



The regional dimension of MNEs' foreign subsidiary localization

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Abstract

This paper examines the regional effect of MNEs' foreign subsidiary localization. We hypothesize that the number of subsequent foreign subsidiaries in a country is in part determined by a firm's prior foreign subsidiary activity at the regional level. We test our hypotheses using data on 1076 Japanese MNEs that created 3466 foreign subsidiaries (1837 wholly owned FDI and 1629 joint ventures) over the period 1996–2001. We use a multilevel negative binomial approach with three levels of analysis: localization decisions in a country (49 countries), in a region (six regions) and at the headquarters level. In this way, we test the regional effects controlling for country and corporate dimensions. We also run separate models to differentiate wholly owned and joint venture localization decisions. Our results strongly support the semi-globalization perspective in that the regional-level effects are significant and different from the country-level effects for all foreign subsidiaries, for wholly owned subsidiaries and for jointly owned subsidiaries. Japanese MNEs adopt a regional perspective that complements their decisions at the country and firm levels. They seek regional agglomeration benefits and make arbitrage decisions between countries in the same region.

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INTRODUCTION

Recently, a strong debate has emerged about the actual “globalization” of international firms relative to the development of a more intermediate vision, or “semi-globalization” (Ghemawat, 2003; Rugman & Verbeke, 2007). Semi-globalization implies “that we observe neither extreme geographical fragmentation of the world in national markets nor complete integration” (Rugman & Verbeke, 2004: 6). This view is situated between the perspectives of complete isolation and complete integration, and allows a better, more subtle, understanding of the strategies of international firms (Buckley & Ghauri, 2004; Ghemawat, 2003) and their regionalization (Rugman & Verbeke, 2004). Moreover, it highlights the crucial role of economic geography and raises questions about the spatial reorganization of foreign investments and regional economic integration (Buckley & Ghauri, 2004). However, most previous investigations of foreign subsidiary location decisions have overlooked the potential impact of such geographical regions. Hence, although a few scholars have measured various aspects of the

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geographic dimension of MNEs' foreign subsidiaries (e.g., Benito, Grøgaard, & Narula, 2003; Delios & Beamish, 2005; Enright, 2005a; Rugman & Verbeke, 2004, 2007), further research is required (Buckley & Ghauri, 2004; Ghemawat, 2003; Ricart, Enright, Ghemawat, Hart, & Khanna, 2004; Rugman & Verbeke, 2005, 2007). There continues to be a strong debate on this issue in international business (IB) research, with divergent views about the existence and nature of this regionalization process (e.g., Delios & Beamish, 2005; Dunning, Fujita, & Yakova, 2007; Rugman & Verbeke, 2007; Stevens & Bird, 2004). This ongoing issue is an important component of the "big question" that IB research must address (Buckley & Ghauri, 2004), for its relevance as a distinct research stream (Ghemawat, 2003).

We contribute to this debate by examining empirically whether the localization decision of MNEs' foreign subsidiaries has a regional component. Specifically, we consider two new issues resulting from the semi-globalization view. The first is the extent to which a firm's decision to create foreign subsidiaries in a country depends on country-level variables vs regional-level variables. The second is how the decision about market entry into any given country is integrated into a regional strategy.

Consequently, we develop a multilevel model structured around country and regional dimensions, and test its validity through investigation of MNEs' foreign subsidiary localization decisions. Using this model, we test whether the regional dimension has a significant effect on foreign investment decisions, in accordance with the semi-globalization assumption. This also enables us to assess the effects at each level that influence firms' international strategy, so that we can "tease out regional from country level effects" (Aguilera, Flores, & Vaaler, 2007: 17).

As advocated by Rugman and Verbeke (2007), we test this model using firm-level data. As a first step, we consider all foreign equity-based subsidiaries before, in a second step, differentiating between wholly owned subsidiaries (WOS) and jointly owned subsidiaries (JV) in our analyses. We attempt to show that the number of subsequent foreign subsidiaries, WOSs or JVs, made by a firm in a country is influenced by the number of prior foreign subsidiaries and the ratio number of exited to existing foreign subsidiaries measured at the region level in addition to the country level.

As a result, our central contribution is to empirically validate the role of regions in MNEs'

subsidiary localization decisions. Additionally, we provide three other contributions. First, we provide a thorough analysis and validation of an MNE's subsidiaries' region-level aggregation causes. Second, we do the same for an MNE's decisions of arbitrage among its portfolio of foreign subsidiaries. Finally, we apply multilevel methods to test our research questions illustrating the advantage and relevance of such methods for IB research (Arregle, Hébert, & Beamish, 2006).

BACKGROUND

Despite a variety of perspectives, prior studies share a common inattention to the regional dimension of firms' internationalization and foreign investment activity (Enright, 2005a). Research emphasizing both global headquarters and country-level subsidiary issues has more or less dominated the IB field (Rugman & Verbeke, 2001). However, there is growing evidence that both trade and foreign investment activity have a strong regional dimension (Rugman & Verbeke, 2004, 2007). Few MNEs have achieved a truly global scope, as a large proportion focus on only one or two key continental regions of the world (Delios & Beamish, 2005; Rugman & Verbeke, 2004). The structure and operations of the MNE also mirror this semi-globalization (Ghemawat, 2003). In what is seen as efforts to cope efficiently with both globalization and localization pressures (Buckley & Ghauri, 2004), firms have been found to concentrate key management activities in regional management centers (Enright, 2005a). These centers play distinct roles, complementing both global and local organizational units (Enright, 2005b). Firms also adopt regional strategies and create regional operational hubs, which enable them to serve an entire continental region from one country (Buckley & Ghauri, 2004; Ricart et al., 2004). Finally, trends toward greater regional economic integration, in North America, Europe and Asia, may also support the regionalization of foreign subsidiaries (Buckley, Clegg, Forsans, & Reilly, 2001). Hence these MNEs develop a regional strategy, in addition to more local or global international strategies: they integrate their foreign investment decisions among countries at the region level. For instance, a decision to create a foreign subsidiary in a country could depend on characteristics, or prior decisions, relative to the other countries in the same region, or a decision to close down a subsidiary in a country could be linked to the decision to open a new one in another country in the same region.

The existence of such a regional dimension in the localization decision of MNEs' foreign subsidiaries remains only scantily investigated. This situation might be reinforced, among other reasons, by a lack of consensus on the definition of a region in the IB literature. Regions can indeed be defined in a variety of ways, from an economic, social, cultural, institutional or geographical perspective (see Aguilera et al., 2007, for a review). In this research, we adopt a geographical conceptualization of a region, in which the physical continuity and proximity among countries of the grouping is emphasized. Such a perspective is consistent with our focus on subsidiary localization. The impact of geographic distance on the likelihood of international trade and investment flows is well documented (Ghemawat, 2003; Khanna, Kogan, & Palepu, 2006).

Consequently, we build from the semi-globalization debate to examine how this geographic region dimension impacts on an MNE's foreign subsidiaries localization choices. In particular, we investigate whether a firm's localization decisions depend on or are influenced by its previous market entry and exit decisions at the regional level. Our proposition is that those foreign subsidiary decisions are regionally interdependent, in addition to or instead of being locally and globally interdependent.

