Which Borders Affect Acquisition Outcomes? The Effect Of Firm-Level and Country-Level Geographic Scope On Post-Acquisition Knowledge Transfer

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Abstract

This research note studies how two forms of geographic scope affect the performance of international acquisitions. We depart from previous research by shifting the focus of questions concerning the performance of international acquisitions from foreign market expansion (country-level emphasis on geographic scope) to obtaining geographically distributed resources that are embedded in corporate targets (firm-level emphasis). We focus on the geographic spread of target’s activities, and find that it has positive influences on post-acquisition knowledge transfer and capability enhancement. Controlling for this target scope, we find no significant differences of knowledge transfer extent between domestic and cross-border acquisitions. Thus, simply crossing borders has limited influence on differences in post-acquisition knowledge transfer, but gaining access to the target’s geographically distributed resources matters substantially. Our results, drawn from a survey of 74 domestic acquisitions and 177 cross-border horizontal acquisitions, suggest the need to cast the analysis at the level of the geographic scope of the firm rather than the country of origin.
Which Borders Affect Acquisition Outcomes? The Effect Of Firm-Level and Country-Level Geographic Scope On Post-Acquisition Knowledge Transfer

This note compares how two forms of multi-nationality influence post-acquisition performance, contrasting the dichotomy of cross-border and domestic acquisitions to influences that arise from the multinational scope of the target. Research in international business has emphasized performance gains that arise from multinational activities. Two types of gains have received most attention, internalization gains that stem from the transfer of a firm’s proprietary assets to a foreign country following foreign direct investment (Caves, 1971; Hymer; 1960) and reverse internalization gains stemming from the acquisition of valuable assets from foreign markets (Cantwell, 1989; Dunning, 1990). Recently, multinational research has focused on whether foreign direct investment provides a means of enhancing a firm’s capabilities (Frost, 2001; Kogut and Chang, 1991; Westney, 1990). One setting in which the capabilities question arises is that of business acquisitions, which often provide opportunities to improve the skills of acquiring firms. A key question is whether cross-border acquisitions tend to outperform domestic acquisitions or, at least, provide additional sources of value creation by drawing on national differences and diverse environments.

The few studies that have compared outcomes of domestic and cross-border acquisitions offer ambiguous conclusions. In a financial event study of 276 cases in which U.S. firms acquired foreign businesses, Markides and Ittner (1994) find that the acquirers tend to gain value, counter to the common conclusion in the domestic acquisitions literature that acquiring firm shareholder value often declines or, at best, remains unchanged. Eddy and Seifert (1984) and Dewenter (1995), by contrast, find little difference between the returns of acquirers that purchase foreign firms and those that purchase domestic firms. In studying the acquisition of U.S. firms, Swenson (1993) reports that target shareholders benefit more when a foreign company takes over the firm than when the acquirer is a U.S. firm. Dewenter (1995), though, finds no significant difference in the mean level of target shareholder wealth gains in domestic versus foreign acquisitions. Finally, Seth, Song and Pettit (2000) find that cross-border acquisitions produce gains for targets and acquirers that are quite similar in value to those in domestic cases.

The lack of consensus among the studies leaves no conclusion regarding whether domestic and cross-border acquisitions have similar or different influences on performance. This raises the question of whether the geographic scope of an acquisition influences the value
creation potential of the acquisition. In particular, what aspect of geographic scope might have
the greatest influence on value creation of an acquisition?

When assessing international acquisitions, prior research has often focused on the
geographic origin of the merging firms, examining geographic scope through the simple
dichotomy of domestic versus cross-border acquisitions. While providing important insights, this
dichotomy misses key elements of geographic scope. In this paper, we argue that the geographic
scope of the target, defined as the international spread of its activities, is a stronger predictor of
the potential for the acquirer to enhance its capabilities by gaining access to a target’s resources
that embed different country environments. In others words, a target, be it domestic or foreign,
with activities that spread across several country environments will tend to provide a richer set of
resources to the acquirer than a target with a more restricted geographic scope. The multinational
scope of the target is an indicator of the target’s possession of proprietary assets, access to a
geographically distributed resource network, capabilities for intra-corporate transfer, and
organizational sophistication. We expect systematic differences of magnitude of knowledge
transfer extent between targets with multinational scope and targets with a national scope.

The study stems from a survey of managers involved in 74 domestic acquisitions and 177
cross-border horizontal acquisitions. We find that the multinational scope of the target is a
predictor of post-acquisition knowledge transfer and capability enhancement. After controlling
for the target’s geographic scope, we found little significant difference between cross-border
acquisition and domestic acquisitions. These results shed light on the multi-nationality and FDI
arguments of the international literature applied to the acquisition context. A contribution of this
study is to emphasize the role of target geographic scope in reflecting the complexity of the
process by which acquirers gain access to resources from heterogeneous foreign environments.

Background

Before we turn to the discussion on the relationship between geographic scope and value
creation within acquisition, we note that both strategic management and international business
literatures use similar conceptual lenses to address the issue of acquisition value creation,
drawing on theories such as transaction costs, organizational learning, and evolutionary theory.
Both literatures have focused on knowledge transfer and post-acquisition issues. The issues of
cross-border acquisitions, multinational ownership, and geographic scope may appear unique to
the international business literature, but those issues seem to influence the magnitude of the hypothesized relationships rather than changing the theories themselves.

The strategy literature commonly argues that acquisitions are one of the mechanisms by which firms gain access to new resources that reduce costs and increase revenues via resource redeployment (Chatterjee, 1986; Anand and Singh, 1997). Several empirical studies suggest that acquisitions create value by allowing the redeployment of resources to or from the target. Seth (1990) and Capron (1999) suggest that greater resource redeployment will lead to greater performance. Post-acquisition redeployment will tend to be greatest when either the target or acquiring firm have particularly strong resources (Capron, Dussauge and Mitchell, 1998). Therefore, in both domestic and cross-border acquisitions, the opportunity for resource redeployment is contingent on the asymmetry between resource profiles of the two firms.

