innovation systems’ (Nelson, 1993). Thus, foreign firms may need to establish operations in these locations to tap into sources of technology that diffuse slowly across national boundaries (Kogut, 1991).

As with the asset-based rationale for expansion, location choice research applies this asset-seeking logic to smaller geographic units of analysis and examines the role of localized knowledge in attracting investments to specific regions. Seminal work by Marshall (1920) highlights knowledge spillovers from competitors as one of several agglomeration economies. These economies are benefits firms derive from co-locating with other firms. Qualitative evidence of this phenomenon is documented in several industries (e.g. Saxenian, 1994; Porter, 1998). Large sample quantitative evidence shows that firms are more likely to locate new plants in places with higher levels of similar industry activity, arguing that such externalities drive the concentration (e.g. Head, Ries & Swenson, 1995).

Scholars have devoted particular attention to the role of knowledge spillovers among these externalities as drivers of location choice. In knowledge intensive industries, access to localized knowledge spillovers has been argued to affect firms’ competitive positions (Saxenian, 1994; Porter, 1998; Murtha, Lenway & Hart, 2001). Empirical evidence shows that access to localized knowledge spillovers increases with the level of industry

knowledge intensity (Chung & Alcácer, 2002). Presence in knowledge intensive locations is required because knowledge spillovers tend to be geographically bounded (Jaffe, Trajtenberg & Henderson, 1993; Almeida, 1996; Almeida, 1996; Audretsch & Feldman, 1996b). Knowledge tends to be localized because it is partially tacit (Polanyi, 1962) and its transfer requires frequent personal interaction (Nelson & Winter, 1982; Teece, 1986; Kogut & Zander, 1992), which becomes more difficult and costly as geographic distance increases (Teece, 1977, 1986; Galbraith, 1990). Empirical evidence shows that firms source localized technical knowledge through both manufacturing (e.g. Cantwell, 1989; Chung & Alcácer, 2002) and R&D operations (e.g. Kuemmerle, 1999; Penner-Hahn & Shaver, 2005; Zhao & Alcácer, 2007). Although such knowledge seeking behavior has been examined in the context of cross-border expansion, it is likely to exist in domestic expansion when significant heterogeneity in knowledge intensity across locations within countries exists (Ramos, 2007).

The recent push in the literature focuses on the impact of strategic interaction within capability-seeking FDI. Research here notes that expanding into locations rich in knowledge spillovers brings potential trade-offs once the actions of competitors are considered. In their knowledge-seeking efforts, firms must cope with potential imitation by competitors and integrate newly acquired knowledge throughout the expanded operations of the firm. Thus, strategy scholars are developing a more nuanced view on location choice by taking into account relevant differences across firms in their propensity to face such trade-offs and their ability to manage them. Thus, the initial value

creation logic suggesting generalized agglomeration benefits has been questioned and refined.<sup>5</sup>

Shaver and Flyer (2000) argue that while the intuition provided by the literature on agglomeration economies is appealing it overlooks the fact that firms not only capture but contribute to agglomeration externalities, and that the contributions and captured benefits like vary across firms. In particular, when firms are heterogeneous, the net benefits from agglomerating, which includes knowledge spillovers, will vary across firms and affect which firms are more likely to cluster. They find that large foreign entrants, who would contribute more to agglomeration externality, are less likely to cluster than small entrants. Consistent with this, Belderbos and Carree (2002) find that small and medium sized Japanese electronics firms (versus large firms) are likely to agglomerate with other Japanese electronics firms when entering China.

Likewise, Alcácer and Chung (2007) provide evidence that firms consider not only gains from inward knowledge spillovers but also the potential cost of outward ones, finding technologically advanced firms choosing only locations with high levels of academic activity and avoiding locations with industrial activity to distance themselves from competitors. Despite these observations, under certain conditions both technologically leading and lagging firms have incentives to seek localized knowledge in knowledge intensive industries. For example, Chung and Alcácer (2002) show knowledge-seeking by firms of technically lagging nations and by firms of technically leading ones. Although the lagging firms might be looking to catch-up with the leading firms, the

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<sup>5</sup> An often forgotten outcome of agglomeration is congestion costs (Hanson, 2000).

leading firms might be looking to source technical diversity by the latter. Modeling work suggests that the propensity for collocation with rivals increases when symmetry in firm R&D spending is high (Flyer & Shaver, 2003).