HYPOTHESES

MNEs' foreign investment decisions typically involve important resource commitments, and are part of a series of decisions rather than being strict discrete choices (Buckley & Casson, 1998; Kogut, 1983; Kogut & Kulatilaka, 1994). Firms try to develop a pattern of investments according to their medium- or long-term international strategy (e.g., Chang, 1995; Guillén, 2003; Vermeulen & Barkema, 2002). Studying this pattern of firms' subsequent foreign investments underlines the importance of a dynamic perspective (Kogut & Kulatilaka, 1994). In particular, a firm's foreign investments have been suggested as following patterns exhibiting both an aggregation and an arbitrage logic (Buckley & Ghauri, 2004; Ghemawat, 2003). How MNEs cope with the opposite pressures of globalization and localization is a central issue in IB research (e.g., Bartlett & Ghoshal, 1989; Doz, Santos, & Williamson, 2001; Porter, 1986; Prahalad & Doz, 1987; Yip, 1995). These aggregation and arbitrage patterns play a key role in this regard. By geographically aggregating investments, firms typically attempt to exploit similarities and

advantages across countries (Ghemawat, 2003; Nachum & Wymbs, 2005). This aggregation logic may be especially useful to understand how prior market entry decisions influence subsequent ones. In contrast, arbitrage involves taking advantage of differences among countries (Ghemawat, 2003). This logic may in turn be promising when examining how firms' redeployment of resources freed up by prior exits impacts on subsequent foreign entries.

The Effect of a Firm's Prior Entry Decisions: Aggregation

Aggregation causes. There are several explanations for a firm's tendency to aggregate its foreign investments in a specific geographic area rather than dispersing them across areas. This persistence can be explained by a legitimization process of entry decisions over time. Prior decisions legitimize current and subsequent ones (Chan, Makino, & Isobe, 2006: 651). Similarly, aggregation can be seen as an attempt to minimize the liability of foreignness encountered when developing subsidiaries in a new geographic area (Zaheer & Manrakhan, 2001). MNEs can limit this burden, as knowledge about area specificities may be shared among subsidiaries in the same geographic area. As the successful exploitation of routines leads to repetition (March, 1988, 1991), firms also develop a momentum of strategic choice (Amburgey & Miner, 1992) and establish foreign subsidiaries in countries where they are already established and with which they are familiar (Bastos & Greve, 2003).

Furthermore, firms seek agglomeration externalities that benefit firms located near one another (Sorenson & Baum, 2003). These externalities are also relevant to analyze the dispersion of subsidiaries within firms. One potential mechanism for these economies of agglomeration is localized knowledge spillovers. A firm's close foreign subsidiaries can more easily share knowledge or organizational routines, thus avoiding the need to redundantly develop them. Density of social ties, an important driver of knowledge diffusion within a firm, also declines rapidly with distance while the cost of maintaining established relationships rises (Sorenson & Baum, 2003: 12). Therefore these mechanisms explain how geographic proximity also constrains the movement of knowledge within a firm and among its foreign subsidiaries, favoring their agglomeration in one geographic area. There are spatial aspects of knowledge (Buckley & Ghauri,

2004; Sorenson & Baum, 2003), and flows of information are spatially constrained (Hedstrom, 1994). Geographic proximity influences the transmission of knowledge (Audretsch, 2003; Rosenkopf & Almeida, 2003) and organizational practices (Strang, 2003).

However, these positive agglomeration effects have been argued to reach a limit and diminish as the number of foreign subsidiaries in the same area increases. Diseconomies of agglomeration may emerge as the availability of resources is reduced, local costs rise and competition increases among firms (Chan et al., 2006). From the “new economic geography” we know that co-location can increase homogeneity and duplication among foreign subsidiaries and decrease exposure to new knowledge (Sorenson & Baum, 2003). Similarly, firms with a greater propensity for repeating international alliances with prior partners experience inferior economic performance, as redundant ties (e.g., repeated partnerships) in a firm’s network do not truly improve the quality of the network, owing to an emphasis on exploitation at the expense of exploration (Goerzen, 2007). Consequently, the positive agglomeration effects of foreign subsidiaries will diminish in the same geographic area as exploitation and redundancies begin to dominate.

We thus expect to observe an inverted U-shaped relationship effect of the number of prior foreign subsidiaries in a geographic area on the founding of subsequent foreign subsidiaries in this area. Empirically, these different components of the aggregation effect have been studied at the country level (e.g., Bastos & Greve, 2003; Guillén, 2003; Head, Ries, & Swenson, 1995; Henisz & Delios, 2001), but recent empirical evidence has been mixed (Chan et al., 2006).

Regional aggregation. The existence of this relationship at the regional level remains to be validated. While this relationship may be similar in its logic and rationale to the country-level one, we believe that a regional effect will exist, and will be distinct rather than the mere result of the addition of country-level effects. A region typically involves a greater geographic size and diversity than a country. Yet a region is made up of a limited number of countries that are geographically close and with lower economic and institutional distance than at the global level (Rugman & Verbeke, 2005). Hence, from these relative region specificities, we can expect unique region-level aggregation effects.

For instance, compared with a country, considering the larger size and variety of a continental region, the negative effects (e.g., redundancies) of agglomeration will likely be weaker or will emerge later. Regional diversity also provides more opportunities for positive agglomeration effects. It is indeed possible to access different knowledge or resources embedded in different countries in the region, but, owing to the relative proximity, diffusion costs remain relatively low. Firms can gain on both sides: access to different assets or knowledge and relatively efficient diffusion among them. Such benefits are enhanced as well, with regional economic integration observed in various continental regions (Buckley & Ghauri, 2004; Enright, 2005b). These pressures support the spatial reorganization of production and the integration of goods and services markets at the regional level as firms maximize their ability to exploit intra-regional differences and synergies (Buckley & Ghauri, 2004). Firms can achieve economies of scale or organizational efficiencies on a region level rather than on a country level (Enright, 2005a: 60). The creation of regional hubs, for instance, permits firms to achieve superior flexibility, to avoid exclusive commitment, to reduce transportation costs, to capture better information and to benefit from larger economies of scale or scope (Buckley & Ghauri, 2004).

Compared with a global strategy, a region’s higher geographic proximity will positively influence the transmission of knowledge and agglomeration advantages. Therefore a region has a relative advantage compared with broader geographic strategies, as agglomeration benefits still exist or are easier to create. The second relative advantage of regions comes from regional economic integration or institutional proximity that limits the liability of foreignness when a firm decides to develop foreign subsidiaries in the same region. Countries continue to matter, creating discontinuities (Buckley & Ghauri, 2004; Rugman & Verbeke, 2005), but national markets in the same region share some similarities that decrease the newness of the problems and this liability of foreignness.

Rugman and Verbeke (2005) provide another important explanation of the existence and value of unique region-level aggregation effects. When an MNE increases its geographic scope, it incurs additional costs as contractual hazards are amplified owing to nation-state borders, time and space, economic differences and institutional differences (Rugman & Verbeke, 2005: 10). Therefore

geographic scope is a critical element for internationalization choices, and is determined by the MNE's ability to link its firm-specific advantages (FSAs) to country-specific advantages (CSAs). MNEs must successfully deploy their existing FSAs to the specificities of countries to increase their sales and profitability. As a result, "each foreign location requires location-specific linking investments to meld existing FSAs with CSAs" (Rugman & Verbeke, 2005: 13), which creates asset specificity. These linking investments in a country are country-specific, which raises the question of their redeployability.