International business researchers have extended the concept of resource opportunities to include a geographic component that captures a more complete view of acquisitions. This view recognizes that an extra benefit arises from gaining access to targets with resources that encompass a varied set of environment settings. The concept of geographic scope traditionally arises in internalization theory and, more recently, in the reverse internalization argument.

The internalization of intangible assets argument, originally advanced by Hymer (1960), posits that MNEs exist because of their ability to transfer and exploit knowledge more effectively in the intra-corporate context than through external market mechanisms (Buckley and Casson, 1976; Casson, 1987; Caves; 1971; Gupta and Govindarajan, 1991). This argument applies to the acquisition context, as an acquisition represents one way of reproducing an intra-corporate context by taking control of a target, to which the acquirer can redeploy its intangible assets.

Recently, the international business literature has begun to consider a reverse-internalization argument. Since the publication of Cantwell’s (1989) thesis, the field has hypothesized that industries where host countries have advantages in resident technology attract foreign investment (Kogut and Chang 1991). While the traditional internalization focus takes the form of a sectoral “push” of the home country’s technological advantages, the more recent argument posits a geographical “pull” of the host country’s skills (Anand and Kogut, 1997; Barkema and Vermeulen, 1998). Dunning (1990) argues that the main country specific locational determinants have recently shifted to reflect the innovatory and entrepreneurial dynamism of the recipient economy. The targeted assets of the recipient country enable the MNE not only to
exploit their competitive advantages, but also to sustain or add to the firm’s advantages. This flow of resources from host country to home country is becoming known as asset-seeking foreign direct investment or reverse-internalization (Eun, Kolodny, and Scheraga, 1996).

Thus, the logic of the main theories of international business closely parallels that of the theories of strategy research. Both approaches expect resource redeployment to be common and to be an important source of value creation following acquisitions.

If it makes sense to posit that geographic scope amplifies the potential for acquisitions to improve firms’ capabilities, one can wonder why the empirical literature has reached inconclusive results regarding the potential of cross-border acquisitions to improve performance. Our main premise is that the usual distinction between cross border and domestic acquisitions suggests a basic association between the geographic origin of the target and the geographic diversity of the target’s resources. Yet, the complexity of business activities pushes against such a simple dichotomy. For example, domestic targets sometimes have resources that encompass diverse geographic settings, while a foreign target might have resources that arise from only one local environment. Such variation suggests the need to cast the analysis at the level of the geographic scope of the target rather than the level of the country of origin of the target.

In this section, we argue that the target’s geographic scope is a more relevant indicator of the geographic diversity to which an acquirer may gain access than the dichotomy between domestic and cross-border acquisitions. We argue that target multinational scope is an indicator of three aspects of acquisition potential: ownership opportunities stemming from possession of proprietary assets; locational opportunities stemming from access to geographically distributed resource networks; and organizational opportunities stemming from the ability to coordinate intra-corporate knowledge transfer.

First, consider ownership opportunities to gain possession of proprietary assets. Theorists argue that MNEs exists because the hazards associated with market transaction of the firms’ proprietary assets, particularly tacit assets such as R&D skills, make internalization a more efficient mechanism for redeploying those assets in international markets (Hennart, 1982; Caves, 1996). Empirical studies have identified a positive relationship between a firm’s possession of proprietary assets and its multinational activity (Kogut and Chang, 1991; Morck and Yeung, 1992). This perspective implies that opportunities for gaining access to proprietary assets through an acquisition are likely to increase with the geographic scope of the target.
Second, consider locational opportunities to gain access to geographically distributed knowledge. Scholars focusing on the knowledge creation potential of the multinational firm stress the ability of foreign subsidiaries to generate innovations based on stimuli and resources resident in the heterogeneous host country environments (Bartlett & Ghoshal, 1989; Birkinshaw, 1997; Dunning, 1990; Frost; 2001). Localized technological and marketing capabilities frequently arise as key resources in studies of cross-border acquisitions (Delios and Beamish, 1999). Eun, Kolodny, and Scheraga (1996) and Morck and Yeung (1992) emphasize the role of acquirer and target firms’ technological assets. Marketing expertise, such as brand capital and distribution access, also provides critical resources for accessing new markets. Marketing expertise often involves substantial intangible know-how that it is risky and difficult to develop independently or to obtain in arms length transactions. While the marketing know-how is an intangible public good within the firm, foreign brands may be difficult to exploit in new markets (Caves and Mehra, 1986). Similarly, critical intangible know-how underlying a firm’s sourcing and distribution activities (e.g., supplier relationships, warehouses, and sales force personnel) may be difficult to develop in new markets.

Through their ongoing interaction with their host country environment, targets with greater multinational scope have developed networks of relationships with universities, firms, and suppliers. Participation in external networks in different countries provides the firm with a greater capability to scan the environment, screen new technologies and ideas, and gain access to local resources (Kostova and Zaheer, 1999). Targets with high participation in foreign external networks are more likely to contribute to the innovative search of their acquirers.

Thus, the geographic spread of a target’s activities indicates the diversity of resources that arise in the heterogeneous host country environments of the target. We argue that the multinational scope of the target’s activities is more likely to account for the resource diversity provided by the target than the country of origin of the target per se. In others words, a target that is based in the same country as the acquirer can provide more international resource diversity if the target has a multinational scope than a target that is based in a different country from the acquirer but which has only local scope.

Third, consider organizational opportunities to coordinate intra-corporate knowledge transfer. While an extensive literature shows that multinational firms require substantial organizational and managerial capability to administer knowledge transfer effectively, the
research has focused on the internal development of these capabilities rather than on their acquisition (Bartlett and Ghoshal, 1989). We propose that the acquisition of a target with multinational scope helps the acquiring firm obtain the target’s capability to manage the diversity of contexts, as well as the target’s technological and market capabilities. Such organizational capability is complex, unobservable, and difficult to imitate (Rivkin, 2000).

