



IPL
instituto politécnico
de leiria

DO WE BUY MORE OR LESS WHEN WE WANT TO LEARN? THE KNOWLEDGE STRATEGIES AND STRUCTURAL FORMS OF US CROSS-BORDER ACQUISITIONS

Manuel Portugal Ferreira
Instituto Politécnico de Leiria, Portugal

Stephen Tallman
The University of Richmond, USA

Dan Li
Indiana University, USA

2007

working paper




Glob
advantage

Working paper n° 05/2007

globADVANTAGE
Center of Research in International Business & Strategy

INDEA - *Campus 5*

Rua das Olhalvas

Instituto Politécnico de Leiria

2414 - 016 Leiria

PORTUGAL

Tel. (+351) 244 845 051

Fax. (+351) 244 845 059

E-mail: globadvantage@ipleiria.pt

Webpage: www.globadvantage.ipleiria.pt

advantage

WORKING PAPER N° 05/2007

September 2007

**DO WE BUY MORE OR LESS WHEN WE WANT TO LEARN?
THE KNOWLEDGE STRATEGIES AND STRUCTURAL FORMS OF US CROSS-
BORDER ACQUISITIONS**

Manuel Portugal Ferreira

Escola Superior de Tecnologia e Gestão

Instituto Politécnico de Leiria

Morro do Lena - Alto Vieiro

2411-911 Leiria, Portugal

Phone: ++ 1 244 - 820300

Fax: ++ 1 244 - 820310

E-mail: portugal@estg.ipleiria.pt

Stephen Tallman

Robins School of Business

The University of Richmond

Richmond, VA 23173

E-mail: stallman@richmond.edu

Dan Li

Department of Management

Kelley School of Business

Indiana University

Bloomington, IN 47405-1701

Email: lid@indiana.edu

2007

An earlier version of this paper was presented at the AIB 2006.

**DO WE BUY MORE OR LESS WHEN WE WANT TO LEARN?
THE KNOWLEDGE STRATEGIES AND STRUCTURAL FORMS OF US
CROSS-BORDER ACQUISITIONS**

ABSTRACT

Cross-border acquisitions may be a primary mode for accessing novel knowledge and the building up of knowledge capabilities. However, the successful exploration of novel business and/or location knowledge may require specific structural forms for the incorporation and internal transfer to occur. In this paper we examine the relationship between the knowledge strategy and the structural form of the acquisition, specifically the degree of equity acquired. Our analyses of 439 US cross-border acquisitions revealed a curvilinear effect of location-related knowledge exploration but a linear effect of business-related knowledge exploration on the structural form of cross-border acquisition. We conclude that the knowledge strategy, and perhaps the type of knowledge being sought, is related in complex manners to the structural form adopted.

Keywords: cross-border acquisitions, knowledge strategy, equity ownership, structural forms, learning

INTRODUCTION

The volume and magnitude of cross-border acquisition over the past decade has led some authors to refer to this "CEO favorite growth strategy" (Hitt, Ireland & Harrison, 2001, p. 384) as a merger mania. According to recent United Nations reports the volume of mergers and acquisitions (M&As) accounts for about 80% of the foreign direct investment (FDI) flows (UNCTAD, 2000). Cross-border acquisitions have surpassed alternative entry modes as the vehicle through which multinational corporations (MNCs) exercise their internationalization strategies (Zollo, 1998).

Academic research has accompanied the growth in the volume and value of acquisitions, notably cross-border acquisitions. However, it has mostly relegated the study of cross-border acquisitions to comparisons with alternative entry modes, such as greenfield startups and joint ventures (Li & Guisinger, 1991; Hennart & Park, 1993; Woodcock et al., 1994; Barkema & Vermeulen, 1998) in the analysis of the determinants of the governance forms in foreign expansion. Moreover, extant studies tend to place acquisitions in an undifferentiated group rather than considering the possibility of different strategic motivations underlying the choice of alternative cross-border acquisitions' structures. These studies do not distinguish the share of equity ownership involved in the acquisition, placing together full and partial acquisitions. However, it is probable that acquisitions may be structured differently for different purposes, and do not require a comparison among alternative entry modes.

Cross-border acquisitions have been examined as attempts either to leverage existing resources in new industries or host countries (Caves, 1971; Buckley & Casson, 1976; Rugman, 1981) or, more recently, as attempts to

explore novel technologies and knowledge (Hedlund & Ridderstrale, 1997; Morosini, Shane & Singh, 1998; Karim & Mitchell, 2000; Vermeulen & Barkema, 2001). While exploitation involves using current resources in new operations, such as operations in host countries, exploration involves accessing novel knowledge, developing new resources, information, and capabilities. These resources and knowledge reside beyond the firms' immediate business or geographic landscapes and may therefore help to explain international expansion as a global exploration strategy. The expansion into foreign countries contributes to the building up of MNCs' knowledge capabilities (see Tallman & Fladmoe-Lindquist, 2002) and increases the likelihood that a diversified pool of experiences will endow the multinationals with the next generation knowledge. The characteristics of the knowledge sought determine the extent to which location (and hence FDI), and share of ownership (and hence acquisition, in whole or in part) of a foreign subsidiary are important for exploring (learning) or exploiting (marketing) purposes. Therefore, the specific strategy of the MNC to exploit and/or explore knowledge across borders may influence a variety of entry decisions such as the degree of equity ownership acquired, the extent of integration or autonomy conferred to the subsidiary, and the business and the location entered.

However, to the best of our knowledge, no other study has assessed the degree of equity ownership in cross-border acquisitions as a reflection of the MNCs' knowledge strategy. The overarching research question for this study is: *What is the impact of the MNC's knowledge strategy for each deal - exploiting or exploring for distinct knowledge types - on the ownership structure of cross-border acquisitions?* The degree of equity ownership is

important because varying degrees of ownership entail equally varying levels of control, integration, inter-firm collaboration, resource commitment, irreversibility of strategic actions, access to resources, and exposure to industry and country risks and uncertainties. It is further probable that the degree of equity impacts on the reported potential loss of resources of the target firm post acquisition (Dyer, Kale & Singh, 2004). Further, we differentiate MNCs' exploration for business and location knowledge and hypothesize on the relationships between the knowledge strategy pursued and the structural form of the deal (in this paper empirically simplified to the degree of equity ownership) in US cross-border acquisitions. Our empirical analyses of 439 cross-border acquisitions revealed a curvilinear effect of location-related knowledge exploration but a linear effect of business-related knowledge exploration, on the ownership structure of cross-border acquisitions. Hence, as we suggested, the relationship between the knowledge strategy, and perhaps the type of knowledge being sought related in complex manners to the structural form adopted.

Below, we develop the theoretical foundations and the hypotheses. Then, we present the methodology used to test the hypotheses, sample and variables. The results of the empirical tests follow. The paper concludes with a discussion, implications for theory and practice, and avenues for future research.

THEORY DEVELOPMENT

Cross-border acquisitions are a form of governance of transactions, in which the focal acquirer MNC expands its internal boundaries by internalizing activities that were previously executed by the target firm. A cross-border acquisition occurs when one firm (the acquirer MNC) acquires part or the

totality of the equity of another firm (the target firm) in a foreign country. Contrary to a merger, where both firms are absolutely integrated, acquisitions per se do not represent a model of organizational integration; rather, the degree of equity acquired confers on the acquirer MNC a continuum of control options and possibly of levels of integration of the resources of the target firm (McGahan & Villalonga, 2004).

Extant research has somewhat confounded ownership with entry mode. The typical aggregations on shared and whole ownership are often used indistinctly of the entry mode. Similarly, the usual classifications of entry modes do not distinguish the degree of ownership involved. Although there is arguably value of using, for example, insights from joint venture research for the study of partial acquisitions, or from greenfield startups for full acquisitions, it is evident these modes are substantially distinct. Our study is a within entry mode examination, rather than between alternative modes, allowing us to distinguish MNCs' strategies for specific events, or deals, and how different MNCs' strategies may lead to one or the other structural choice in terms of equity ownership in cross-border acquisitions.