Region-bound FSAs are a response to this dilemma. Rugman and Verbeke (2005) developed the concept of region-bound firm-specific advantages (RFSAs), complementing (location-bound) CSAs and (non-location-bound) FSAs. They can be exploited successfully by a firm throughout a region rather than being restricted to one country. Such benefits are possible if the firm integrates its foreign subsidiaries regionally while keeping a regional responsiveness at the country level. In the presence of substantial transaction costs, and high FDI costs in particular, a regional orientation, dispersing competencies and capabilities among internal and region-based networks, may be an efficient configuration (Rugman & Verbeke, 2001). RFSAs can be exploited successfully by a firm throughout a region with low-linking investments in a region's countries owing to the relative "closeness" or similarity of these countries and their corresponding CSAs (Rugman & Verbeke, 2005). However, by definition, these RFSAs remain region-specific, and can be deployed across borders only in a limited region. As a result, region-level effects should exist because of this attempt to minimize these linking costs and maximize MNEs' performance. MNEs' regional management centers reflect the importance and value of these RFSAs and region effects (Enright, 2005b). RFSAs allow an MNE to upgrade its CSAs, making them more valuable at the region level with new – and additional as compared with the country level – scale and scope advantages resulting from the comparatively larger size and diversity of regions.

This discussion leads us to propose the existence of a regional-level aggregation relationship, in addition to a country-level one. We even expect the former to be stronger than the latter. Hence we formulate the following hypotheses:

Hypothesis 1: The number of subsequent foreign subsidiaries developed in a country by a firm has

an inverted U-shaped relationship with the number of prior foreign subsidiaries of this firm in this region.

Hypothesis 2: The effect of the number of prior foreign subsidiaries made by a firm will be stronger at the region level than at the country level in explaining the number of subsequent foreign subsidiaries made by a firm in a country.

The Effects of Prior Exit Decisions: Arbitrage

The logic of arbitrage in foreign investment decisions is particularly useful to understand the effects of prior divestment decisions (exits) on subsequent entries. Arbitrage occurs when foreign subsidiaries from a geographical area are terminated and relocated. Volatility and flexibility are the mechanisms underlying such behavior with the objective of capitalizing on differences between geographic areas (Buckley & Ghauri, 2004; Ghemawat, 2003). The distinct nature of regional effects vs country ones is also expected to be more salient by considering this arbitrage logic.

Arbitrage causes. Unfortunately, little attention has been paid to this issue (Ghemawat, 2003), and particularly to one of its components: divestments (Belderbos & Zou, 2006; Benito, 1997, 2005). Researchers have seldom considered that divestment decisions can be an integral part of managing a larger network of subsidiaries in MNEs (Belderbos & Zou, 2006). As result, they have ignored possible reallocations (i.e., arbitrage) within the subsidiary network. Scholars have also focused typically on the size or absolute number of divestments rather than on their importance relative to the firms' portfolio of foreign investments. However, it may be difficult to achieve a thorough understanding of the arbitrage or reallocation logic if we do not account for the subsidiary network in place. This explains why the evidence regarding the impact of divestments on subsequent foreign market entries remains limited. Recently, Chan et al. (2006) suggested that the availability of resources released from exits in a country should promote reinvestments in other foreign subsidiaries and thus subsequent entries in the same country. However, this hypothesis was not supported.

Building from real option theory, an MNE can be viewed as a collection of valuable options that permit the choice of moving activities from one country to another (Kogut & Kulatilaka, 1994). An MNE's subsequent investments in foreign countries

are a part of an internationally coordinated network of subsidiaries across borders (Chang, 1995; Kogut & Kulatilaka, 1994), providing an “operating flexibility,” adding value to the firm. This is the central advantage of MNEs compared with domestic firms: the ability to coordinate flexible multi-national activities within a network (Kogut & Kulatilaka, 1994).

Regional arbitrage. The role of arbitrage has been acknowledged in recent research on semi-globalization and global strategy, clearly taking at least a regional perspective. Scholars have emphasized the volatility and flexibility among subsidiaries in different countries (e.g., Buckley & Ghauri, 2004; Ghemawat, 2003; Kogut & Kulatilaka, 1994). Foreign subsidiaries are integrated among different countries and are more “footloose” (Buckley & Ghauri, 2004). These reallocations do not take place at a country level as there is not enough flexibility to gain from closing a subsidiary in a country and relocating it in the same country. At the regional level, arbitrage decisions among countries allow an MNE to deal with, or take advantage of, different institutional contexts. They are not constrained any more by a country’s boundary and the corresponding institutional forces, but can choose to reallocate their foreign investments across national boundaries. Therefore, in essence, arbitrage should have mainly a regional or a more global dimension.

Region-bound FSAs explain why these arbitrage decisions should exist at the region level. Considering the costs incurred to develop such FSAs and their asset specificity, an MNE will make arbitrage decisions among countries of the same region to keep benefiting from its past region-bound investments. Moreover, regional economic integration creates regions with a strong economic value that cannot be abandoned without taking the risk of being excluded from an important market or an important source of knowledge. This reluctance to completely leave an important region can also be explained by an MNE’s objective to keep a “real option” in the region for future developments (Kogut & Kulatilaka, 1994). MNEs will optimize their subsidiaries network by arbitrage decisions within the region but will not leave it.

Hence MNEs divide their international strategies according to regions and make arbitrage decisions among countries in a region to optimize their foreign subsidiaries network (Buckley & Ghauri,

2004; Ghemawat, 2003; Rugman & Verbeke, 2004, 2007). We suggest that the resources released by terminating foreign subsidiaries in the region will be reinvested among other countries in the same region. The higher this “reallocation” or arbitrage behavior at a regional level, the higher will be the propensity to develop new foreign subsidiaries within this region.

To appraise effectively this arbitrage activity, we cannot rely on the absolute number of exited foreign subsidiaries (with more than 10% equity stake) as prior research on divestments has used (e.g., Belderbos & Zou, 2006; Benito, 1997). We propose rather a comparative perspective, specifically an exit ratio defined as the number of foreign subsidiaries exited in a region by a firm over a certain period relative to the firm’s total number of foreign subsidiaries in that region over the same period of time (e.g., “ratio of exits” in a region). We made this choice for two reasons. First, our approach permits us to resolve the statistical problem mentioned by Chan et al. (2006) about a strong linkage between the number of exited foreign subsidiaries and the number of existing foreign subsidiaries. Second, consistent with Benito (2005), this new ratio provides a more robust perspective on how managers manage their different foreign subsidiaries, including their engagement in arbitrage and its strategic intent. If firm A with 10 foreign subsidiaries and firm B with two foreign subsidiaries in the same country each close one subsidiary in this country, it would not indicate the same level of inter-country arbitrage. For firm A, it can be simply a marginal adaptation (or adjustment divestment) of its subsidiaries without dramatically changing its international strategy. For B, it may be the first sign of a strong international strategic reorientation (or major realignment). A high ratio of exits in the region indicates a strong “reallocation” behavior, and means that a firm is very active in reconfiguring its regional foreign subsidiaries.

However, we expect that the relationship between their reallocation behavior and subsequent entry will be curvilinear. The positive relationship between exits and subsequent entries may hold for limited levels of divestment activity, or for what Benito (2005) labeled “adjustment divestments.” The resources freed by this activity will be reinvested in another country of the same region. However, massive exits, or restructuring divestments, may rather signal a major realignment of a firm’s portfolio and possible disengagement at

the regional level, weakening the positive effect of region exits.