Therefore, technological leaders and laggards can end up co-located because the latter pursues the former or because both attempt to create value from accessing knowledge rich locations in some way. When this occurs, the question is how technological leaders may cope with the risk of asymmetric knowledge spillovers. Emerging research sheds light on some the mechanisms firms use. Zhao and Alcácer (2007) show that multi-location firms rely on three mechanisms to organize their R&D activities to appropriate the value of innovations generated in clusters: technological distance, internalization, and control. Their evidence on the global semiconductor industry provides support of leading firms generating innovations that are technologically distant from competitors, have a high level of internalization, and involve inventors from other geographic locations. Technologies intricately linked across a firm's operations, or internalized, are argued to be less prone to imitation as co-located competitors may only benefit from spillovers of portions of them in individual locations.

Internalization of technologies as a mechanism of value appropriation has been found not only in clusters but also in locations with weak appropriability regimes. Zhao (2006) shows that the ability to integrate technologies internally enables MNEs to conduct R&D in countries with weak intellectual property rights protection. In these institutional environments firms also develop technologies that are intricately related to their

knowledge in other locations, so probable local imitation in such places is unlikely to hinder their overall value appropriation. Similarly, Feinberg and Gupta (2006) find evidence of U.S. based multinationals responding to high risk in their host countries through increasing internal transactions. This parallel use of internalization in clusters and countries with weak intellectual property protection suggests that the former, possibly regardless of their institutional environment, become places with weak appropriability regimes. The effectiveness of internalization as a barrier to imitation may decrease as rivals co-locate in numerous locations. By doing so, they may be able to imitate locally key technological assets to subsequently integrate them.

In addition to the transfer of knowledge across firms within a location, as firms become geographically dispersed an additional consideration they face is the internal transfer and recombination of the externally-sourced knowledge. The value of the knowledge residing in a particular location has been argued to be contingent on its transfer and recombination inside the firm (e.g. Kogut & Zander, 1992; Zander & Kogut, 1996). Emerging research is beginning to uncover the organizing mechanisms heterogeneous firms use to cope with this challenge.

Lahiri (2003) finds that through intra-firm linkages geographically dispersed firms are more likely to absorb external knowledge spillovers. Going beyond knowledge absorption, Singh (2007) explores the impact of geographic dispersion of a firm's R&D activities on the quality of innovative output, finding that geographically distributed R&D per se does not improve the quality of a firm's innovation being in fact negatively

associated on average. That is, potential gains from access to diverse knowledge sources are on average offset by the difficulty integrating knowledge across multiple locations. Unpacking firm heterogeneity, additional findings suggest that firms significantly differ in their knowledge integration capabilities, and that those able to manage cross-fertilization of ideas from multiple locations achieve in fact more valuable innovations. The integrating mechanisms that increase the value of innovations are knowledge-sourcing from other locations within the firm, inventors having cross-regional ties, and the involvement of inventors recently moved from another region. Interestingly, the former two are analogous to the mechanisms found by Zhao and Alcácer (2007) as barriers to imitation in clusters. This brings into question whether they emerge as intended integration mechanisms or as an unintended byproduct of protection against localized imitation through internalization. Conversely, the internalization of technologies argued to be a protective mechanism could be confounded with integration efforts.

Examining these imitation and integration trade-offs generated by knowledge-seeking expansion and the heterogeneous firm response to them offers new insights on the influence of the external environment on firms' internal organization. These are significant contributions to strategic issues that underlie location research.

### **Expansion via acquisitions**

Firms' strategic geographic behavior has been examined empirically largely by focusing on greenfield investments. Far less is known about the role geography plays with respect

to acquisitions; even though acquisitions are the predominant form of FDI (Anderson, 2003). This inconsistency is understandable from a research design perspective because there are many research design advantages for focusing on greenfield investments rather than acquisitions. Nevertheless, because of their empirical prominence and because acquisitions reflect different strategic choices versus greenfield investments, acquisitions potentially exhibit different geographic patterns from those of new operations and are worthy of study.

Acquisitions and greenfield investments have three fundamental differences that can influence their geographic patterns. First, acquisitions bring the possibility of simultaneous entry into several locations because targets can be firms with geographically dispersed activities. Second, compared to greenfield investments, acquisitions involve an ownership decision. Empirically, this restricts the choice set of locations to those with potential targets (Head, Ries & Swenson, 1995). More importantly, this ownership decision implies that firms are not choosing solely locations as in the case of greenfield investments, but that location may be one of several determinants of target selection. Third, firms may restructure their operations geographically after expanding through acquisitions (North, 1974), which has not been noted as a salient issue as firms expand through greenfield investments. Because of these differences acquisition activity is likely to exhibit different geographic patterns from those of greenfield investments.