Degree of Ownership

While a majority of the existing studies tend to assume that cross-border acquisitions refer to full acquisitions, an acquisition may actually involve any equity stake from 1 to 100%. For example, a full acquisition (i.e., the acquisition of 100% of the target firm's equity) provides the acquirer complete control over the target's resources, and a minority acquisition (i.e., the acquisition of less than 50% of the target firm's equity) provides at most partial control, or partial ability to influence the operations of the target. Different degrees of ownership involve varying levels of financial resource

commitments, degrees of independence and autonomy in decision making, exposure to political, economic, social and business risk, and also different levels of learning. The extant research has often conceptualized the degree of equity ownership as representative of the level of integration or control of the subsidiary. However, the ownership stake is not a direct equivalent to the degree of control exercised or the extent of integration. Although control requires some degree of ownership, ownership may not be exercised in controlling. Moreover, for instance, lower ownership generally entails lower control and less integration or more autonomy, but it is likely to favor the access to the target's resources, as we will propose. Ownership and integration are somewhat different sets of decisions.

The degree of equity ownership is a structural complementary alternative to the degree of autonomy conferred to the target firm post-acquisition as suggested by Haspeslagh and Jemison (1991). That is, when the target possesses valuable resources for the acquirer, the acquirer may prefer to confer a higher degree of autonomy to the new subsidiary (Haspeslagh & Jemison, 1991), or to acquire only a partial equity stake in the target. Acquirer MNCs may prefer lower ownership modes to absorb efficiently the target firm's skills, routines, technologies, and organization culture to avoid the loss of the target's value, employees and clients after the acquisition (Dyer et al., 2004). Conversely, MNCs prefer higher ownership modes to transfer headquarters' knowledge resources, competitive advantages, skills, routines, and ways of doing things to the subsidiary. At least to some extent, full acquisitions are more likely to involve lower post-acquisition integration hazards (Barkema & Vermeulen, 1998; Vermeulen & Barkema, 2001) than partial acquisitions because in a full acquisition the acquirer is essentially seeking to transfer its

resources and capabilities to the target firm. In this regard, full acquisitions are modes for the exploitation of firm-specific advantages. In other words, full acquisitions may be preferred mechanisms to exploit capabilities held, rather than explore new knowledge.

The degree of equity ownership is also a strategic alternative to what Hayward (1999) termed "small acquisition mistakes" and to Sitkin's (1992) "small losses." According to Hayward, MNCs could start by acquiring small firms to learn. As they develop knowledge of the target business and location, higher commitment modes could then be employed more safely (Johanson & Vahlne, 1990). Brown and Eisenhardt (1998) also suggested that because of the uncertainties involved in entering unfamiliar territories (i.e., uncertainties in explorative learning), MNCs may scan the future using initially low cost probes and formulate their next strategic moves accordingly, suggesting that partial equity stakes in acquisitions could resemble low cost probes. Furthermore, small equity positions on the target may find parallelism on a real options model of foreign expansion.

The resource- and knowledge-based views suggest a positive impact of the target's resources on the level of integration such that the higher the value of these resources the higher the incentive to fully integrate them. The target's resources may be combined with other resources/knowledge already held by the acquirer to promote value creation, operational and managerial synergies (Datta & Grant, 1999). However, several issues need consideration. First, higher integration does not guarantee internal transfer. Second, higher integration may disrupt the value of the target's resources. Third, some resources are highly embedded and indivisible from the firm and cannot be efficiently integrated (Hennart, 1988; Mitchell, 1994; Anand & Delios, 1997).

These resources are strongly linked to the relationship between the firm and the host country, and cannot be acquired in disembodied form in the factor market (Barney, 1991) or accessible by fully integrating the target firm. Fourth, some resources need to be accessed directly in the location where they exist. Fifth, by acquiring a partial ownership stake, the acquirer also minimizes a variety of country risks and reduces locational uncertainty (Tallman, 1992), while it gradually accumulates host country and industry knowledge (e.g., about the market, institutional environment, distribution systems). Hence, it seems reasonable to suggest that the higher the value of the target's resources, the more likely the acquirer will avoid full integration, opting instead for conferring a higher degree of autonomy to the target firm (Haspeslagh & Jemison, 1991) in one solution, or in another solution, by taking only a partial equity stake in the target firm. By engaging in a partial acquisition the acquirer preserves the value of the acquired resources (Haspeslagh & Jemison, 1991; Zollo, 1998), avoiding disruptions in the system of routines and procedures of the target firm.

Different governance models, or structural forms, are possibly more appropriate for some types of knowledge. For example, Hennart (1988) noted that licensing is more appropriate for the transfer of explicit knowledge but closer interaction through equity modes may be more appropriate to access and absorb novel knowledge (Killing, 1980). Some acquisitions may require at least a degree of internalization while others may require total integration. For example, MNCs pursuing a knowledge seeking, or knowledge exploration, strategy may need to acquire part of the equity of a target due to imperfections in the market for knowledge (Teece, 1981; Hennart, 1982). In other instances, diverse structural arrangements may be required for different

types of knowledge sought. For instance, Hennart (1988) noted that *link* joint ventures are often used to combine different types of knowledge, and that *pooled* joint ventures are used to combine similar types of knowledge. Hence, even for similar types of knowledge, equity relationships may be more efficient than either market based exchanges (e.g., licensing) or fully integrated governance models (e.g., full acquisition). In particular, imperfections in the market for knowledge seem to emerge primarily from evaluation uncertainties, ineffectiveness in the system for protection of proprietary knowledge resources (e.g., patents), and the tacitness of some forms of knowledge.

To conclude this section, our discussion supports the argument that the degree of equity ownership acquired should reflect either the interest of the acquirer MNC in the target's resources or the transferability of the acquirer's resources and (knowledge-based) capabilities to additional operations. Each of these motivations will differentially drive the acquisition of different shares of equity of the target firm. That is, the ownership structure should reflect, and differentiate, the motives and strategies underlying cross-border acquisitions. Using a knowledge-based strategy perspective we show how the ownership structures can be used to increase the effectiveness of the MNCs' knowledge strategy in cross-border acquisitions.

Knowledge Strategy

The strategy of the firm consists of the goals and objectives that lead to the allocation of firm's resources (Chandler, 1962) and addresses many aspects of the firms' behaviors. In this study we focus on knowledge strategies. Knowledge strategies address the extent to which a focal deal is knowledge explorative. In international management studies the knowledge strategies have often been defined as market seeking (i.e., exploitation) and

strategic asset seeking (i.e., exploration) strategies (Dunning, 1993; Dunning & Narula, 1996). The relation between strategy and structure was evidenced in various studies, most notably by Chandler's SCP, and is outside the immediate focus here, but the degree of equity acquired is one of the structural features to consider in the implementation of acquisitions.

The MNCs may augment their knowledge- experiential-based capabilities through global exploration strategies (Vermeulen & Barkema, 2001; Tallman & Fladmoe-Lindquist, 2002) by entering different technological (i.e., businesses/industries) and/or geographic environments (i.e., countries) (Karim & Mitchell, 2000). Cross-border acquisitions ease the combination of MNCs' in-house existing knowledge with novel knowledge acquired from external partners. Following Reuer et al. (2004), "novelty" refers to the extent to which a focal deal involves accessing knowledge that departs from prior held knowledge. Hence, a deal may be novel both in terms of accessing knowledge at the level of the business (e.g., product-related knowledge, or technological capabilities applied to production) and/or novel in terms of accessing a location in which the acquirer MNC is not yet present.