At the country level, the relationship will be reversed. It is unlikely that the resources freed by exits will be reinvested in the same country. It would be surprising for firms to incur the costs of adjustment divestments, only to reinvest in the same country shortly after. Country exits will be negatively related with subsequent country entries. As developed, the arbitrage level is the region, not the country. However, we expect this negative relationship to be nonlinear, as high values of the country ratio of prior exits would indicate a major shift in strategy and the abandonment of a country, which may be relatively more difficult to implement than a partial reorientation (Belderbos & Zou, 2006). Hence we formulate the following hypotheses, in which the distinctive effects of region-level and country-level exits are acknowledged:

Hypothesis 3: The number of subsequent foreign subsidiaries developed in a country by a firm has an inverted U-shaped relationship with the ratio of prior exited-to-existing foreign subsidiaries of the firm in this region.

Hypothesis 4: The number of subsequent foreign subsidiaries developed in a country by a firm has a U-shaped relationship with the ratio of prior exited-to-existing foreign subsidiaries of this firm in this country.

Building from our above discussion, we also propose that the influence of the ratio of prior exits will be stronger at the region level than at the country level:

Hypothesis 5: The effect of the ratio of prior exited-to-existing foreign subsidiaries will be stronger at the regional level than at the country level in explaining the number of subsequent foreign subsidiaries made by a firm in a country.

METHOD

Data Source and Sample

This study used data available in *Kaigai Shinshutsu Kiyō Souran* ("Japanese Overseas Investments"), an annual publication of Toyo Keizai Inc., which provides subsidiary-level information on the overseas activities of Japanese MNEs. The database has been found to provide reliable data for the study of Japanese FDI (e.g., Delios & Henisz, 2003; Makino

& Beamish, 1998). The 2001 version contained information on 30,014 subsidiaries representing more than 5000 public and private firms established in over 100 countries from 1985 to 2001. As of 2007, more than 80 papers in refereed academic journals have drawn on this dataset. However, to our knowledge, except for one article by Delios and Beamish (2005) considering Japanese MNEs' global and regional strategies, this dataset had never been used for investigating regional effects in foreign investment decisions.

We selected firms according to two criteria. First, we chose firms that established at least four foreign subsidiaries over the period 1986–2001, as our objective was to test and identify interrelationships between foreign subsidiary decisions. Firm-level aggregation or arbitrage effects necessitate the existence of multiple foreign subsidiaries. A firm with very low foreign subsidiary activity does not correspond to such a type, and cannot develop such behavior by integrating its foreign subsidiaries in a regional or global perspective. However, to increase the generalizability of our potential results, we kept a relatively low threshold to ensure that we did not take into account only large Japanese firms. Second, we selected firms that did not have all their foreign subsidiaries in one country. For instance, a firm with four foreign subsidiaries located only in Spain would not have to integrate its foreign subsidiaries across European countries, as all of them are only in one country. The region-level localization strategy would not bring any value or difference to the country-level (Spain) strategy. Moreover, this type of firm would bias our results, as the inclusion of single-host-country firms would mask region and corporate effects (Bowman & Helfat, 2001; Makino, Isobe, & Chan, 2004) creating biases for our level 2 and level 3 models. Therefore our final sample is made up of 1076 Japanese firms that established 3466 foreign subsidiaries over the period 1996–2001. These foreign subsidiaries are made up of 1837 WOSs (more than 90% equity) and 1629 JVs (10–90% equity).

Definitions of FDI and foreign subsidiaries vary. The most orthodox economic view would consider a foreign subsidiary as one with 100% equity holding. Nowadays, the US Bureau of Economic Analysis, the United National Conference on Trade and Development, and virtually all national tax jurisdictions treat foreign subsidiaries with ownership levels of 90% or more as WOS. They do not require a full 100% equity level because they recognize that an equity holding involving 90%

is very substantial, while less than 10% gives the investor little “voice” in operational decision-making.

Disagreement exists in regard to which types of JV (10–90% equity), if any, should be viewed as foreign subsidiaries or treated as direct investment. Dunning (1995: 463) provides a useful review of the evolving attitude toward collaborative/cooperative forms of production. He notes that

until the late 1970s ... in the main, economists viewed the boundary of a firm as the point at which its owners relinquished “de jure” control over resource harnessing and usage; and, to a large extent, this boundary was thought to be coincident with a loss of majority equity ownership.

Thus historically, for at least most economists, a foreign subsidiary was a foreign investment involving at least a 50.1% holding. Dunning (1995: 481) goes on to argue that the eclectic paradigm needs to acknowledge that the traditional assumptions regarding ownership-based definitions have to be broadened.

Our objective is not to try and resolve the question of which level of JV, if any, should be viewed as a form of FDI. To that end, we conservatively view FDI as constituting “de facto” WOSs (90–100%), while treating equity JV (10–90%) as a mode of investment. Consequently, we develop and test our hypotheses on different models reflecting these different possible approaches, examining respectively the creation of all subsequent foreign subsidiaries (with at least 10% equity), subsequent WOSs (90% or more) and subsequent JVs (10%–90%), to check the robustness of our results.

Variables

Dependent variables. Our first dependent variable is the number of foreign subsidiaries (WOSs and JVs) created by a firm in a country over the period 1996–2001. Because we test the robustness of our results considering the different modes of entry separately, WOS and JV, we use two additional dependent variables: number of WOSs created by a firm in a country over the period 1996–2001, and number of JVs created by a firm in a country over the period 1996–2001.

Independent variables. A firm’s prior investment activity in a region was measured by the count of prior foreign subsidiaries¹ (e.g., subsidiaries with more than 10% equity stake) established in a region over the period 1990–1995. It is used to identify aggregation effects. We used the same variable as

research considering aggregation at the country level (e.g., Chan et al., 2006).

The second independent variable is the ratio of prior foreign subsidiaries (with more than 10% equity stake) exited by a firm over a period of time relative to existing foreign subsidiaries (with more than 10% equity stake) for the firm over the same period of time. It is used to identify and measure arbitrage effects. As explained earlier, we adapted the traditional variable measuring divestments – for example, the number of divested foreign subsidiaries with more than 10% equity stake (Belderbos & Zou, 2006; Benito, 1997) – and used a ratio of exits for statistical reasons (Chan et al., 2006) and to better capture the arbitrage effect. This variable is measured at two levels and gives two independent variables: ratio of prior exits in a country, and ratio of prior exits in a region. We included both linear and quadratic terms of these two variables to test the nonlinear relationships, and they are also observed over the period 1990–1995.

Control variables. We included control variables in our three levels of analysis.

At the country level (i.e., an MNE’s strategy in a country), firm’s country experience was measured by the log of the sum of subsidiary years of experience in a firm’s history in the focal country (Lu, 2002). Institutional isomorphism (mimetic) effects (Chan et al., 2006; Lu, 2002; Yiu & Makino, 2002) were estimated with other Japanese firms’ experience in a country (Henisz & Delios, 2001; Lu, 2002), calculated as the log of the number of subsidiary years experience of other Japanese firms in a country; and other Japanese firms’ prior exits in a country (Chan et al., 2006), calculated as the ratio of the number of prior foreign subsidiaries exited by other Japanese firms in a country to the number of other Japanese firms’ foreign subsidiaries in a country. Similar to Chan et al. (2006), we included the quadratic term of the ratio of exits to model a nonlinear relationship. We also controlled for country-specific variables and, relying on recent studies (Chan et al., 2006; Delios & Henisz, 2003), we included country variables such as the log of GDP per capita, the GDP per capita growth rate and the political hazards index. Political hazards index reflects the feasibility of a policy change in a country, where a high value indicates a low political hazard risk (Henisz, 2000).