The following research supports the expectation that there are distinct geographic patterns across entry modes. Roberto (1994) analyzes the location of FDI into Italy via both acquisitions and greenfield investments and concludes that the location of foreign acquisitions is determined not only by the supply of acquisition candidates across locations but also by other geographic characteristics. Friedman *et al.* (1996) similarly show that significant differences exist between location preferences across entry modes. Ó hUallacháin and Reid (1997) find that the location of acquisitions by Japanese firms entering into the U.S. differ significantly from the location of their greenfield investments, and that different location attributes affect these modes over time.<sup>6</sup>

Although limited, there is a body of research that has explored geographic patterns in acquisitions. Research from economic geography provides some evidence that firms identify and select targets based on their geographic location. Green (1990) describes the existence of geographic patterns of acquisitions across countries, and also regionally within the U.S. and Canada. Green and Meyer (1997) show that several home and host country characteristics influence the geographic patterns of international acquisitions, and that certain location-specific attributes that attract acquirers differ across industries. Research in international business provides some additional evidence of geographic patterns in acquisitions. Mariotti and Piscitello (1995) study the location of FDI in Italy via acquisitions and find that foreign investors cluster their investments in specific regions, arguing that adverse asymmetry in information costs relative to domestic investors drives such pattern. Finally, Nachum and Wymbs (2005) examine heterogeneity

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<sup>6</sup> A case based literature has explored the geographic patterns of growth of retail chains finding no differences across entry modes (e.g. Allaway, Mason, and Black, 1991).

across firms in their tendency to cluster through acquisitions and show that the selection of targets by multinational firms expanding into agglomerations involves systematic location decisions.

While this research reveals patterns of location choice in acquisitions little attention has been paid to the observation that many acquisitions involve multi-location targets. In such acquisitions, do acquirers value attributes of the entire geographic configuration or of specific parts? Recent evidence is beginning to illustrate the conditions under which firms are likely to value geographic 'portions' of multi-location firms.

Firms seek to create value by tapping into localized knowledge spillovers not only via greenfield investments but also through acquisitions. Acquisitions in knowledge intensive industries are often motivated by the need to obtain intangible resources available in other firms (Wilson, 1980; Capron & Mitchell, 1988), such as technology in manufacturing industries (Grandstrand & Sjölander, 1990; Puranam, 2001). In such acquisitions, a target's presence in a knowledge intensive location is likely to be beneficial, since future technological developments in an industry are likely to occur in such locations (Porter, 1998). Technological developments generated in knowledge intensive regions may be directly related to the technology sought after through the acquisition, or complementary to it further enhancing its value (Teece, 1986). In some instances, the knowledge spillovers being generated in a knowledge intensive region could be of such high value that the need to rapidly access them could drive the acquisition of a firm present in it (Lorenzen & Mahnke, 2002). Innovative regions

emerge over time as industries evolve (Audretsch & Feldman, 1996a; Klepper, 2003). Firms have strong incentives to rapidly enter a knowledge intensive region because the value of the knowledge being created in it can quickly depreciate over time (Mansfield, 1985; Murtha, Lenway & Hart, 2001). The acquisition of an operation in it can allow them to tap into localized knowledge through the targets' direct or formal relationships with other firms (e.g. local supplier networks) and indirect or informal linkages (e.g. social interactions of managers or employees) which require significant type to develop (Lorenzen & Mahnke, 2002; Hennessy, 2005). Acquiring a local firm in a knowledge intensive region provides the acquirer with a 'local interpreter' of the region's knowledge (Lorenzen & Mahnke, 2002).

When single-location targets present in such a location are not available an acquirer may select a multi-location firm present there. In such cases, transactional problems can prevent firms from acquiring solely the part they value of a multi-location firm. In knowledge intensive industries, geographically dispersed firms engage in knowledge sourcing from multiple locations for internal transfer and recombination (Kogut & Zander, 1992; Lahiri, 2003). The value of an individual operation is difficult to assess accurately since it is likely to involve complex organizational processes (Nelson & Winter, 1982). R&D and manufacturing operations have in particular intricate linkages with other parts of the firm (Chi, 1994), and with the external local environment (Lorenzen & Mahnke, 2002; Hennessy, 2005). In addition, the value of a part of a larger firm is likely to depend on its technological complementarity with other parts of the firm (Teece, 1986). Difficulties disentangling and valuing a part of a larger firm create high

transaction costs leading to market failure, making acquirers buy the whole target (Capron, Dussauge & Mitchell, 1998). The market for firms becomes more efficient than the market for such geographic resources. Consistent with these arguments, Ramos (2007) finds that in acquisitions in knowledge intensive industries, because of access to valuable localized knowledge spillovers, acquirers positively value the knowledge intensity in single locations of multi-location targets.