The MNCs may pursue different knowledge strategies simultaneously for different deals (March, 1991). The characteristics of the deal, rather than those of the MNCs, are a more accurate manifestation of the primary knowledge benefits and knowledge strategy of the MNCs for the foreign deal - i.e., the extent to which each deal represents higher or lower knowledge exploration. Hence, the knowledge strategy of the acquirer MNC for each deal is appropriately assessed in terms of the knowledge that may be accessed and how, and how much, this knowledge departs from the MNCs' current pool of knowledge. The acquirer MNCs' knowledge strategy for a focal cross-border

acquisition may influence the structural form adopted and specifically the degree of equity ownership acquired. To the extent that the knowledge strategy of the acquirer MNC differs, so may structural choices governing the acquisition.

Exploring for Business Knowledge

The MNCs will be accessing novel business-related knowledge when diversifying into new industries; industries that requires different knowledge skills and whose knowledge requirements differ from those already known (Coff, 1999). The extent to which each deal serves exploration purposes is partly driven by the applicability of the MNC-specific capabilities outside the MNC's traditional core business and into more unrelated businesses. In other words, the relative knowledge novelty of a business entered is determined by the MNC's prior business experiences. Hence, the evaluation of the acquirer's business exploration strategy may be formulated from the knowledge requirements, skills, or features of the acquirer and target firms industries (Chang, 1996; Coff, 1999; Reuer & Ragozzino, 2004). Coff (1999), for example, suggested that the closer the knowledge requirements of the target and acquirer firms' industries, the more familiar the acquirer will be with the target's resources, buyers and suppliers, management capabilities, and so forth, and the acquirer MNC will be better able to evaluate whether its current resources may be synergistically combined with the resources of the target. Reuer et al. (2004, p. 22) recently suggested that "[i]n its primary business, the MNC is better able to value potential targets because it is more familiar with pertinent technologies, employee skills, and other resources" because "the two firms will tend to have greater similarities in business practices and organizational routines than is the case in inter-industry transaction," thus

mitigating the risks of poor evaluation of the target. Therefore, the more proximate (or related) the businesses of the acquirer and target, the more similar will be the assets of the two firms, thus causing fewer integration hazards (Chatterjee & Wernerfelt, 1991; Harzing, 2001), and more potential for synergies (Chatterjee, 1986, 1990).

In accord to received theory, resource-rich MNCs are traditionally assumed to exploit their business knowledge held, perhaps leveraged in combination with the resources of the target, by expanding into similar business- or product-related businesses through wholly-owned modes. Wholly-owned modes better protect the value of the MNCs' resources. Similarly, it is likely that the primary motivation underlying the MNCs' business-related cross-border acquisitions is the exploitation of the MNC's capabilities. According to Capron, Dussauge and Mitchell (1998), in absolutely related acquisitions, most technical resource transfers are from the acquirer to the target. Anand and Singh (1997) and Capron et al. (1998) noted that firms' resource redeployments post-acquisition will be higher the more similar are the target and acquirer firms. These transfers from the acquirer MNC to the target are probably mostly transfers of business knowledge, which are to be subsequently exploited in the host market.

The higher the business knowledge relatedness of the new focal deal with the MNCs' business knowledge held, the higher the likelihood that a focal MNC will seek to obtain a larger equity stake in the target that grants control over its operations. Conversely, when the knowledge requirements and skills of the target and acquirer industries vary considerably (i.e., business unrelated acquisitions), there are larger information asymmetries regarding the target's resource base. Acquisitions in non-core, and more unrelated, business areas

are more likely to face evaluation hazards because the acquirer MNC "will be less familiar with targets and less knowledgeable about the value of their underlying resources" (Reuer et al., 2004, p. 22). Moreover, the more distinct are these businesses the more likely the acquirer will misevaluate the transferability of the target's resources, and the synergistic potential of these resources when combined to the acquirer's resources. Several scholars have found empirical evidence that MNCs' entering novel businesses prefer acquisitions to greenfields (e.g., Barkema & Vermeulen, 1998; Caves & Mehra, 1986; Hennart & Park, 1993) because acquisitions underlie a learning rationale whereby the acquirer MNC seeks to capture manufacturing, management or commercialization capabilities from the target firm. Hence, the selection of the target firm is more hazardous for cross-border acquisitions in non-core and unrelated businesses than in the core and related businesses, as suggested previously. A structural form based on shared equity may be particularly advisable in these cases. In other words, the lower the business-related knowledge distance provided by the acquisition the closer to a knowledge exploitation strategy, conversely, the larger the knowledge distance between acquirer and target the higher the knowledge exploration. The above rationale suggests a linear effect of knowledge exploration and equity stake, such that the lower the exploration the higher the equity stake.

A competing hypothesis is warranted, however, because it is possible that an MNC entering a business with which it is absolutely unfamiliar (in which it had no previous experience) it may opt for acquiring the totality of the target firm. The internal governance of these subsidiaries has to be substantially distinct. For example, an exploitation strategy is likely to require the absorption and integration of the target firm to take advantage of scale and

scope economies, and internal transfers. Conversely, an exploration strategy, as evidenced in an absolutely business-unrelated acquisition, is likely to require conceding a great degree of autonomy to the foreign subsidiary (Datta & Grant, 1999; Vermeulen & Barkema, 2001). In this case it seems probable that the target is not really integrated into the overall MNC, but rather that it is managed independently. Acquisitions in unrelated businesses may be particularly hazardous (Singh & Montgomery, 1987) because the dominant logic is very different across businesses (Prahalad & Bettis, 1986), suggesting that acquisitions in unrelated spaces may be given high autonomy. Morosini et al. (1998) also noted that high levels of cultural distance between firms may lead to cultural ambiguities and process losses where cultures collide and may lead to conflict (Jemison & Sitkin, 1986). Appropriate structural forms can prevent conflicts from emerging by, for example, keeping cultures apart. Hence, it is in these cases where ownership and integration become more distinct.

MNCs are less likely to integrate knowledge from highly different and autonomous subsidiaries (Vermeulen & Barkema, 2001). These autonomous subsidiaries may have idiosyncratic knowledge mandates, or may simply be outposts into radically new areas of business (Brown & Eisenhardt, 1998; Birkinshaw, 1997). Haspeslagh and Jemison (1991) focused specifically on post-acquisition implementation and highlighted the tension between the strategic interdependence of the acquirer and target firms and the need to provide autonomy to the target firm for effective knowledge transfer. They noted that while strategic interdependence requires integration to maximize the potential synergies, knowledge transfer, or resource sharing, the need for autonomy emerges when the acquirer is unfamiliar with the target's resources,

markets, and technologies. This rationale suggests a possible curvilinear effect of the knowledge strategy with the equity stake. Hence, we formulate two competing hypotheses:

Hypothesis 1.1. *The greater the business knowledge exploration (novelty) in a cross-border acquisition, the lower the share of equity ownership acquired.*

Hypothesis 1.2. *The effect of business knowledge exploration on the share of equity acquired is U-shaped, such that the MNC will acquire a larger share of the equity of the target firm for both high and low levels of business knowledge exploration and a lower share of the equity for intermediate levels of business exploration.*

Exploring for Location Knowledge

The MNCs also acquire firms in different locations, not only in different businesses. A significant body of research on industry clusters, for example, has highlighted the benefits from accessing location-specific knowledge that is often "in the air" (Marshall, 1920; Shaver, 1998; Tallman et al., 2004). Location-specific knowledge is developed idiosyncratically in each country as a result of education policy, orientation towards science and R&D, culture, innovation system (Kobrin, 1991; Kogut, 1991; Cantwell & Janne, 1999), political, legal, economic and social profiles. Some locations are particularly interesting learning sites due to their idiosyncratic technological trajectories, knowledge bases, institutions, national culture, social and cultural development, pattern of government intervention, demand and supply conditions and inter-firm rivalry that provide them a comparative advantage (Porter, 1990). By entering a new country, MNCs are building their location-related knowledge.