Several studies have documented the difficulties of integrating international units that are acquired during international market expansion (Yoshida, 1987; Hennart and Park, 1993). The difficulties of creating a network of interdependent subsidiaries also tend to be extensive (Porter, 1987). Consequently, acquiring firms need to obtain a multinational organizational infrastructure as well as discrete multinational pieces. The existing literature has focused more on the acquisition of individual capabilities, than on the acquisition of coordination capabilities. Adoption of superior coordinative routines not only provides greater efficiency, but also enables different units to learn more quickly from experiments in other parts of the organization.

MNE’s that operate in diverse settings can take advantage of accumulated organizational experience in transferring their resources across their units, from home headquarters to foreign subsidiaries, from foreign units to home locations, and across subsidiaries. Research on international knowledge transfer shows that multinational firms develop skills and processes to carry out international knowledge transfer which takes place within the context of a network of differentiated units (Ghoshal and Bartlett; 1989; Hedlund; 1994; Gupta and Govindarajan, 2000). Such international knowledge transfer commonly implies the development of practices that allows firm to ‘decontextualize’ and ‘recontextualize’ the knowledge that they want to transfer and integrate into the targeted units (Doz and Santos, 1997; Brannen, Liker and Fruin, 1998). Those practices make the firm’s resources less context-specific and more suitable to redeployment at an international scale.

Although the task of integrating globally dispersed knowledge is fraught with obstacles (Kogut and Zander, 1995; Gupta and Govindarajan, 2000), MNEs tend to develop an accumulated experience of intra-corporate knowledge transfer. This experience is a valuable asset when the acquirer wants to transfer knowledge to or from the target. A target with a multinational scope will tend to transfer and receive knowledge more effectively than a target with a national scope due to its experience in intra-corporate knowledge transfer.
In sum, we argue that the multinational scope of the target is an important determinant of potential knowledge transfer between the two firms. Targets with multinational scope commonly possess specific proprietary resources, as well as complex coordinative routines and integrative capabilities. This approach includes the traditional emphasis on intangible operating assets such as technology and marketing skills, while also viewing multinational scope as itself being a key complex and inimitable capability. Accordingly, we propose the following proposition and related hypotheses, which encompass several dimensions of knowledge and resource transfer.

**Proposition 1.** The greater the multinational scope of the target, the greater the transfer of the target’s knowledge and resources to the acquirer.

**Hypotheses:** The greater the multinational scope of the target, the greater:
H1a. The transfer of the target’s technical skills to the acquirer
H1b. The transfer of the target’s brand names to the acquirer
H1c. The transfer of the target’s suppliers relationships to the acquirer
H1d. The transfer of the target’s managerial skills to the acquirer

With a wider geographic scope that a multinational target provides for the acquirer, increased opportunities arise for sourcing dispersed knowledge-related assets, such as technology, marketing, and physical assets. The acquirer can internalize such assets and use them to improve the capabilities of the newly combined firm. Capability enhancement arises through cost-based synergies or revenue-based synergies (Chatterjee, 1986; Anand and Singh, 1997). Cost reduction stems from more efficient exploitation of resources. Revenue enhancement arises from an increase in prices through product innovation and quality improvement or an increase in sales volume through a larger potential market. Accordingly, we propose the following proposition and related hypotheses, which encompass several dimensions of business capabilities.

**Proposition 2:** The greater the multinational scope of the target, the greater the capability enhancement of the newly combined firm.

**Hypotheses:** The greater the multinational scope of the target, the greater:
H2a. The improvement in R&D capabilities of the newly combined firm
H2b. The improvement in product quality of the newly combined firm
H2c. The improvement in product cost efficiency of the newly combined firm
H2d. The extension of the product lines of the newly combined firm

In summary, the FDI literature suggests that the performance of cross-border acquisitions increases with the potential for international expansion of resources. Increased geographic
diversity provides opportunities for enhancing capabilities by redeploying complementary resources and tapping new resources from the target itself and from its environment. Further, the multinational nature of a target firm provides opportunities to access coordinative routines and organizational systems that are otherwise difficult to develop internally. In other words, the higher the multinational diversity of the target, the greater the potential for capability enhancement at the acquirer and in the newly combined firm. Multinational diversity of the target amplifies the argument proposed by the FDI literature on cross-border acquisitions. After taking into account the effect of the target’s multi-nationality on post-acquisition knowledge transfer, we will explore whether the fact of buying a domestic versus a foreign target adds additional explanatory power to post-acquisition knowledge transfer.

**Research Design**

We conducted a top-management survey of acquirers involved in 253 acquisitions in Europe and North America during the 1988-1992 period. The appendix contains a description of our data collection procedure and of the questions that we used for this study.

To investigate the degree of knowledge transfer associated with acquisitions, we constructed a typology of resources drawing from previous research (Morck and Yeung, 1992; Chatterjee and Wernerfelt, 1991). From this research, we identified four intangible resources that indicate post-acquisition knowledge transfer: technical (R&D and manufacturing know-how), brand name, supplier relationships, and managerial resources. We measured the extent to which the acquirer uses the knowledge from the target in each resource dimension using an ascending five-point scale. Measuring the extent of knowledge transfer following the acquisition allows us to capture not only the quality of the resource fit (i.e., possession of resources and availability of opportunities to redeploy them into new uses) but also the capability of the merging firms to actually implement the redeployment of their resources into each other’s businesses (Chatterjee, 1986). Table 1 reports summary statistics for the variables.