In order to identify additional and independent region-level effects, we included in our country-level control variables the count of prior foreign

subsidiaries¹ established in a country by a firm. As for its region-level counterpart, it is measured over the period 1990–1995.

At the region level (i.e., an MNE's strategy in a region), we controlled for possible mimetic effects considering the same aforementioned isomorphism variables. They are the experience of other Japanese firms and their ratio of exits in a region. The calculations are the same as indicated in the previous paragraph but at the regional level. Again, we included a quadratic term for the ratio of exits.

At the firm level, we measured the firm's prior total international experience as the logarithmic transformation of the number of subsidiary years of investment in a firm's history in all countries (Delios & Henisz, 2000, 2003), firm's research and development intensity (R&D expenses divided by total sales, 1990–1995 average) and advertising intensity (advertising expenses divided by total sales, 1990–1995 average) (Delios & Henisz, 2003). Finally, firm size was measured by the log of its annual sales (in 1995).

Levels of analysis. As mentioned, we consider in our hypotheses and models variables measured and analyzed at different levels (Hitt, Beamish, Jackson, & Mathieu, 2007): firms' foreign subsidiary choices in a country (level 1), firms' foreign subsidiary choices in a region (level 2) and firms' corporate (headquarters) variables (level 3). Our variables of interest are at levels 1 and 2. Level 3 is considered only as a control dimension, as firm-level variables may have an effect on the number of foreign subsidiaries, WOSs or JVs. This allows us to control for a firm's corporate dimension: R&D intensity, advertising intensity, firm total international experience and firm size.

As explained above, we defined regions in geographic terms and thus as a grouping of countries with physical continuity and proximity (Aguilera et al., 2007). The definition of a region is not straightforward, considering the different operationalizations available (see Aguilera et al., 2007, for an extensive review). Some scholars have defined regions based on geographical distance (e.g., McNamara & Vaaler, 2000; Rugman & Verbeke, 2004), others according to religion, language, institutional similarities, trade agreements, economic development or cultures (e.g., Hofstede, 1980; Ronen & Shenkar, 1985). We use geographic regions, as this definition appeared to be the most consistent with this study's focus on foreign subsidiary localization (Flores & Aguilera, 2007),

and is central for the organization of firms' international strategy (Buckley & Ghauri, 2004) and the aforementioned origins of region-level effects. In support, Rugman and Verbeke (2007: 203) explain that regional clusters based on cultural dimensions have some value, but not for studies that attempt to understand the essence of international corporate strategy. Moreover, in recent years, scholars have argued for further integration of economic geography in examining spatial dimensions of MNEs' strategy (Buckley & Ghauri, 2004). Indeed, geographic proximity has been found to stimulate trade, investment and even convergence in governance and management practices among countries (Ghemawat, 2003; Khanna et al., 2006). As a key promoter of economic interdependence and region-bound FSAs, we expect that geographic proximity is an important factor in the agglomeration and arbitrage logics underpinning our study and its hypotheses.

The regional grouping of countries used in this study was derived from the 19-region classification proposed by the United Nations Statistics Division (<http://unstats.un.org/unsd/methods/m49/m49.htm>). We identified six regions (see Table 1), among which four were identical to regions included in the UN classification: "Europe," which combined countries from western, southern and northern Europe; "Eastern Asia," with countries at proximity from China; "Southern Asia," with countries at proximity from India; and "South Eastern Asia," with countries south of China and east from India. As a total of 2140 foreign subsidiaries in our sample were made in Asia, we split Asia into these three geographic regions to achieve a better and more precise understanding of foreign investments dynamics. Of the two others, the South America region included countries from that regional classification and two countries from Central America (Costa Rica and Panama). The last geographic region was labeled NAFTA in order to account for the trade agreement encompassing Canada, the United States of America and Mexico.

Furthermore, regions with limited foreign subsidiary activities, such as the Middle East (15 foreign subsidiaries), Africa (43 foreign subsidiaries) and Oceania (65 foreign subsidiaries), were dropped. Eastern Europe (88 foreign subsidiaries) was also left out, as dramatic changes in that area resulted in unstable regional boundaries over the period covered in this research. Still, the six regions used in the study accounted for 3466 (92.5%) of the 3751 foreign subsidiaries established by the

Table 1 Regions and countries

<i>Region</i>	<i>Countries</i>
NAFTA (701 foreign subsidiaries created in 1996–2001)	Canada USA Mexico
Europe (495 foreign subsidiaries created in 1996–2001)	United Kingdom Netherlands France Germany Sweden Belgium Portugal Spain Italy Finland Austria Greece Norway Denmark Ireland Switzerland Luxembourg
Eastern Asia (1132 foreign subsidiaries created in 1996–2001)	China Taiwan Macao Hong Kong South Korea Mongolia
Southern Asia (85 foreign subsidiaries created in 1996–2001)	India Pakistan Sri Lanka Bangladesh
South Eastern Asia (923 foreign subsidiaries created in 1996–2001)	Thailand Singapore Malaysia Philippines Indonesia Brunei Vietnam Myanmar
South America (130 foreign subsidiaries created in 1996–2001)	Costa Rica Colombia Venezuela Ecuador Peru Chile Brazil Argentina Panama Bolivia Paraguay
Total: 3466 foreign subsidiaries	

1076 Japanese MNEs in our sample over the period 1996–2001. They also included the regions commonly examined in the literature on the regionalization debate (see Rugman & Verbeke, 2004, 2007) and the main FDI activities of MNEs (UNCTAD, 2005).

Model Estimation

As explained, we consider 1076 Japanese MNEs with a minimum of four foreign subsidiaries set up over the period 1986–2001. These Japanese firms established 3466 foreign subsidiaries (1837 WOSs and 1629 JVs) over the period 1996–2001 in 49 countries and in six regions. As a result, we have a data matrix at level 1 (firm/country) of 52,724 observations (1076 firms \times 49 countries). At level 2 (firm/region), we have 6456 observations (1076 firms \times 6 regions), and 1076 at level 3. Descriptive statistics and a correlation matrix of the variables at the different levels are provided in Tables 2 and 3.

Preliminary analyses indicated an over-dispersion, so we used a negative binomial model as it is suitable to analyze count data with such a distribution. Owing to the structure of the data and the hierarchical nature of our research question, we used a multilevel negative binomial model with three levels and analyzed it with the multilevel software SuperMix (Hedeker & Gibbons, 2007). Our hypotheses concern effects occurring at each level (country, region and headquarters levels) and across levels, but traditional non-multilevel methods do not allow a correct specification or test of these relations (Arregle et al., 2006; Hitt et al., 2007; Raudenbush & Bryk, 2002; Snijders & Bosker, 1999). Multilevel models address the potential statistical problems of disaggregation, intraclass correlation and misestimated precision inherent in such multilevel data (Barcikowski, 1981; Bliese & Hanges, 2004; Hox, 1997; Raudenbush & Bryk, 2002). Moreover, this multilevel method is also required to specify submodels expressing relationships among variables within each level, further specifying how variables at one level influence relations accruing at the other (Raudenbush & Bryk, 2002). Therefore effects measured at the region level are not the sum of effects at the country levels, but instead are independent of country and firm effects. Importantly, the methodology we employ allows us to test the regional effects controlling for country and corporate dimensions.