The farther the locations are from the MNCs' prior geographical experiences, the more likely these represent a greatest deviation from the current knowledge portfolio, and the higher the opportunity for learning. Location-specific knowledge is built through years of education of the population, general governmental expenditures in education, government R&D, host country firm's investments in R&D. All these materialize the knowledge that may be sought after by foreign investors, but also make part of the architectural knowledge that characterize and distinguish locations (Tallman et al., 2004). Location knowledge is also bound by the national culture. For example, different levels of power distance (Hofstede, 1980) may underlie different models of organization of labor and the preference for more or less hierarchical structures, and different levels of uncertainty avoidance may entail different levels of entrepreneurial activity. We may thus consider that also cultural distance (Kogut & Singh, 1988) between home and host country - to the extent that it highlights countries' dissimilarities - is an indicator of whether the acquirer MNC will be accessing knowledge that departs more radically from the current stock of knowledge (Rosenkopf & Nerkar, 2001).

Location-related knowledge exploration strategies are executed by entering new locations; that is, MNCs access novel location-related knowledge when expanding to countries where they are not yet present. Some locations', or countries', endowments are location-specific and not transferable away from the location (Anand & Delios, 1997). As Anand and Kogut (1997) put it, not all resources and knowledge are fungible across borders. The transferability, or lack of it, not only justifies cross-border acquisitions because they facilitate the "procurement of host country knowledge, resources and

capabilities" (Anand & Delios, 1997, p. 581), but also requires the selection of the structural form more likely to guarantee access to, and absorption of, these knowledge/resources. Cross-border acquisitions seem to be the most appropriate mode to span boundaries and access location-specific knowledge. That is because mere co-location may not suffice for learning, and foreign firms may instead be required to become embedded on the inter-firm relationships in the local network of firms and institutions (Saxenian, 1994). Collaborative approaches, such as shared equity ownership arrangements (e.g., partial acquisitions, alliances), speed knowledge acquisition and reduce technological uncertainty by relying on the absorption of the knowledge held by the partner firms (Mowery, Oxley & Silverman, 1996; Powell et al., 1996). Hence, when the goal is to learn from the location, the MNC is likely to take only a partial equity stake on the target firm.

However, similarly to the rationale presented for business knowledge exploration, it is reasonable to suggest a curvilinear relation between the knowledge strategy and the structural form. Briefly, we advance that at very high levels of location exploration it may be better to fully acquire a target firm. When the location knowledge departs too radically from the knowledge pool held, the acquirer MNC has little to none absorptive capacity - the current knowledge does not permit the assessment or commercial application of the knowledge accessed. Hence, in those instances where the location is absolutely unfamiliar, the best may be to fully acquire the target, perhaps providing it with complete autonomy (Datta & Grant, 1999) so as not to disrupt the value of the knowledge and because any attempts to integration would be largely counterproductive. Acquisitions in very unrelated locations may be risky (Singh & Montgomery, 1987) and be governed by a different way

of doing things (Prahalad & Bettis, 1986). The subsidiaries in distant locations may be kept autonomous and empowered with specific knowledge mandates (Birkinshaw, 1997). Morosini et al. (1998) also noted that high levels of cultural distance between firms may lead to cultural ambiguities and process losses where cultures collide and may lead to conflict. The need for autonomy of these subsidiaries emerges because the acquirer is completely unfamiliar with the target location. In other words, intermediate levels of location exploration that make use of some capabilities of the MNC but also seek to access some degree of novel knowledge are likely to call for varying levels of shared equity positions. Hence, some similarities, or relatedness, between acquirer and target firms create potential for synergies and learning (Capron, 1999) but possibly only if they are not so great as to prevent future inter subsidiary transfer. We formulate two competing hypotheses on the relationship between location-related knowledge exploration and equity ownership:

Hypothesis 2.1. *The greater the location knowledge exploration in a cross-border acquisition, the lower the share of equity ownership acquired.*

Hypothesis 2.2. *The effect of location knowledge exploration on the equity acquired is U-shaped such that the MNC will acquire a larger share of the equity of the target firm for both high and low levels of location knowledge exploration and a lower share of the equity for intermediate levels of location exploration.*

METHOD

Sample Selection

We retrieved the data on cross-border acquisitions from the SDC Platinum database and restricted the criteria as follows. First, we included only

completed and unconditional¹ cross-border acquisitions that were executed in the year 2000 by US firms. Maintaining the year constant, we avoid potential year effects that could confound the analyses. We selected the year 2000 because since in 2000 there were a large number of acquisitions that yield an appropriate sample size. Restricting the cross-border acquisitions to only US acquirers allowed us to maintain constant the country of origin of the acquirer, thus also avoiding possible inter-country variations. These variations may exist but are not our focus here. Second, we excluded financial services firms (e.g., banks) since these operate with a different set of principles and their reporting standards are substantially different from those of manufacturing and other service firms. We further included only publicly held acquirer firms since data on private firms are virtually non-existent². Third, we excluded acquisitions in offshore financial havens, such as the Virgin Islands and Bermudas because it is likely that the acquisitions in financial offshores seek only taxation or accounting benefits. Fourth, we retrieved only the first acquisition in a focal target firm. In other words, we do not include sequential acquisitions. Hence, we excluded the acquisitions where the acquirer is reinforcing the equity stake in a given target firm.

It is worth mentioning that the object of analyses is the focal cross-border acquisition, but the historical data refer to the acquirer ultimate parent and not necessarily to the focal acquirer. With this procedure we build a more comprehensive representation of the MNCs' capabilities that may or may not be used in cross-border acquisitions. That is, for each acquisition we tracked down the acquirer ultimate parent, and it alone may account for some

¹ The inclusion of unconditional acquisitions captures different reporting system of Australia.

² We allowed private target firms to stay in our sample because the data on foreign target firms are largely not accessible for either public or private target firms.

differences we found compared to other studies previously carried out on cross-border acquisitions. For example, the firms in our sample seem to have a larger international experience and acquisition capability than those in Reuer et al. (2004). We believe that a better depiction of the MNCs' capabilities requires that we look at the acquirer's ultimate parent rather than the acquirer per se, because predictably the capabilities accumulate at the level of the overall firm, not simply at the level of a focal acquirer unit. The focal acquirer may be the headquarters, a subsidiary in the U.S., or a subsidiary in a foreign country (either the focal target country or any other foreign country).

The final sample comprises 439 cross-border acquisitions³ by 231 U.S. MNCs. Of these, roughly about 30% involved the acquisition of less than the total (or full) equity of the target firm. Specifically, 83 acquisitions (19%) were minority acquisitions and 49 (11%) were majority acquisitions. Not surprisingly, we observed that a large proportion of the acquisitions occurred to the United Kingdom (19%), Canada (12%), Germany (7.5%) and Australia and Brazil (5%).

Measures

Dependent variable

The dependent variable assesses the degree of equity ownership acquired in a focal cross-border acquisition. In this study we coded the equity stake into a variable with a binary outcome: full versus non-full.⁴ The degree of equity

³ The target countries included in our sample were: Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Brunei, Canada, Chile, China, Colombia, Czech Rep., Denmark, Finland, France, Germany, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Mexico, Morocco, Netherlands, New Zealand, Norway, Pakistan, Peru, Philippines, Poland, Portugal, Russian Federation, Singapore, Slovak Republic, South Africa, South Korea, Spain, Sweden, Switzerland, Thailand, Turkey, United Kingdom, Venezuela, Vietnam.

⁴ We also coded the equity stake into full (100% of the equity), majority (>100% and <50%) and minority (>50%). This classification was used in conducting statistical tests with a multinomial logit model. Since the results of the majority and minority equity stake did not seem to differ drastically and in a meaningful way, we opted for conducting a logit model. Notwithstanding, note that the majority of the acquisitions are full acquisitions, and hence the

ownership acquired was extracted from the SDC database. The classification of equity in a dichotomous outcome was due to two issues: first, the SDC database often does not specify the actual percentage of equity acquired and rather just indicates whether it was a minority, majority or full stake; second, the categorical outcome permits a clearer identification of the final ownership control status by the acquiring MNC.