Expansion via acquisitions often brings knowledge integration challenges. Therefore, when choice sets of potential targets exhibit geographic variation, acquirers are likely to avoid selecting geographically distant targets. Recent evidence is consistent with this possibility. Chakrabarti and Mitchell (2006) show that the geographic distance between potential acquiring and target firms' headquarters affects acquisition activity in the chemical manufacturing industry. Their findings suggest that acquiring firms prefer geographically proximate targets, and that such preference is stronger under conditions that involve greater post-acquisition integration efforts.<sup>7</sup> Similarly, Ramos (2007) provides evidence of the positive effect of geographic overlap of potential multi-location targets in increasing their likelihood of their selection in knowledge intensive industries. These are industries in which the need for internal knowledge transfer and recombination is particularly salient.

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<sup>7</sup> Distance can also affect target selection through its effect on information asymmetry or search. Recently Ragozzino and Reuer (2005) show that information asymmetry created by geographic distance among firms' headquarters influences target selection in acquisitions across multiple industries within the U.S., and that such information asymmetry is moderated by heterogeneous signaling mechanisms of potential targets such as having a venture capitalist or the reputation of their underwriters in the initial public offerings.

## **Future research**

The preceding literature review shows a significant evolution from simple explanations of generalized benefits from geographic locations to a more nuanced understanding that considers firm heterogeneity and strategic interaction in location choice. It also shows an evolution towards understanding of the role of geography in acquisitions versus analyses that focus solely on greenfield investments.

We expect the next logical steps in this research progression to evaluate the following issues. First is continued investigation of the role of location in acquisition choices. Second is examining restructuring after location choices. Third is understanding the nuances and interaction of vertical and horizontal spillovers to entrants, which have been largely tackled individually. We describe potential avenues to each of these steps in the following discussion. Done well, we expect extensions of FDI research in these areas to impact research in the broader field of strategic management.

### *Further examining location choice in acquisitions*

Recent theoretical developments and evidence imply the need to incorporate a more nuanced geographic perspective of firms by recognizing that many firms are multi-location entities. This recognition has three important implications.

First, when multi-location firms are part of the examined settings, future research will likely have to recognize and deal with this geographic complexity. This call applies not only to research focused on the study of geographic determinants of target selection but

also to research that examines the influence of non-geographic characteristics of potential targets.

Second, emerging work provides initial guidance on the geographic attributes of multi-location firms that future research may need to consider. Empirical work dealing with multi-location firms may need to examine not only the role of headquarters' location but also of other operations. Research has shown so far a tendency to examine the role of headquarters' locations on target selection, but evidence from Ramos (2007) shows that other parts in the configuration of multi-location firms matter under differing industry conditions.

Third, although this work notes some conditions where accounting for the role of specific portions of multi-location firms would seem necessary (e.g. acquisitions in knowledge intensive industries or horizontal acquisitions), other settings could imply the valuation of different geographic traits of multi-location firms. Research has, for instance, noted different expected geographic patterns of expansion in manufacturing and service industries (e.g. Baum, Xiao Li & Usher, 2000). Such differences appear to be driven in part by different types of agglomeration externalities (i.e. production versus demand externalities)

### *Restructuring*

Examining business reconfiguration after entry is necessary for a better understanding firm evolution and change (Karim & Mitchell, 2000; Capron et al., 2001; Berry 2007).

Assessing how acquirers value the geographic attributes of parts of multi-location targets can enhance our understanding of post-acquisition restructuring. The locations where multi-location targets operate likely influences the restructuring of operations post acquisition. Future research would be well served by better understanding post-acquisition location behavior.

Furthermore, while the propensity of restructuring is evident with acquisitions, restructuring after expansion via greenfield also deserves attention, in particular as expanding firms may pursue both actions simultaneously. The assumption of spatial fixity of greenfield investments is pervasive in the literature. Recent trends in the form of relocation of operations and headquarters should make us question this assumption (e.g. Birkinshaw, Braunerhjelm, Holm & Terjesen, 2006).