Table 2 Descriptive statistics

Level	Variables	<i>n</i>	Min.	Max.	Mean	<i>s.d.</i>
HQ	ln(Total international experience)	1076	0.69	8.58	4.17	1.24
	Advertising intensity	630	0	0.24	0.01	0.02
	R&D intensity	630	0	0.14	0.02	0.02
	ln(Sales)	1076	7.09	21.36	13.41	2.76
FR	Number of prior-created foreign subsidiaries in a region	6456	0	48	0.99	2.68
	Ratio prior exits in a region	6456	0	1	0.01	0.07
	ln(Other Japanese firms' experience in the region)	6456	7.22	10.91	9.89	1.27
	Ratio Other Japanese firms' prior exits in the region	6456	0.07	0.32	0.15	0.08
FC	Number of created foreign subsidiaries 1996–2001 in a country	52,724	0	25	0.07	0.44
	Number of created WOSs 1996–2001 in a country	52,724	0	13	0.03	0.25
	Number of created JVs 1996–2001 in a country	52,724	0	24	0.03	0.30
	Number of prior-created foreign subsidiaries in a country	52,724	0	41	0.12	0.71
	Ratio prior exits in a country	52,724	0	1	0.01	0.09
	ln(Firm's country experience)	52,724	0	6.99	0.36	0.97
	ln(Other Japanese firms' experience in the country)	52,724	0	10.78	6.40	1.84
	Ratio Other Japanese firms' prior exits in the country	52,724	0	1	0.14	0.11
	ln(GDP/capita)	52,724	5.76	10.71	8.76	1.52
	GDP/capita growth rate	52,724	−0.03	0.10	0.03	0.02
	Political hazards index	52,724	0.10	1	0.37	0.26

FC, firm/country (level 1); FR, firm/region (level 2); HQ, headquarters (level 3).

RESULTS

The results of the multilevel negative binomials are provided in Tables 4, 5 and 6. Models 1a and 1b (Table 4) are used to explain the number of foreign subsidiaries established in a country, Models 2a and 2b (Table 5) are used to explain the number of JVs and Models 3a to 3c (Table 6) the number of WOSs. For each dependent variable we tested a model (Models 1b, 2b and 3b) without the squared terms (e.g., a linear relationship) for our independent variables to check the robustness of our best model nonlinear relationships. Aikake Information Criterion (AIC) and Schwarz Bayesian Criterion (SBC) are provided for each model, and are used to choose the best models (e.g., lowest values for AIC and SBC).

The best model to explain the number of foreign subsidiaries made in a country is Model 1a (see Table 4). For the number of subsequent JVs, Model 2a is the best model (see Table 5) and, for the number of subsequent WOSs, the best model is Model 3c (see Table 6).

For Hypothesis 1, results in Model 1a show that the prior number of foreign subsidiaries established in a region has a significant positive linear term and a negative quadratic term when explaining the number of subsequent foreign subsidiaries in a country. Results in Model 3c for the number of

subsequent WOSs and Model 2a for the number of subsequent JVs give similar results. Therefore, Hypothesis 1 is supported whatever the type of foreign subsidiaries. These inverted U-shaped relationships are presented in Figures 1, 2 and 3 respectively for foreign subsidiaries, WOSs and JVs.

The variable ratio of prior region exits shows a positive linear term and a negative quadratic term, and both are significant, in Models 1a, 2a and 3c. Thus Hypothesis 3 is supported for the three types of foreign investment. These relationships are presented in Figures 4, 5 and 6.

At the country level, the results of testing Models 1a, 2a and 3c confirm that the ratio of prior country exits has a significant negative effect on the propensity to develop subsequent foreign subsidiaries, WOSs and JVs in the same country. Results for Models 1a and 2a confirm that this relationship is nonlinear, although Model 3c (WOS) shows a linear relationship. However, this result is still consistent with semi-globalization, as it shows that the arbitrage effect does not take place at the country level. The corresponding relationships are presented in Figures 4, 5 and 6. Hypothesis 4 is supported.

In order to check the robustness of the region-level effects, we tested the best models (1a, 2a

Table 3 Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Number of prior-created foreign subsidiaries in the country	1														
2 Ratio of prior exits in a country	0.17**	1													
3 ln(Firm's country experience)	0.47**	0.31**	1												
4 ln(Other firms' country experience)	-0.03**	-0.03**	-0.07**	1											
5 ln(GDP/capita)	0.02**	0.05**	0.14**	0.36**	1										
6 GDP/capita growth rate	0.06**	0	0.01*	0.06**	-0.04**	1									
7 Political hazards index	0.06**	-0.02**	0.02**	-0.14**	-0.43**	0.32**	1								
8 Ratio Other firms' prior exits in the country	-0.04**	-0.01*	-0.07**	-0.01**	-0.16**	-0.13**	-0.14**	1							
9 Number of prior-created foreign subsidiaries in region	0.46**	0.15**	0.34**	-0.10**	0.11**	0	0	-0.11**	1						
10 Ratio of prior exits in a region	0.12**	0.20**	0.15**	-0.04**	0.04**	0	0	-0.04**	0.28**	1					
11 ln(Other firms' region experience)	0.08**	0.05**	0.18**	0.26**	0.60**	0.05**	-0.06**	-0.41**	0.19**	0.07**	1				
12 Ratio Other firms' prior exits in the region	-0.09**	-0.04**	-0.17**	-0.16**	-0.29**	0.03**	-0.08**	0.47**	-0.20**	-0.07**	-0.56**	1			
13 ln(Firm's total international experience)	0.16**	0.12**	0.30**	-0.16**	0	0	0	0	0.38**	0.20**	0	0	1		
14 Advertising intensity	-0.01*	-0.01*	0	0	0	0	0	0	-0.01**	-0.02**	0	0	0.01	1	
15 R&D intensity	0.02**	0	0.07**	-0.04**	0	0	0	0	0.06**	0.04**	0	0	0.19**	0.10**	1
16 ln(Sales)	0.03**	0	0.02**	-0.01**	0	0	0	0	0.05**	0	0	0	-0.02**	0	0.10**

**Correlation is significant at the 0.01 level; *correlation is significant at the 0.05 level.
 n=52,724 (except for correlations with R&D or Advertising, n=30,876).

Table 4 Results of the negative binomial explaining the number of foreign subsidiaries created by an MNE over the period 1996–2001 in a country