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

We used four variables to measure post-acquisition capability enhancement of the acquirer: change in R&D capabilities, product quality, cost efficiency, and product line extension. Each performance measure consists of a five-point scale (with one for very negative impact and five for very positive impact).
We measured the geographic variable of the target with a three-category variable. For this variable, 1 indicated national scope, 2 indicated international scope within one region, and 3 indicated global scope. In this sample, 40% of the targets have national scope, 40% have international scope within one region, and 20% are global.

**Control variables**

We defined several control variables. Several variables addressed complementary influences on acquisition performance (domestic versus cross-border acquisitions, pre-acquisition resource asymmetry, product similarity, pre-acquisition target profitability). Other variables considered knowledge transfer enablers (past acquisition experience, acquirer geographic scope). We also controlled for market growth and relative size of target to acquirer.

*Domestic versus cross-border acquisition.* As we mentioned earlier, we will explore whether the fact of buying a domestic versus a foreign target adds additional explanatory power to post-acquisition knowledge transfer. We used a binary variable.

*Pre-acquisition resource asymmetry.* The potential to create value from an acquisition will tend to depend on the relative resource profile of the target and the acquirer. We expect acquirers to draw knowledge from targets on dimensions where targets have relative strength. This argument arises from both the strategy and international business literatures. We measured the pre-acquisition resource profile by evaluating the relative strength of the target to the acquirer in R&D, manufacturing, marketing, and managerial areas based on an ascending five-point scale.

*Product similarity.* Product relatedness will tend to lead to synergy. We used a set a five-point scale to measure the similarity of the products between the target and the acquirer.

*Pre-acquisition target and acquirer profitability.* The corporate governance literature has long noted the motive to restructure poorly performing firms through superior management (Jensen and Ruback, 1983), although in practice many acquisition targets tend to be healthy firms that can contribute to the resources of the acquiring firm (Ravenscraft and Scherer, 1987; Scherer and Ross, 1990). Consistently, we also control for the acquirer’s pre-acquisition profitability. Similarly, we measure acquirer pre-acquisition profitability to control the possibility that highly profitable firms gain most from acquisitions. We measured pre-acquisition profitability relative to industry average with a five-point scale, ranging from much more profitable to much less profitable.
Past acquisition experience. Previous acquisition experience may enable acquirers to be more effective in transferring knowledge (Lubatkin, 1987; Pennings, Barkema & Douma, 1994; Singh and Zollo, 1997). Alternative arguments suggest that the experience-acquisition performance is U-shaped (Hablevian and Finkelstein, 1999). We accounted for past acquisition experience by taking the number of previous acquisitions that the acquirer made during the five years preceding the studied acquisition.

Acquirer geographic scope. In line with the theory on MNE's, a multinational acquirer may be more likely than a domestic acquirer to redeploy resources to the target. We measured the geographic variable of the target with a three-category variable, with 1 indicating national scope, 2 indicating international scope within one region, scope, and 3 indicating global scope. In the sample, 12% of the acquirers are domestic, 23% have international scope within one region, and 65% are global.

Market growth. Acquisitions that take place in industries with low prospects for growth could lead to overall weaker performance than acquisitions in fast growing markets. Firms also might be more likely to redeploy resources in growing industries, rather than in stable or declining industries. We measured forecast industry sales growth with a five-point scale, ranging from rapidly growing to rapidly declining.

Relative size of target to acquirer. The potential to create value from an acquisition may depend upon the relative size of the merging firms. The acquisition of a relatively large target is likely to be a more important economic event for the acquirer than is the acquisition of a relatively small target (Asquith, Bruner and Mullins, 1983; Agrawal, Jaffe, and Mandelker 1992). Seth (1990) also argues that acquisitions involving relatively large targets are more likely to generate operational synergies than those involving relatively small targets. We measured the relative sales of target to acquirer on a five-point scale (with 1 indicating target sales less than 10% of acquirer sales and 5 indicating target sales of more than 100%).

Results

Tables 2 and 3 report OLS tests of the hypotheses. The results in Table 2 strongly support our first proposition, showing that there is a positive and significant relationship between the multinational scope of the target and the extent to which the acquirers use the targets’ knowledge after the acquisition. The relationship holds across the four types of knowledge we investigate, i.e., technical know-how (R&D and manufacturing skills; H1a), brand names (H1b), supplier
relationships (H1c), and managerial expertise (H1d). The results hold after controlling for cross-border acquisitions, relative size, relative resource strength, pre-acquisition profitability, and other factors. Notably, we find no impact of cross-border acquisitions on resource transfer. Instead, the key driver is the multi-national scope of the target.

*********** Tables 2 and 3 about here ***********

The results in Table 3 offer moderate support for Proposition 2, showing positive and significant relationships between the multinational scope of the target and the extent to which three dimensions of capabilities of the newly combined firm improved following the acquisition. Significant relationships hold for R&D capabilities (H2a), product quality (H2b), and product line extension (H2d). The relationship product cost efficiency (H2c) is positive but insignificant, which suggests that knowledge transfer contributes to revenue-based synergies more than cost-based synergies. As in the resource transfer analysis, we find little impact of cross-border acquisitions on capabilities, although greater increase of R&D capabilities does tend to occur in cross-border acquisitions. Again, the key driver is the multi-national scope of the target.

The results suggest that targets with activities that span different countries provide international diverse contexts in which acquirers can obtain new resources and skills that complement their knowledge bases, even if the acquirers are already international in scope. The results suggest that intra-firm geographical knowledge transfer is facilitated when the target has developed experience in knowledge transfer through its international expansion. The ability to absorb new knowledge and transfer it across units depends both on the sender and the recipient of knowledge and their ability to engage in the transfer process (Szulanski, 1996). An acquired firm with a national scope may not have been used to codify or, at least, made efforts to “decontextualize” its knowledge because the incentives for diffusing its knowledge across foreign units did not exist. Therefore, a firm with only national scope is more likely to possess context-specific resources that are more difficult to transfer back to the acquirer. In addition, most multinational targets possess processes, incentives, and culture to leverage geographically dispersed knowledge that enable the organization to un-bundle and rebundle activities in novel ways (Hagström, 1990). Utilizing dispersed resources requires a mental attitude built on the ability to treat knowledge residing in geographically dispersed units as valuable assets (Bartlett and Ghoshal, 1989). Given that 88% of the acquirers in the sample are international in scope, at least within a single continent, it is possible that those acquirers are more likely to share similar
views and understandings of the capabilities of multinational targets than of domestic firms.