Independent variables

Two variables assessed the MNCs' knowledge exploration strategy. These variables were used in prior studies. To assess the exploration for location-related knowledge we used the Kogut and Singh's (1988) well-known measure of cultural distance between the home and host country. We defined each host location according to its cultural novelty (Reuer, Park & Zollo, 2002) in much the same way as in Kogut and Singh and using Hofstede's (1980) four dimensions of culture (power distance, uncertainty avoidance, individualism and masculinity). Location novelty was proxied by the cultural distance between the focal acquisition home and host country:

$$\text{Location novelty} = \frac{1}{4} \left[\sum_{i=1}^4 \frac{(I_{ij} - I_{if})^2}{S_i^2} \right]^{0.5}$$

where I_{ij} is the score for scale i for the host country of the target firm j , I_{if} is the score for scale i for the host country of the focal acquisition f , and S_i^2 is the sample variance in scale i . Location knowledge is not restricted to cultural aspects but there is abundant research noting how other dimensions of a country environment correlate with culture (see Morosini et al., 1998), such as entrepreneurial culture (McGrath et al., 1992), innovation (Shane, 1993), orientation towards research and development, new product

understanding of when do MNCs engage in less than a full acquisition seems particularly important.

development and innovation (Kogut & Singh, 1988; Shane, 1993), propensity towards assuming risks (Hosftede, 1980, 2001). As Morosini et al. (1998:) noted "[g]iven the uncertainty as to the routines and repertoires that will be valuable in the future, an MNE may increase the probability of possessing greater variety of potentially valuable routines and repertoires by acquiring firms in culturally dissimilar countries."

To assess the exploration for business-related knowledge involved in an acquisition we used a measure of the *knowledge distance* between the acquirer and target firm main businesses. This measure was drawn from Chang (1996), Farjoun (1998) and Coff (1999) and was recently employed in M&A research (Reuer et al., 2002). Prior studies on corporate diversification have used this measure to gauge the knowledge base of a firm or to compare the knowledge requirements of home and destination industries for expanding firms (Farjoun, 1998; Chang & Singh, 1999). This variable measures the Euclidian distance between two industries (at the 3-digits SIC) based on their knowledge requirements - proxied by their respective employment distributions across divisions. Data for the calculation of this variable were obtained from the Occupation Employment Survey (OES) from the Bureau of Labor Statistics, which provides data on the distribution of employment across 224 occupational categories within industries at the 3-digit SIC level. The formula reads as follows:

$$\text{Business novelty} = \left[\sum_{k=1}^{22} (EA_k - ET_k)^2 \right]^{0.5}$$

where EA_k and ET_k are the proportions of the workers in occupation k in the acquirer's and the target's industries respectively. In this study we restricted the 224 possible employment categories to the main 22 employment

categories. The more dissimilar the two industries, the higher will be the business knowledge novelty between the acquirer and target's primary business, and hence higher knowledge exploration. Reuer et al. (2002) in a study of international joint ventures (IJVs) suggested that more novel IJVs tended to be more exploratory in nature, while conversely more familiar IJVs would likely had a significant exploitation component to them (Koza & Lewin, 1998; March, 1991).

Control variables

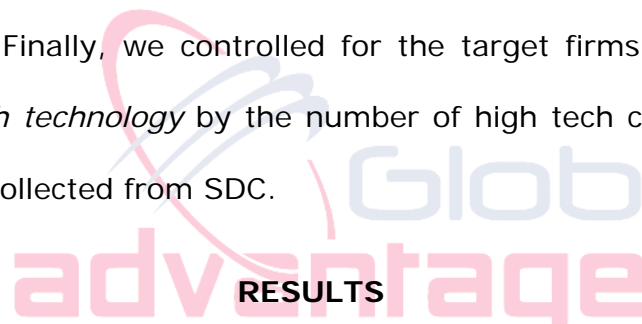
To account for possible alternative explanations, we included several control variables, as follows. We controlled for the acquirer's slack financial resources. We adopted an identical procedure to Reuer and Ragozzino (2004) measuring the acquirer firms' *financial leverage* as the ratio of the acquirer's total liabilities to total assets.⁵ Firms with a larger financial slack can more easily engage in the acquisition of a larger equity stake. However, we would expect the impact of slack to be particularly strong for an acquirer pursuing an exploitation strategy, and less strong for acquirers pursuing an exploration strategy. Moreover, slack resources are a good indicator of the ability to replicate in a foreign country the operations in the home country - an exploitation strategy. Notwithstanding, while it may be reasonable to suggest that slack would facilitate "going alone" experimentations, it is less likely to occur through acquisition, and would be more likely to occur through greenfield sole ventures. Data were obtained from Compustat.

We also controlled for the MNC's *foreign acquisition experience* as measured by the number of countries where the firm has already conducted acquisitions, in the period 1989 to 1999. We used the number of countries of

⁵ We tested alternative formulations of the acquirer financial leverage, such as using the ratio of total liabilities over total equity (cfr. Reuer et al., 2004) and the results were virtually identical.

foreign acquisitions, rather than the number of foreign acquisitions, to measure experience because the former offers a more accurate description of the firm's capabilities of implementing acquisition under different countries business environment contexts. Nevertheless, we also tested with the number of prior acquisitions (count and log) and the results were not altered.

We also controlled for the target firms' characteristics. We proxied the *target firm size* by the number of SIC codes the target firm held. The data did not allow more direct measures such as number of employees or asset value, but tests in a small sample showed a correlation of over 60% between the number of SIC codes and firm size - which seems reasonable since more diversified firms are generally larger. Larger targets could make more difficult a full acquisition. Finally, we controlled for the target firms' technology. We measured the *high technology* by the number of high tech codes held by the target firm. Data collected from SDC.



Since our dependent variable has a dichotomous outcome, we used three logistic regression models to analyze and test the hypotheses. The descriptive statistics (table 1) and the regression results (table 2) are shown below. Model 1 includes only the control variables. Model 2 also includes the linear terms of business and location knowledge exploration - needed to carry out the tests with the curvilinear effects. Model 3 is the complete model.

[Insert Table 1 & Table 2 about here]

Hypothesis 1.1 proposed a negative linear association between the extent of business-related knowledge exploration and the likelihood the degree of equity acquired. Hypotheses 1.2 formulated a competing test that the association could be curvilinear. The results on the relationship between

business knowledge exploration and the likelihood of full acquisition confirm hypothesis 1.1 since the coefficient on the Business knowledge exploration is negative and statistically significant (beta = -0.032, $p < 0.05$ in Model 3). However, the coefficient on its square term is only marginally significant at 10% level (beta = 0.001, $p < 0.10$ in Model 3). Therefore, Hypothesis 1.1 is confirmed but not Hypothesis 1.2. Hence, we conclude a linear association between business knowledge exploration and the degree of equity.

Hypotheses 2.1 and 2.2 advanced competing alternatives on the association between location-related knowledge exploration and the degree of equity ownership. Our tests strongly support both hypotheses - a negative and statistically significant coefficient on Location knowledge exploration (beta = -0.837, $p < 0.01$ in Model 3) and a positive and statistically significant coefficient on its squared term (beta = 0.141, $p < 0.05$ in Model 3). Therefore, we conclude that the relationship between a firm's location knowledge exploration and the likelihood of fully acquiring a target firm (i.e, a full acquisition) is curvilinear. The MNC will acquire a larger share of the equity of the target firm for both high and low levels of location knowledge exploration and a lower share of the equity for intermediate levels of location knowledge exploration.