Level	Variables	Number of foreign subsidiaries		
		Base model	Model 1a	Model 1b
FR	Ratio of prior exits in the region		4.7959*** (0.3816)	2.5613*** (0.1676)
	(Ratio of prior exits in the region) ²		−3.9101*** (0.6307)	
	No. of prior-created foreign subsidiaries in the region		0.0639*** (0.0101)	0.0456*** (0.0037)
FC	(No. of prior-created foreign subsidiaries in the region) ²		−0.0011*** (0.0002)	
	Ratio of prior exits in the country		−1.6038*** (0.3809)	−0.7322*** (0.1621)
	(Ratio of prior exits in the country) ²		1.1320* (0.4762)	
<i>Control variables:</i>				
FC	No. of prior-created foreign subsidiaries in the country	0.0818*** (0.0117)	0.0638*** (0.0133)	0.0144** (0.0056)
	(No. of prior-created foreign subsidiaries in the country) ²	−0.0020*** (0.0003)	−0.0016*** (0.0003)	
HQ	Intercept	−9.0031*** (0.5412)	−7.6543*** (0.5424)	−8.1079*** (0.5473)
	R&D	7.4888*** (0.7282)	5.8610*** (0.7264)	6.3168*** (0.7364)
FC	Advertising	−4.9572** (1.5965)	−3.0803* (1.5318)	−3.2003* (1.5441)
	ln(Sales)	0.2286*** (0.0217)	0.1831*** (0.0220)	0.1928*** (0.0221)
FC	ln(Firm's total international experience)	0.1165*** (0.0285)	0.0611* (0.0291)	0.0837** (0.0292)
	ln(Other firms' experience in the country)	0.7585*** (0.0263)	0.7951*** (0.0277)	0.7885*** (0.0272)
FR	ln(Other firms' experience in the region)	−0.0103 (0.0456)	−0.0978* (0.0458)	−0.0619 (0.0460)
	Ratio Other firms' exits in the country	−8.4037*** (1.3358)	−8.4831*** (1.3311)	−8.3098*** (1.3381)
FR	(Ratio Other firms' exits in the country) ²	12.6980*** (2.5265)	13.1754*** (2.4892)	12.8468*** (2.5064)
	Ratio Other firms' exits in the region	11.0762*** (2.5645)	10.2191*** (2.5624)	10.7492*** (2.5874)
FC	(Ratio Other firms' exits in the region) ²	−34.4985*** (6.4063)	−31.4234*** (6.3915)	−32.9062*** (6.4531)
	Political hazard index	−0.0704 (0.1054)	−0.0739 (0.1046)	−0.0523 (0.1057)
FC	ln(GDP/capita)	−0.4164*** (0.0210)	−0.4227*** (0.0210)	−0.4370*** (0.0211)
	Growth of GDP/capita	7.7699*** (1.0072)	7.9132*** (1.0047)	8.1459*** (1.0140)
FC	ln(Firm's country experience)	0.9654*** (0.0250)	0.9971*** (0.0262)	1.0135*** (0.0251)
	Deviance	10,233.57	9808.05	9888.39
FC	Akaike Information Criterion (AIC)	10,271.57	9866.05	9938.39
	Schwarz Bayesian Criterion (SBC)	10,428.78	10,106.01	10,145.25

***p < 0.001, **p < 0.01, *p < 0.05. Standard errors in parentheses.

FC, firm/country (level 1); FR, firm/region (level 2); HQ, headquarters (level 3).

and 3c) without the region-level variables used in our hypotheses. These results are presented in Table 7 and clearly indicate that the models with region-level variables are the best ones, as their AIC and SBC are much lower than models in Table 7. They also show the bias and risks of ignoring such region-level effects on the analysis of the dynamic of foreign subsidiary localization, as the ratios of prior exits at the country-level are not significant.

Next, we compare the results at both levels to test Hypotheses 2 and 5. We use the same approach as Chan et al. (2006: 657) to compute the ratio maximum value of multipliers over the inflection point for each variable at both levels. This ratio provides an indication of the extent to which

subsequent foreign subsidiary (or WOS or JV) creation in a country is elastic to prior-created foreign subsidiaries and prior exits: the higher the ratio, the more elastic the subsequent foreign subsidiary (or WOS or JV) creation to prior-created or exited foreign subsidiaries. These elasticity ratios at both levels for the three best models are listed in Table 8.

For the variable “number of prior existing foreign subsidiaries” the country-level elasticity ratio varies from 0.07 to 0.09 and the region-level ratio is 0.08. For the variable “ratio of prior exits” the country-level elasticity ratio varies from 0.76 to 0.85 and the region-level ratio from 6.33 to 7.13. These results confirm that the region-level effect is

Table 5 Results of the negative binomial explaining the number of JVs created by an MNE over the period 1996–2001 in a country

Level	Variables	Number of JVs					
		Base model		Model 2a		Model 2b	
FR	Ratio of prior exits in the region (Ratio of prior exits in the region) ²			4.8675*** (0.5710)		2.3394*** (0.2374)	
	No. of prior-created foreign subsidiaries in the region (No. of prior-created foreign subsidiaries in the region) ²			−4.3989*** (1.0171)		0.0627*** (0.0139)	0.0422*** (0.0048)
FC	Ratio of prior exits in the country (Ratio of prior exits in the country) ²			−2.2451*** (0.5375)		−0.8021*** (0.2297)	
				1.8878** (0.6522)			
<i>Control variables</i>							
FC	No. of prior-created foreign subsidiaries in the country (No. of prior-created foreign subsidiaries in the country) ²	0.0500** (0.0157)		0.0491** (0.0180)		0.0104 (0.0072)	
		−0.0009* (0.0005)		−0.0011* (0.0005)			
	Intercept	−6.3300*** (0.7338)		−4.9504*** (0.7405)		−5.3870*** (0.7399)	
HQ	R&D	2.2501* (1.1489)		1.5500 (1.1580)		2.0040 (1.1644)	
	Advertising	−10.2636*** (2.6773)		−8.7118** (2.6502)		−8.7549** (2.6585)	
	ln(Sales)	0.3351*** (0.0311)		0.2952*** (0.0317)		0.3044*** (0.0315)	
	ln(Firm's total international experience)	−0.0136 (0.0391)		−0.0759 (0.0398)		−0.0500 (0.0398)	
FC	ln(Other firms' experience in the country)	0.6573*** (0.0382)		0.6827*** (0.0399)		0.6712*** (0.0393)	
FR	ln(Other firms' experience in the region)	−0.1008 (0.0586)		−0.1898** (0.0592)		−0.1503** (0.0590)	
FC	Ratio Other firms' exits in the country (Ratio Other firms' exits in the country) ²	−8.0603*** (2.0418)		−8.2089*** (2.0318)		−7.7579*** (2.0521)	
		9.5891* (4.1527)		10.1750* (4.0723)		9.3141* (4.1549)	
FR	Ratio Other firms' exits in the region (Ratio Other firms' exits in the region) ²	1.2016 (3.8362)		0.5196 (3.8360)		0.6714 (3.8464)	
		−11.8099 (9.4518)		−9.5593 (9.4475)		−10.1403 (9.4793)	
FC	Political hazard index	0.0984 (0.1361)		0.0949 (0.1357)		0.1225 (0.1370)	
	ln(GDP/capita)	−0.5861*** (0.0312)		−0.5858*** (0.0312)		−0.6014*** (0.0313)	
	Growth of GDP/capita	4.5780*** (1.3250)		4.2527** (1.3239)		4.3618** (1.3350)	
	ln(Firm's country experience)	0.9395*** (0.0384)		0.9594*** (0.0401)		0.9687*** (0.0388)	
	Deviance	6090.55		5856.09		5908.48	
	AIC	6128.55		5914.09		5958.48	
	SBC	6285.76		6154.04		6165.34	

***p<0.001; **p<0.01; *p<0.05. Standard errors in parentheses.

stronger than the country-level effects for the ratio of prior exits but not for the number of prior foreign subsidiaries. Hypothesis 5 is supported but not Hypothesis 2.

For the control variables in Model 1a, all of them are significant except political hazards. The significant results for R&D, size of the firm, firms' country experience, experience of other Japanese firms in the country, ratio of exits of other Japanese firms in the country, firm's international experience, GDP per capita and GDP per capita growth rate are in line with previous empirical research (e.g., Chan et al., 2006; Delios & Henisz, 2003; Guillén, 2003). The significant coefficients for the two region-level control variables provide interesting and new results: their effect is opposite to the same variables measured at the country level. The

propensity of a firm's subsequent foreign subsidiaries in a country is negatively related to the experience of other Japanese firms in the region and has an inverted U-shaped relationship with the ratio of exits of other Japanese firms in the region.