The binary variable that accounts for domestic versus cross-border acquisitions does not have a significant impact on the extent of post-acquisition knowledge transfer and capability enhancement, with the single exception for R&D capabilities enhancement. This result suggests that one should expect few systematic differences between domestic versus cross-border acquisitions in their potential for capability-based synergy. Further detailed comparative analyses show a similar pattern of knowledge transfer between domestic and cross-border acquisitions.

The null result for the domestic versus cross border acquisition dichotomy suggests that simply crossing a border may not be a key issue, while accessing a target’s dispersed geographic resources has important influences on capability building. Multinational targets provide additional sources of value creation by drawing on national differences and diverse environments, while targets present in a foreign country may not necessarily provide this degree of richness of resources.

Conclusion

This study shows that geographic scope helps account for knowledge transfer and capability enhancement following acquisitions. However, simply crossing a border by acquiring a foreign firm is not the key issue. Instead, we show that targets with multinational scope are more likely to contribute to positive post-acquisition performance. In sum, our results suggest that the geographic origin of the merging firms is not the primary source of value creation. Instead, more fundamental firm-level factors such as geographic scope of the target and initial resource asymmetry of the merging firms are likely to influence post-acquisition knowledge transfer and capability enhancement, beyond considerations of a geographic border.

Our results shed light on the previous results obtained in empirical comparisons of domestic and cross-border acquisitions. While the recent literature in international business has increasingly taken into account the asset-seeking motive in international transactions and FDI, research has emphasized crossing borders rather than gaining access to skills and recombining firms’ recombining geographically-distributed resources. We are shifting the focus from foreign market entry (country-level emphasis) to gaining and recombining geographically-distributed resources that are embedded in targets (firm-level emphasis).

Beyond the traditional ownership and locational advantages stressed in the international business literature, we emphasize the advantages pertaining to the access to the MNE’s
organizational know-how, integrative mechanisms, and coordination routines that enables intra-
corporate knowledge transfer. Such access does not eliminate problems of post-acquisition
integration, but may ease some of the hurdles of knowledge diffusion across the merging firms.

Outside the MNC context, the development of new technologies is much more rapid than
the development of organizational know-how in start-up firms. While previous research has
focused on market access by technology firms and vice-versa, the acquisition of organizational
capital required in managing multiple technologies and markets needs more attention.
References


APPENDIX 1: SURVEY PROCESS

The use of a survey to account for post-acquisition knowledge transfer is an important difference between this study and several previous studies based on secondary data. These studies have revealed many important relationships between the pre-acquisition characteristics of the merging firms’ resource endowment (e.g., advertising or R&D expense ratio) and acquisition performance. Prior analysis has identified conditions that may eventually lead to a process of resource redeployment after the acquisition between the merging firms, but they do not explicitly capture the ability of those firms to effectively transfer knowledge and enhance their capabilities. Most large-sample research concerning acquisitions focuses on publicly-traded U.S. firms (e.g., Haunschild, 1994), often emphasizing larger firms and acquisitions (e.g., Davis and Stout, 1992; Cannella & Hambrick, 1993; Hayward and Hambrick, 1993). This research typically relies on publicly available financial and structural data, and lacks fine-grained information concerning post-acquisition behavior because determining the extent of knowledge transfer cannot be easily identified from the firm’s public announcements. Acquisitions research that includes archival information concerning non-U.S. firms and small private U.S. firms also typically lacks detailed internal information (e.g., Freeman, Carroll, & Hannan, 1983; Mitchell, 1994). To overcome these limits, we surveyed the managers of the acquiring firms. Survey data have been used previously in the strategic management literature to gather data on firms’ attributes and internal processes (Hunt, 1990; Datta, 1991; Very, Lubatkin, Calori and Veiga, 1997). Our survey methodology provides extensive information concerning post-acquisition behavior despite the substantial number and wide variety of firms.


The data collection process proceeded in four phases. First, we developed measurement scales by reviewing relevant literature and by completing 25 on site-interviews with CEOs from large firms, academics and consultants. We pre-tested these scales with a group of academics and consultants. Next, a bilingual researcher pre-tested the preliminary versions of the resulting questionnaires (in both English and French) with senior executives of large U.S. and European firms attending executive education programs in two major business schools located in the United States and in France. These pre-tests led to the revision of several items to improve their clarity as well as the addition of several new items identified during the interviews. The third stage consisted of on site-interviews with CEOs or executives in charge of their acquisition programs in 10 large firms, resulting in the final versions of the questionnaire. In the final stage, we mailed the survey to the acquiring companies included in the sampling frame described above. We addressed the surveys to the chief executives of the business units that undertook the acquisition. In the cover letter, we requested that the survey be completed either by the CEO or by a senior executive with overall responsibility for the acquisition case studied. Following
Dillman (1978), we mailed two follow-up letters and one replacement questionnaire following the initial mailing.