DISCUSSION

The MNCs' competitive advantage is determined by the ability to access new resources/knowledge and build their capabilities. The primary role of the firm is to identify these resources/knowledge, evaluate and exploit them, and explore additional combinations of resources/knowledge through strategy-structure configurations to achieve a sustainable competitive advantage *vis-à-vis* other firms.

Our study relates the knowledge strategy (the extent of business- and location-related knowledge exploration) to the structural form of the deal. We modeled the acquirer MNCs' strategies as the novelty of the business and location accessed in a focal cross-border acquisition. The drawbacks involving entries into novel deals are well known. These are, for instance, the post-acquisition integration hazards, cultural clashes, loss of human resources, unused synergies, and so forth. However, these drawbacks are not preventing firms from engaging in acquisitions. At a simple, observational level, the majority of the cross-border acquisitions in our sample were not related at the 4-, 3- or even 2-digit SIC codes to the MNCs' primary business, indicating that probably many of these deals are exploratory to, at least, some degree.

The results were robust in showing that the knowledge strategy does influence the structural form of the deal. However, the results are not straightforward. The larger the business knowledge exploration of the deal, the more likely the acquirer will take on a partial equity stake. Business similarity is a driver of exploitation and novelty of exploration. The results provide strong evidence for the effect of a location-related knowledge exploration on the structure of a cross-border acquisition. The higher the location exploration, the more likely the acquirer would take only a partial stake on the target firm's equity, but the relation between location exploration and equity is curvilinear (U-shaped). Most notably, acquisitions in highly novel locations may depart too much from the existing MNC's capabilities, and thus be managed as an autonomous subunit (Datta & Grant, 1990). Hence, for both low and high levels of location exploration the acquirer MNCs will be more likely to acquire the totality of the target firm. While this is an important result, its interpretation is complex. It is possible that underlying these two

extremes of location exploration are two completely dissimilar models of integration and control/autonomy of the foreign acquisition, as we theorized. Since we do not have direct data on the model of integration we may simply hypothesize that very distant acquisitions may be fully acquired but are managed quite autonomously. These acquisitions may entail a set of location routines that are completely outside the acquirer's capabilities, or absorptive capacity (Cohen & Levinthal, 1990), for an efficient full integration. In fact, these very distant acquisitions may be at the origin of Birkinshaw's (1997) view of subsidiaries as outposts to new knowledge, or to Brown and Eisenhardt (1998) probes into new landscapes. Hence, the MNC maintains the acquired firms autonomy thus better preserving its knowledge value. Conversely, proximate acquisitions are efficiently absorbed using the acquirer's existing capabilities.

Implications for theory

Our study contributes to research on learning theory and knowledge-based models of foreign expansion; at the minimum to research on expansion through cross-border acquisitions. As learning- and knowledge-based models are gaining popularity among strategy and management scholars in recent years, little is still known on how strategies and structures come together to optimize learning (Huber, 1991). It seems straightforward that a primary condition for learning to occur is access to novel knowledge. However, firms also seem to learn directly and vicariously through observing other firms' experiences (Haunschild, 1993). Nevertheless, on a learning perspective we cannot discard the possibility that rather than acquiring a smaller equity stake on a target firm, the acquirer may instead acquire smaller targets to start with (Hayward, 1999), provide larger autonomy to the target (Haspeslagh &

Jemison, 1991), or use contractual forms to partially hedge from uncertainties (Reuer, Shenkar & Ragozzino, 2004). The data limited our ability to test Hayward's (1999) small acquisition mistakes hypothesis (see also Sitkin, 1992). In this view, MNCs could pursue business and location exploration strategies by acquiring smaller target firms first.

More importantly, this study contributes to a better understanding exploration strategies (or strategic asset seeking investments) by multinational corporations, and particularly it initiates an important debate: how should MNCs structure their participation in foreign markets to realize effectively a global exploration or exploitation strategy. Exploration strategies are motivated by the MNC's desire to gain access to resources, or the output of resources, which cannot be effectively transferred to the MNC through an arm's length transactions. Thus, we might expect that these resources would be difficult to transfer within the MNC as well. Hence, arranging for such transfers (see Zollo, 1998) is an essential part of a successful exploration strategy. It is possible that some of what we have learned in this study can be applied to general issues of MNCs' scope. It is easy to imagine situations in which an MNC could bring itself into contact with valuable public goods (location) which would be helpful in its core business by making investments in horizontally related industries. Even some decisions by MNCs to perform activities vertically related to their primary business can be motivated by an exploration led strategy. The simplest examples of this effect are investments in wholesaling and retailing by manufacturing firms. In some cases, these investments are clearly aimed at gaining knowledge about customer needs.

Implications for practice

How much can managers learn from this study? Cross-border acquisitions are increasingly postulated as learning opportunities (Vermeulen & Barkema, 2001), capable of redesigning the MNCs' entire repertoire of capabilities (Karim & Mitchell, 2000). Given the recurrent finding that acquisitions provide little or no financial benefits, the great benefit for firms may well be the learning potential of new businesses, new locations, and the applicability of their capabilities across the geographic and product space.

Managers need to learn how to minimize the equity stake in uncertain cross-border acquisitions. If the purpose is to learn from the target firm the full acquisition of a target firm is already known to lead to a depletion of the target firm's resource value. For example, Dyer and colleagues (2004) documented the loss of human resources, clients and shareholders' wealth following an acquisition. Hambrick and Cannella (1993) focused specifically on the loss of executives post-acquisition. Dyer and colleagues assumed acquisitions to be full acquisitions. However, there is yet no evidence that there is a similar loss of value in a partial acquisition, as in fact, there is no empirical evidence that there is a loss of value following an equity joint venture. Hence, the structural form of the deal may be a good alternative to the degree of autonomy to the target firm (Haspeslagh & Jemison, 1991), or to the design of contracts (Reuer & Ragozzino, 2004) in conditions of uncertainty. Furthermore, by minimizing the equity stake acquired, managers free financial capital that may be used to explore in other spaces.

Managers also need to figure out that the potential for learning is determined by the novelty of the knowledge accessed. The mere replication of routines such as operating in certain countries and

businesses or engaging repeatedly in full acquisitions may not provide the variety of learning experiences required.

Managers may use the structural form of the deal as a signaling device of the strategy. The extant research has overwhelmingly focused on the stock prices fluctuations and on acquisition performance, merely controlling (at best) for the degree of equity ownership, to suggest that unrelated acquisitions generally lead to poorer performance than related diversification. This observation may be actually a simplification of reality. It is possible that the stockholders cannot distinguish between exploiting and exploring strategies. Of course, an alternative is that stockholders simply do not value the added uncertainty emerging from exploration strategies. This has serious implications for management and for future implementation of acquisitions.

Limitations

A first set of limitations were imposed by the data and the need to resort to proxies to approximate theoretical constructs - which may be overcome in future studies with a dedicated survey. For instance, with dedicated primary data we could measure first hand the strategies pursued. To construct the knowledge strategy we assessed the novelty of the deal by comparing the main business, and location, of the acquirer and target firm. However, ideally, the business and location exploration would consider the entire pool of businesses and locations in which the MNC already operates. Furthermore, we did not focus on how much the acquirer MNCs learns but rather on what is the potential for learning given the novelty of the business and locations accessed.

Although we considered, for simplification purposes, that expansions into related businesses and familiar locations would be essentially exploitative, it is possible that some of these expansions may bring some new knowledge. In

this manner when entering a foreign country but in the same business the MNC may still benefit from business knowledge inflows to the extent that the business knowledge evolved differently as a result of the country's technological and historical trajectories (Kogut, 1991). Similarly, when entering a familiar country but in a different business, there may be location knowledge benefits in that, for example, the institutional and economic context varies within the country for each industry. Hence, even entries to related areas may entail some knowledge benefits. Moreover, some unrelated acquisitions, contrary to my assumption, may be exploitative rather than explorative. These are cases where, for instance, a manufacturing MNC enters into distribution. Future research may expand on these interactive effects.