Future strategy research examining restructuring could also build on work in economic geography that characterizes restructuring and examines its prevalence under different industry conditions. It has been noted that geographic restructuring can be comprised of relocation, sale, closure and even reduction of operations (Keeble, 1971; North, 1974; Kirkham & Watts, 1998). Economic geography research also provides evidence of manufacturing firms closing and relocating operations after acquiring (North, 1974), and of closing operations due to their excessive distance from the head-office and other plants (Kirkham & Watts, 1998).

Strategy's main contribution to the aforementioned inquiry should come from emphasizing the role of industry and firm heterogeneity in the propensity and type of restructuring pursued. Some strategy research is beginning to examine the geographic restructuring pursued by multi-location firms and its determinants. For instance, recent work by Belderbos and Zou (2007) examines the divestment of foreign manufacturing affiliates within firms' international plant networks drawing on real options and agglomerations theory. Their evidence supports that MNEs both maintain flexibility options by maintaining a network of plant affiliates and exercise these flexibility options through divestments of affiliates that do not add flexibility value. Cohen (2006) provides a rich account of the geographic evolution of multi-location firms in the U.S. computer programming sector, finding additional support for the managerial burden associated with dispersed geographic configuration even after the adoption of information and communications technologies. This emerging research provides a richer notion of firms' geographic plasticity.

#### *Interaction between vertical and horizontal FDI*

Research exploring the role of agglomeration externalities on location choice has largely focused on benefits stemming from the co-location of similar operations (i.e. activity or industry specific externalities). Similarly, research focused on knowledge spillovers, one of such externalities, tends to theorize about activity specific spillovers (e.g. among manufacturing or R&D operations) within industries.<sup>8</sup> This seems due to its theoretical foundation on Marshallian externalities, which are activity and industry specific. Less attention has been devoted to potential agglomeration benefits, and knowledge spillovers

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<sup>8</sup> However this notion is not always reflected in the empirical measurement.

in particular, among different activities and industries (e.g., Zhao and Alcácer, 2007). Jacobs (1969) proposed such cross-industry knowledge spillovers as facilitators of innovations in cities caused by the observation and imitation of practices.

Empirical work by Chung and Song (2004) explores intra and inter-firm agglomeration externalities and sheds light on this possibility. Their evidence shows that firms in the electronics sector expanding into the U.S. value co-locating not only with other firms' similar activity but also with different activities, suggesting the existence of horizontal and vertical agglomeration externalities. Similarly, Chang and Park (2005) show that Korean firms entering China value positive externalities from local firms in different industries. Evidence by Zhao and Alcácer (2007) also suggests that while firms seek to protect their innovations from horizontal competitors, they remain open to Jacobian knowledge spillovers. In light of this emerging evidence, further investigation of how within-industry and cross-industry knowledge spillovers interact seems warranted.

*Cross-fertilization from FDI research to location choice research in strategic management*

Done well, we believe that international location choice research can be an important informant to location choices in the domestic context. For instance, emerging research examining the propensity and determinants of international relocation may inform the study of analogous restructuring within domestic contexts. Similarly, the examination of restructuring in multinational plant networks through expansion and contraction may be extrapolated to multi-location firms in domestic settings. Their prevalence seems

plausible in countries that exhibit significant internal variation in geographic attributes stemming from size. Such intra-country geographic variation would suggest similar theoretical mechanisms at work. The potential reconfiguration of firms' geographic assets within domestic settings deserves attention since it would imply a sophisticated endogenous use of geography similar to what we observe in international settings. Thus, location dynamics typically viewed as international may also be examined and uncovered within domestic settings.

## **Conclusion**

We reviewed theoretical and empirical research explaining how firms seek to create and capture value through their international location choices. In this pursuit, we considered work that does not explicitly deal with FDI but nonetheless provides insight due to analogous underlying mechanisms. We distinguished between market-seeking and input-seeking expansion, moving from seminal research positing generalized explanations of location superiority to more nuanced predictions that account for firm heterogeneity and strategic interaction among firms. We also depicted a recent departure in the literature from focusing solely on greenfield investments towards examining acquisitions. In light of this progression, further analysis of location choice in acquisitions and research examining post-expansion geographic patterns seems warranted to validate and enhance extant research. Moreover, a better understanding of determinants and outcomes of geographic expansion related to foreign investments has the potential to inform and influence strategy research in many settings.

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