We used a single informant at the acquirer for information concerning each acquisition. Although the use of multiple respondents would have reduced concerns about potential response biases, respondents had to be knowledgeable about the firm and its competitive environment (Campbell, 1955), as well as the consolidation processes following the acquisition. In a large sample study such as ours, identifying and obtaining responses from multiple well-informed respondents is extremely problematic. The key methodological solution in using a single respondent approach is to find the most appropriate respondent (John and Reves, 1982). Thus, we qualified our respondents as individuals who held a CEO or equivalent position, or had been involved as senior managers of the acquisition process. We recognize that the survey records only the acquirers’ views of the acquisition. However, the managers from the acquiring firms tend to be the most knowledgeable about post-acquisition activities, owing to the high level of target CEO turnover following acquisitions (Walsh, 1988). From a practical standpoint, it is often next to impossible to track former executives of the target firm, since in many cases the target is no longer a separate entity.

From the initial sample, we mailed questionnaires to the 1,778 acquirers for whom we obtained addresses. We received a total of 273 completed questionnaires, representing a response rate of 15%. This response rate is comparable with the ones found in the most recent large-scale surveys involving executives (Gatignon, Robertson and Fein, 1997; Powell and Dent-Micaleff, 1997; Robertson, et al., 1995). This response rate is a reasonable one given the dispersed setting of the survey in more than a dozen countries on two continents, the diversity of firms in the survey, the senior positions of the respondents (CEO, president, executive chair, vice president of finance, and managing director), and the sensitivity of the information. Following a check to ensure that these cases all represented horizontal acquisitions, we eliminated 20 responses. The final data set includes 253 unique targets and 190 unique acquirers, with a smaller number of acquirers occurring because some firms acquired more than one target (and thus returned several questionnaires to analyze the different acquisition cases involved, answering one questionnaire for each case). Out of these 253 acquisitions, 177 are cross-border, 74 are domestic, and 2 could not be accurately identified.

We evaluated non-response biases by comparing the industries represented in our sample with the initial sample used. We found no differences in the industries represented. We also compared early respondents (first half) with late respondents (second half), following the Armstrong and Overton procedure (1977). We found no significant differences on key characteristics such as market conditions, acquisition motives or industry characteristics, suggesting that non-response bias should not be a problem. Overall, the data represent a wide range of industries, countries, firms, and scope of acquisition. A more detailed description is available upon request.
APPENDIX 2: SURVEY INSTRUMENTS

A. POST-ACQUISITION KNOWLEDGE TRANSFER MEASURES

The following sections ask questions about the transfer of resources, knowledge, and capabilities across the acquired business and your existing business. Please use the scale below to assess the extent to which people have been collaborating and resources have been transferred.

**TRANSFER OF RESOURCES, KNOWLEDGE, AND CAPABILITIES**

To what extent have you used resources from the acquired business to assist your existing business?

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<th>NOT AT ALL</th>
<th>TO SOME EXTENT</th>
<th>TO A VERY LARGE EXTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of acquired business’s product innovation capabilities</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Use of acquired business’s know-how in manufacturing processes</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Use of acquired business’s brand name</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Use of acquired business’s supplier relationships</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Use of acquired business’s general management expertise</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. POST-ACQUISITION PERFORMANCE

The following sections deal with the effects of the acquisition on performance. 

**Answer section (a) or section (b)**

*Answer section (a) if the acquired business has continued to operate mainly on a stand-alone basis.*

*Answer section (b) if the acquired business has been substantially integrated into your existing business.*

(a) What has been the impact of the acquisition on the positions of the **acquired and existing businesses**?

<table>
<thead>
<tr>
<th></th>
<th>Acquired business</th>
<th>Your existing business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEGATIVE IMPACT</td>
<td>POSITIVE IMPACT</td>
</tr>
<tr>
<td>1.R&amp;D capabilities</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Product quality</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Product cost</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Broadening of product line</td>
<td>1 2 3 4 5</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

(b) What has been the impact of the acquisition on the position of the **consolidated business**?

<table>
<thead>
<tr>
<th></th>
<th>Impact on the consolidated business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEGATIVE IMPACT</td>
</tr>
<tr>
<td>1.R&amp;D capabilities</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Product quality</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Product cost</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Broadening of product line</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

C. ANTECEDENTS OF RESOURCE REDEPLOYMENT

**Geographic scope of the merging firms**

Geographical scope of the acquired firm’s operations
1. Domestic/national
2. International (but limited to one geographic zone –i.e. Europe, North America, and Asia)
3. International/global
Geographical scope of the acquiring firm’s operations
1. Domestic/national
2. International (but limited to one geographic zone –i.e. Europe, North America, and Asia)
3. International/global

**Resource profile.** Please assess the acquired business’s position, compared to your existing business’s position at the moment of the acquisition.

<table>
<thead>
<tr>
<th>The acquired business position was:</th>
<th>WEAKER</th>
<th>EQUAL</th>
<th>STRONGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovativeness</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Manufacturing processes</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Commercial assets</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Managerial capabilities</td>
<td>1 2 3 4 5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Product similarity** Please compare your existing business with the acquired business just before the acquisition.

<table>
<thead>
<tr>
<th>Your products were similar</th>
<th>NOT AT ALL</th>
<th>ABSOLUTELY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

**Pre-acquisition profitability of the merging firms.**
Profitability (profit/capital employed) of the acquired business relative to industry average before the acquisition:
1. Much more profitable
2. More profitable
3. Equivalent
4. Less profitable
5. Much less profitable

Profitability (profit/capital employed) of the acquiring firm relative to industry average before the acquisition:
1. Much more profitable
2. More profitable
3. Equivalent
4. Less profitable
5. Much less profitable

**Acquisition experience:** Number of businesses or firms acquired by the acquiring firm within the last five years

**Relative size.** Relative proportion of the acquired business’s annual sales in comparison to your firm’s sales before the acquisition (in the line of business concerned):
1. < 25%
2. 25-49%
3. 50-74%
4. 75-100%
5. > 100%

**Industry growth.** Forecasted demand in your industry within the next five years
1. A RAPIDLY GROWING MARKET
2. A SLOWLY GROWING MARKET
3. A STABLE MARKET
4. A SLOWLY DECLINING MARKET
5. A RAPIDLY DECLINING MARKET
Endnotes

1 Several prior studies have used this data to examine other questions. Capron, Dussauge, and Mitchell (1998) study the impact of individual dimensions of resource asymmetry on resource redeployment. Capron (1999) studies the effect of resource redeployment on acquisition performance. Capron, Mitchell, and Swaminathan (2001) study the causes of post-acquisition asset sell-off. No prior study using this data has studied the impact of multinational scope on post-acquisition outcomes.