The generalization of our findings to other nationalities needs to be cautious since we used a sample exclusively of US firms and there is evidence that firms from some countries tend to engage in less often in foreign operations through wholly-owned modes (e.g., full acquisitions) and even less often in acquisitions. For instance, Japanese firms have a lower propensity to acquire and seem to prefer greenfield investments or shared equity foreign entry modes.

CONCLUSION

Cross-border acquisitions can be vehicles for the leveraging of the MNC's resources and capabilities but also for building new capabilities. Exploitation strategies can lead to competency traps. As the MNC expands more processes become governed by routines and the MNC becomes less responsive, or adaptive, to the new subsidiary's business and geographic idiosyncrasies. Vermeulen and Barkema (2001) referred to this as a process of simplification. Strategic rigidity emerges as routines and repertoires rigidify. As Morosini and

colleagues (1998, p.) noted "[r]outines and repertoires are ways in which a firm typically addresses aspects of organizing its business activities." Entering distant businesses and locations the MNC may revitalize its capabilities because it will be accessing different routines and repertoires (Barkema & Vermeulen, 1998) and learning (Vermeulen & Barkema, 2001). A knowledge exploration strategy will depart more radically from the MNC's capabilities but it is by entering uncharted territories that the MNC can reshape its own capabilities and contribute to develop a sustainable competitive advantage. Although the majority of the acquisitions continue to be full acquisitions, partial acquisitions may be a more appropriate mode when the goal is to explore unfamiliar landscapes.

REFERENCES

- Anand, J. & Delios, A. (1997). Location specificity and the transferability of downstream assets to foreign subsidiaries. Journal of International Business Studies, 28, 3, 579-603.
- Anand, J. & Kogut, B. (1997). Technological capabilities of countries, firm rivalry and foreign direct investment. Journal of International Business Studies, 28, 3, 445-465.
- Anand, J. & Singh, H. (1997). Acquisition redeployment, acquisitions and corporate strategy in declining industries. Strategic Management Journal, 18, 99-118.
- Barkema, H. & Vermeulen, F. (1998). International expansion through start-up or acquisition: A learning perspective. Academy of Management Journal, 41, 1, 7-26.
- Barkema, H. & Vermeulen, F. (1998). International expansion through start-up or acquisition: A learning perspective. Academy of Management Journal, 41, 1, 7-26.
- Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17, 1, 99-120.
- Birkinshaw, J. (1997). Entrepreneurship in multinational corporations: The characteristics of subsidiary initiatives. Strategic Management Journal, 18, 207-229.
- Brown, S. & Eisenhardt, K. (1998). The art of continuous change: Linking complexity theory and time-paced evolution in relentless shifting organizations. Administrative Science Quarterly, 42, 1-34.
- Buckley, P. & Casson, M. (1976). The future of the multinational enterprise. London: Macmillan.
- Cantwell, J. & Janne, O. (1999). Technological globalisation and innovative centers: The role of corporate technological leadership and locational hierarchy. Discussion Papers in International Investment & Management, University of Reading.
- Capron, L. (1999). The long-term performance of horizontal acquisitions. Strategic

- Management Journal, 20, 11, 987-1018.
- Capron, L., Dussauge, P. & Mitchell, W. (1998) Resource redeployment following horizontal acquisitions in Europe and North America, 1988-1992. Strategic Management Journal, 19, 7, 631-661
- Caves, R. & Mehra, S. (1986). Entry of foreign multinationals into the US manufacturing industries, in Porter, M. (Ed.) Competition in Global Industries, MA: Harvard Business School Press: Boston, 449-481.
- Caves, R. (1971). International corporation: The industrial economics of foreign investment. Economica, February, 1-27.
- Chandler, A. (1962). Strategy and structure. MIT Press, Cambridge: MA.
- Chang, S. (1996). An evolutionary perspective on diversification and corporate restructuring: Entry, exit, and economic performance during 1981-1989. Strategic Management Journal, 17, 587-612.
- Chang, S. & Singh, H. (1999). The impact of modes of entry and resource fit on modes of exit by multibusiness firms. Strategic Management Journal, 20, 1019-1035.
- Chatterjee, S. & Wernerfelt, B. (1991). The link between resources and type of diversification: Theory and evidence. Strategic Management Journal, 12, 1, 33-48.
- Chatterjee, S. (1986). Types of synergy and economic value: The impact of acquisitions on merging and rival firms. Strategic Management Journal, 7, 2, 119-139.
- Chatterjee, S. (1990). Excess resources, utilization costs, and mode of entry. Academy of Management Journal, 33, 4, 780-800.
- Coff, R. (1999). How buyers cope with uncertainty when acquiring firms in knowledge intensive industries: Caveat Emptor. Organization Science, 10, 2, 144-161.
- Cohen, W. & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. Administrative Science Quarterly, 35, 128-152.
- Datta, D. & Grant, J. (1990). Relationships between type of acquisition, the autonomy given to the acquired firm, and acquisition success: An empirical analysis. Journal of Management, 16, 29-44.
- Dunning, J. & Narula, R. (1996) The investment development path revisited: Some emerging issues", in Dunning, J. and Narula, R. (Eds.) Foreign Direct Investment and Governments. Catalysts for Economic Restructuring, London Routledge.
- Dunning, J. (1993). Multinational enterprises and the global economy. Addison-Wesley Publishing Company.
- Dyer, J., Kale, P. & Singh, H. (2004). When to ally and when to acquire. Harvard Business Review, July-August, 1-8.
- Farjoun, M. (1998). The independent and joint effects of skill and physical bases of relatedness in diversification. Strategic Management Journal, 19, 611-630.
- Harzing, A. (2002). Acquisitions versus greenfield investments: International strategy and management of entry modes. Strategic Management Journal, 23, 3, 211-227.
- Haspeslagh, P. & Jemison, D. (1991). Managing acquisitions. New York, Free Press.
- Haunschild, P. (1993). Interorganizational imitation: The impact of interlocks on corporate acquisition activity. Administrative Science Quarterly, 38, 564-592.
- Hayward, M. (1999). Evidence of acquirer learning in mergers and acquisitions, 1985-1995. Unpublished doctoral dissertation, Columbia University.
- Hedlund, G. & Ridderstrale, J. (1997). Toward a theory of the self-renewing MNC. In Toyne, B. and Nigh, D. (Eds.) International Business: An Emerging Vision, Columbia, SC: University of South Carolina Press.
- Hennart, J-F. (1982). A theory of the multinational enterprise. University of Michigan Press, Ann Arbor, MI.
- Hennart, J-F. (1988). The transaction cost theory of equity joint ventures. Strategic Management Journal, 9, 361-374.