2 Where possible (in 70% of the cases), we used the performance response that acquirer reported for business post-acquisition performance. When this value was missing because the respondent could not disentangle target and acquirer post-acquisition performance due to a high level of post-acquisition integration, we took the value of the performance of the consolidated business.

3 These analyses are available upon request.
Table 1. Summary statistics and correlations

|                                | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  |
|--------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. Target geographic scope    | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 2. Cross-border acquisition (0=domestic; 1=cross-border) | -0.04 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 3. Relative R&D strength of target to acquirer       | 0.14 | 0.00 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 4. Relative manufacturing strength of target to acquirer | 0.16 | 0.01 | 0.48 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5. Relative marketing strength of target to acquirer  | 0.07 | 0.09 | 0.43 | 0.33 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 6. Relative managerial strength of target to acquirer | 0.06 | 0.05 | 0.36 | 0.41 | 0.47 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 7. Product similarity          | 0.04 | 0.14 | -0.16 | 0.00 | -0.04 | 0.04 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 8. Pre-acquisition target profitability compared to industry | 0.09 | -0.04 | -0.14 | -0.04 | -0.31 | -0.25 | 0.09 | 1   |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 9. Pre-acquisition acquirer profitability compared to industry | 0.10 | -0.02 | 0.01 | 0.09 | 0.16 | 0.23 | 0.00 | 0.02 | 1   |     |     |     |     |     |     |     |     |     |     |     |
| 10. Acquirer acquisition experience | -0.04 | 0.25 | 0.03 | -0.02 | 0.14 | 0.01 | 0.00 | -0.22 | -0.06 | 1   |     |     |     |     |     |     |     |     |     |     |
| 11. Acquirer geographic scope  | 0.23 | 0.23 | -0.11 | -0.06 | -0.17 | -0.12 | -0.01 | -0.04 | -0.04 | 0.12 | 1   |     |     |     |     |     |     |     |     |
| 12. Forecast industry sales growth | -0.13 | -0.15 | -0.08 | 0.04 | 0.09 | 0.05 | -0.04 | 0.06 | 0.16 | 0.03 | -0.18 | 1   |     |     |     |     |     |     |
| 13. Pre-acquisition relative annual sales of target to acquirer | 0.20 | -0.15 | 0.18 | 0.22 | 0.27 | 0.23 | 0.07 | -0.01 | 0.10 | -0.10 | -0.15 | 0.15 | 1   |     |     |     |     |     |     |
| 14. Technical knowledge transfer from target to acquirer | 0.21 | -0.09 | 0.39 | 0.39 | 0.16 | 0.19 | 0.05 | 0.08 | 0.10 | 0.02 | -0.10 | 0.04 | 0.28 | 1   |     |     |     |     |
| 15. Brand name transfer from target to acquirer | 0.17 | -0.03 | 0.00 | 0.16 | 0.15 | 0.00 | -0.03 | 0.12 | 0.03 | 0.04 | 0.01 | 0.17 | 0.15 | 0.35 | 1   |     |     |     |     |
| 16. Supplier relationships transfer from target to acquirer | 0.21 | -0.05 | 0.19 | 0.26 | 0.16 | 0.26 | 0.04 | 0.08 | 0.01 | -0.03 | 0.08 | 0.22 | 0.41 | 0.46 | 1   |     |     |     |     |
| 17. Managerial expertise transfer from target to acquirer | 0.21 | -0.05 | 0.23 | 0.21 | 0.22 | 0.37 | 0.03 | 0.05 | 0.18 | 0.01 | -0.12 | 0.10 | 0.34 | 0.48 | 0.30 | 0.47 | 1   |     |
| 18. R&D capability enhancement | 0.36 | 0.10 | 0.27 | 0.17 | 0.15 | 0.06 | 0.07 | 0.18 | 0.04 | -0.07 | 0.04 | -0.09 | 0.29 | 0.44 | 0.24 | 0.24 | 0.33 | 1   |     |
| 19. Product quality capability enhancement | 0.26 | -0.07 | 0.14 | 0.14 | 0.01 | 0.04 | 0.06 | 0.13 | -0.01 | -0.06 | 0.06 | -0.08 | 0.11 | 0.41 | 0.22 | 0.24 | 0.20 | 0.53 | 1   |
| 20. Product cost efficiency enhancement | 0.25 | -0.01 | 0.08 | 0.11 | 0.04 | 0.03 | 0.13 | 0.15 | 0.16 | -0.01 | 0.03 | 0.02 | 0.25 | 0.31 | 0.22 | 0.24 | 0.23 | 0.48 | 0.59 | 1   |
| 21. Product line scope extension | 0.22 | -0.01 | 0.03 | 0.06 | 0.07 | 0.01 | -0.03 | 0.07 | 0.11 | 0.01 | -0.01 | -0.02 | 0.15 | 0.25 | 0.31 | 0.27 | 0.21 | 0.42 | 0.41 | 0.45 | 1   |

Mean 1.78 0.70 2.60 2.50 2.85 2.38 3.64 2.90 2.35 4.92 2.53 2.32 1.92 5.00 2.59 2.30 1.69 3.49 3.44 3.47 3.83
s.d. 0.76 0.46 1.19 1.02 1.11 0.98 1.27 1.10 0.94 6.62 0.70 0.85 1.29 2.39 1.57 1.26 1.02 0.80 0.68 0.74 0.87
Min 1 0 1 1 1 1 1 1 1 0 1 1 1 1 2 1 1 1 1 1
Max 3 1 5 5 5 5 5 5 5 5 5 5 10 5 5 5 5 5 5 5 5 5