- Hennart, J-F & Park, Y. (1993). Greenfield vs. acquisition: The strategy of Japanese investors in the United States. Management Science, 39, 1054-1070.
- Hitt, M., Ireland, R. & Harrison, J. (2001). Mergers and acquisitions: A value creating or value destroying strategy? In Hitt, M., Freeman, R. & Harrison, J. (Eds) Handbook of Strategic Management, Blackwell Publishers Ltd, Oxford, UK, 384-408.
- Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Beverly Hills, CA: Sage Publications.
- Huber, G. (1991). Organizational learning: The contributing processes and the literatures. Organization Science, 2, 1, 88-115.
- Jemison, D. & Sitkin, S. (1986). Corporate acquisitions: A process perspective. Academy of Management Review, 11, 1, 145-163.
- Johanson, J. & Vahlne, J-E. (1990). The mechanism of internationalization. International Marketing Review, 7, 4, 11-24.
- Karim, S. & Mitchell, W. (2000). Reconfiguring business resources following acquisitions in the U.S. medical sector. Strategic Management Journal, 21, 10/11, 1061-1081.
- Killing, J. (1980). Technology acquisition: License agreement or joint venture. Columbia Journal of World Business, 15, 3, 38
- Kobrin, S. (1991). An empirical analysis of the determinants of global integration. Strategic Management Journal, 12 (summer), 17-31.
- Kogut, B. & Singh, H. (1988). The effect of national culture on the choice of entry mode. Journal of International Business Studies, 19, 411-432.
- Kogut, B. (1991). Country capabilities and the permeability of borders. Strategic Management Journal, 12 (summer), 33-47.
- Koza, M. & Lewin, A. (1998). The co-evolution of strategic alliances. Organization Science, 9, 255-264.
- Kreacic, V. & Marsh, P. (1986). Organization development and national culture in four countries. Public Enterprise, 6, 121-134.
- Levitt, B. & March, J. (1988). Organizational learning. Annual Review of Sociology, 14, 319-340.
- Li, J-T. & Guisinger, S. (1991). Comparative business failures of foreign-controlled firms in the United States. Journal of International Business Studies, 2, 209-224.
- March, J. (1991). Exploration and exploitation in organizational learning. Organization Science, 2, 1, 71-87.
- Marshall, A. (1920). Principles of economics. Eighth edition, London: MacMillan.
- McGahan, A. & Villalonga, B. (2004). The choice among acquisitions, alliances and divestitures. Paper presented at the BYU-Utah Winter strategy meeting. Park City, Utah.
- Mitchell, W. (1994). The dynamics of evolving markets: The effects of business sales and age dissolutions and divestitures. Administrative Science Quarterly, 39, 575-602.
- Morosini, P., Shane, S. & Singh, H. (1998). National cultural distance and cross-border acquisition performance. Journal of International Business Studies, 29, 1, 137-158.
- Mowery, D., Oxley, J. & Silverman, B. (1996). Strategic alliances and inter-firm knowledge transfer. Strategic Management Journal, 17, 77-92.
- Porter, M. (1990). The competitive advantage of nations. New York: Free Press.
- Powell, W. Koput, K & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. Administrative Science Quarterly, 41, 116-141.
- Prahalad, C. & Bettis, R. (1986). The dominant logic: A new linkage between diversity and performance. Strategic Management Journal, 7, 485-501.
- Reuer, J., Park, K. & Zollo, M. (2002). Experiential learning in international joint ventures: The role of experience heterogeneity and venture novelty. In Contractor, F. and Lorange, P. (Eds.) Cooperative Strategies and Alliances,

- Amsterdam, The Netherlands: Elsevier.
- Reuer, J. & Ragozzino, R. (2004). Share contracting in corporate acquisitions. Working paper, University of North Carolina, Chapel Hill.
- Reuer, J., Shenkar, O. & Ragozzino, R. (2004). Mitigating risks in international mergers and acquisitions: The role of contingent payouts. Journal of International Business Studies, 35, 1, 19-32.
- Rosenkopf, L. & Nerkar, A. (2001). Beyond local search: Boundary-spanning, exploration, and impact in the optical disk industry. Strategic Management Journal, 22, 4, 287-306.
- Rugman, A. (1981). Inside the multinationals: The economics of internal markets. London: Croom Helm.
- Saxenian, A-L. (1994). Regional advantage: Culture and competition in Silicon Valley and Route 128. Cambridge, MA: Harvard University Press.
- Shane, S. (1993). Cultural influences on national differences in rate of innovation. Journal of Business Venturing, 8, 1, 59-74.
- Shaver, M. (1998). Do foreign-owned and US-owned establishments exhibit the same location pattern in US manufacturing industries?. Journal of International Business Studies, 29, 3, 469-492.
- Singh, H. & Montgomery, C. (1987). Corporate acquisition strategies and economic performance. Strategic Management Journal, 8, 4, 377-386.
- Sitkin, S. (1992) Learning through failure: The strategy of small losses. In Staw, B. and Cummings, L. (Eds.), Research in Organizational Behavior, 14, 231-266.
- Tallman, S & Fladmoe-Lindquist, K. (2002). Internationalization, globalization, and capability-based strategy. California Management Review, 45, 1, 116-135.
- Tallman, S. (1992). A strategic management perspective on host country structure of multinational enterprises. Journal of Management, 18, 3, 455-471.
- Tallman, S., Jenkins, H. & Pinch, . (2004). Knowledge, clusters, and competitive advantage. Academy of Management Review, 29, 2, 258-271.
- Teece, D. (1981). The multinational enterprise: Market failure and market power considerations. Sloan Management Review, 22, 3-17.
- UNCTAD (2000). World investment report 2000: Cross-borders mergers and acquisitions and development. Geneva and New York: United Nations, United Nations Publication.
- Vermeulen, F. & Barkema, H. (2001). Learning through acquisitions. Academy of Management Journal, 44, 3, 457-476.
- Wilson, B. (1980). The propensity of multinational companies to expand through acquisitions. Journal of International Business Studies, 11, 59-64.
- Woodcock, C., Beamish, P. & Makino, S. (1994). Ownership-based entry mode strategies and international performance. Journal of International Business Studies, second quarter, 253-273.
- Zollo, M. (1998). Knowledge codification, process routinization, and the creation of organizational capabilities. Unpublished doctoral dissertation, University of Pennsylvania.

TABLE 1. Descriptive Statistics

	Variable	Mean	S.D.	Min	Max	1	2	3	4	5	6	7
1	Full acquisition	0.70	0.46	0	1	1.00						
2	Location knowledge exploration	1.27	1.27	0.02	4.56	-0.20*	1.00					
3	Business knowledge exploration	2.46	1.73	0	4.47	-0.09*	0.02	1.00				
4	Acquirer firm leverage	0.67	0.27	0.02	3.07	0.02	0.06	0.06	1.00			
	Acquirer foreign acquisition											
5	experience	9.40	8.72	0	31	-0.12*	0.08	0.10*	0.31*	1.00		
6	Target firm size	1.96	1.39	1	18	-0.05	0.16*	0.14*	-0.02	-0.01	1.00	
7	Target firm high-technology	0.58	1.35	0	14	0.05	0.01	0.03	-0.11*	-0.03	0.19*	1.00

Note: N=439; * $p < .05$

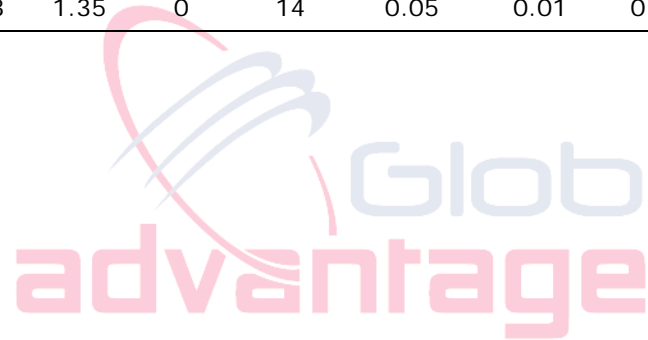


TABLE 2. Logistics Regression Models

	Model 1	Model 2	Model 3
Location knowledge exploration	-	-0.326***	-0.837**
Location knowledge exploration_Squared	-	-	0.141*
Business knowledge exploration	-	-0.007*	-0.032*
Business knowledge exploration_Squared	-	-	0.001 [†]
Acquirer firm financial leverage	0.745	0.762	0.723
Acquirer firm foreign acquisition experience	-0.036**	-0.031*	-0.030*
Target firm size	-0.095	-0.032	-0.054
Target firm high-technology (dummy)	0.120	0.117	0.100
Intercept	0.823*	1.277**	1.741***
Log Likelihood	-263.09	-254.18	-250.77
LR Chi2	10.67*	28.48***	35.30***

Note: [†] $p < .10$; * $p < .05$; ** $p < .01$