(N varies from 230 to 248)
Table 2. OLS influences on the extent of post-acquisition knowledge transfer (n=251)

Post-acquisition transfer from target to acquirer of:

<table>
<thead>
<tr>
<th>Post-acquisition transfer from target to acquirer of:</th>
<th>Technical skills (H1a)</th>
<th>Brand names (H1b)</th>
<th>Supplier relationships (H1c)</th>
<th>Managerial expertise (H1d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Target geographic scope (Proposition 1)</td>
<td>0.14**</td>
<td>0.19***</td>
<td>0.16**</td>
<td>0.16**</td>
</tr>
<tr>
<td>2. Cross-border acquisition (0=domestic; 1=cross-border)</td>
<td>-0.09</td>
<td>-0.04</td>
<td>-0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>3. Relative innovation strength of target to acquirer</td>
<td>0.27***</td>
<td>-0.13</td>
<td>0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>4. Relative manufacturing strength of target to acquirer</td>
<td>0.20**</td>
<td>0.20**</td>
<td>0.10</td>
<td>-0.03</td>
</tr>
<tr>
<td>5. Relative commercial strength of target to acquirer</td>
<td>-0.08</td>
<td>0.28***</td>
<td>0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>6. Relative managerial strength of target to acquirer</td>
<td>-0.03</td>
<td>-0.19**</td>
<td>0.15*</td>
<td>0.29***</td>
</tr>
<tr>
<td>7. Product similarity</td>
<td>0.11</td>
<td>0.00</td>
<td>0.05</td>
<td>-0.01</td>
</tr>
<tr>
<td>8. Pre-acquisition target profitability compared to industry</td>
<td>0.05**</td>
<td>0.11</td>
<td>0.06</td>
<td>0.14*</td>
</tr>
<tr>
<td>9. Pre-acquisition acquirer profitability compared to industry</td>
<td>0.08*</td>
<td>-0.02</td>
<td>0.02</td>
<td>0.07</td>
</tr>
<tr>
<td>10. Acquirer acquisition experience</td>
<td>0.07*</td>
<td>-0.01</td>
<td>-0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>11. Acquirer geographic scope</td>
<td>-0.09</td>
<td>0.06</td>
<td>-0.02</td>
<td>-0.13*</td>
</tr>
<tr>
<td>12. Forecasted demand growth</td>
<td>0.01</td>
<td>0.10</td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>13. Pre-acquisition relative annual sales of target to acquirer</td>
<td>0.14*</td>
<td>0.13</td>
<td>0.09</td>
<td>0.22***</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.28</td>
<td>0.20</td>
<td>0.16</td>
<td>0.32</td>
</tr>
</tbody>
</table>

*** p <0.01; **p <0.05; * p < 0.10 (two-tailed tests)
Table 3. OLS influences on the extent of post-acquisition capability enhancement (n=251)

<table>
<thead>
<tr>
<th>Post-acquisition capability enhancement of combined firm</th>
<th>R&amp;D capabilities (H2a)</th>
<th>Product quality (H2b)</th>
<th>Product cost efficiency (H2c)</th>
<th>Product line extension (H2d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Target geographic scope (Proposition 2)</td>
<td>0.18***</td>
<td>0.14*</td>
<td>0.10</td>
<td>0.14*</td>
</tr>
<tr>
<td>2. Cross-border acquisition (0=domestic; 1=cross-border)</td>
<td>0.13*</td>
<td>-0.12</td>
<td>-0.05</td>
<td>-0.05</td>
</tr>
<tr>
<td>3. Relative innovation strength of target to acquirer</td>
<td>0.32***</td>
<td>0.10</td>
<td>0.03</td>
<td>0.02</td>
</tr>
<tr>
<td>4. Relative manufacturing strength of target to acquirer</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.01</td>
<td>0.08</td>
</tr>
<tr>
<td>5. Relative commercial strength of target to acquirer</td>
<td>0.09</td>
<td>0.03</td>
<td>0.08</td>
<td>0.11</td>
</tr>
<tr>
<td>6. Relative managerial strength of target to acquirer</td>
<td>-0.13</td>
<td>-0.02</td>
<td>-0.03</td>
<td>-0.16*</td>
</tr>
<tr>
<td>7. Product similarity</td>
<td>0.09</td>
<td>0.14*</td>
<td>0.21***</td>
<td>-0.03</td>
</tr>
<tr>
<td>8. Pre-acquisition target profitability compared to industry</td>
<td>0.22***</td>
<td>0.13</td>
<td>0.06</td>
<td>0.01</td>
</tr>
<tr>
<td>9. Pre-acquisition acquirer profitability compared to industry</td>
<td>0.05</td>
<td>0.03</td>
<td>0.20***</td>
<td>0.12</td>
</tr>
<tr>
<td>10. Acquirer acquisition experience</td>
<td>-0.09</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>11. Acquirer geographic scope</td>
<td>0.01</td>
<td>0.04</td>
<td>0.03</td>
<td>-0.03</td>
</tr>
<tr>
<td>12. Forecasted demand growth</td>
<td>-0.06</td>
<td>-0.05</td>
<td>0.06</td>
<td>-0.06</td>
</tr>
<tr>
<td>13. Pre-acquisition relative annual sales of target to acquirer</td>
<td>0.17**</td>
<td>0.06</td>
<td>0.26***</td>
<td>0.08</td>
</tr>
</tbody>
</table>

R-Square

0.29 0.12 0.24 0.08

*** p <0.01; **p <0.05; * p < 0.10 (two-tailed tests)