Considering the WOS and JV models (3c and 2a), several differences in control variables are noteworthy. The R&D variable is significant for the WOS but not for the JV, and the opposite is true for Advertising. Political hazards have a significant negative effect on the number of WOSs but are not significant for JVs. A firm's total international experience has a significant positive effect on the number of WOSs but not for JVs. These results are consistent with previous IB research on WOS and JV decisions (e.g., Brouthers, 2002; Delios &

Table 6 Results of the negative binomial model explaining the number of WOSs created by an MNE over the period 1996–2001 in a country

Level	Variables	Number of WOSs			
		Base model	Model 3a	Model 3b	Model 3c
FR	Ratio of prior exits in the region		4.3192*** (0.5217)	2.4695*** (0.2249)	4.2861*** (0.4929)
	(Ratio of prior exits in the region) ²		−3.2569*** (0.8285)		−3.2069*** (0.7910)
	No. of prior-created foreign subsidiaries in the region		0.0601*** (0.0148)	0.0365*** (0.0056)	0.0603*** (0.0148)
	(No. of prior-created foreign subsidiaries in the region) ²		−0.0012*** (0.0003)		−0.0012*** (0.0003)
FC	Ratio of prior exits in the country		−0.8663 (0.5377)	−0.6918** (0.2191)	−0.7646*** (0.2299)
	(Ratio of prior exits in the country) ²		0.1449 (0.7087)		
<i>Control variables:</i>					
FC	No. of prior-created foreign subsidiaries in the country	0.0968*** (0.0164)	0.0666*** (0.0199)	0.0137 (0.0074)	0.0657*** (0.0195)
	(No. of prior-created foreign subsidiaries in the country) ²	−0.0023*** (0.0005)	−0.0017*** (0.0005)		−0.0017*** (0.0005)
HQ	Intercept	−12.4390*** (0.8972)	−10.9143*** (0.9066)	−11.4036** (0.9023)	−10.9134*** (0.9066)
	R&D	9.9859*** (0.9253)	8.4952*** (0.9279)	8.9824*** (0.9204)	8.4983*** (0.9279)
	Advertising	−1.1307 (1.9674)	0.5717 (1.8445)	0.4143 (1.8438)	0.5706 (1.8444)
	ln(Sales)	0.1350*** (0.0299)	0.0838** (0.0305)	0.0938** (0.0303)	0.0839** (0.0305)
FC	ln(Firm's total international experience)	0.3012*** (0.0417)	0.2337*** (0.0428)	0.2575*** (0.0424)	0.2339*** (0.0428)
	ln(Other firms' experience in the country)	0.8626*** (0.0366)	0.9118*** (0.0388)	0.9114*** (0.0377)	0.9114*** (0.0387)
FR	ln(Other firms' experience in the region)	−0.0017 (0.0816)	−0.0886 (0.0829)	−0.0566 (0.0823)	−0.0884 (0.0828)
FC	Ratio Other firms' exits in the country	−8.3327*** (1.8328)	−8.2878*** (1.8357)	−8.3240*** (1.8300)	−8.2839*** (1.8355)
	(Ratio Other firms' exits in the country) ²	14.8619*** (3.3477)	15.1868*** (3.3356)	15.2826*** (3.3117)	15.1777*** (3.3353)
FR	Ratio Other firms' exits in the region	10.4064** (3.6789)	8.7349* (3.7019)	9.5403** (3.6942)	8.7222* (3.7008)
	(Ratio Other firms' exits in the region) ²	−30.7042** (9.3089)	−25.9176** (9.3662)	−28.0623** (9.3477)	−25.8974** (9.3650)
FC	Political hazard index	−0.4162* (0.1695)	−0.4293* (0.1695)	−0.4116* (0.1686)	−0.4286* (0.1694)
	ln(GDP/capita)	−0.1902*** (0.0301)	−0.2064*** (0.0304)	−0.2202*** (0.0300)	−0.2065*** (0.0304)
	Growth of GDP/capita	11.6275*** (1.6008)	12.2908*** (1.6152)	12.6392*** (1.6001)	12.2916*** (1.6153)
	ln(Firm's country experience)	0.9704*** (0.0328)	1.0148*** (0.0351)	1.0443*** (0.0327)	1.0137*** (0.0347)
Deviance		6163.63	5946.70	5977.18	5946.03
AIC		6201.63	6004.70	6027.18	6002.03
SBC		6358.84	6244.66	6234.04	6233.71

***p<0.001, **p<0.01, *p<0.05. Standard errors in parentheses.

Beamish, 1999; Guillén, 2003; Lu, 2002). However, the results are similar for the different modes of entry (foreign subsidiary, WOS, JV) when we take into account the variables in our hypotheses.

DISCUSSION

This paper investigates factors influencing the localization of an MNE's foreign subsidiaries. We proposed that this localization would exhibit both

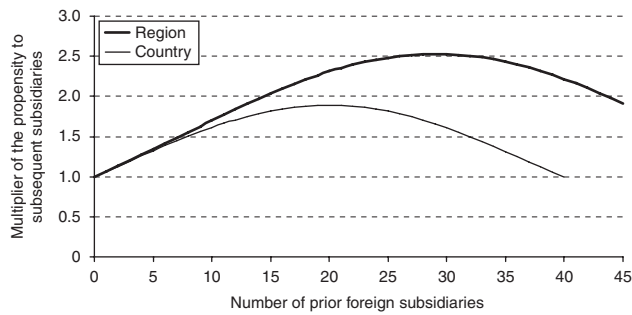


Figure 1 Effects of prior foreign subsidiaries on the propensity to subsequent subsidiaries in a country.

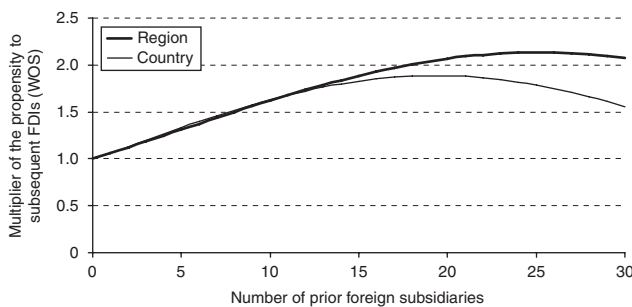


Figure 2 Effects of prior foreign subsidiaries on the propensity to subsequent FDI (WOS) in a country.

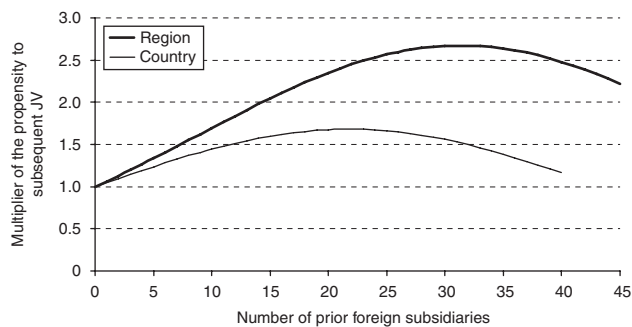


Figure 3 Effects of prior foreign subsidiaries on the propensity to subsequent JV in a country.

a regional agglomeration and arbitrage logic. Consistent with our hypotheses, results suggest that a firm's prior entry and exit at the regional level had a significant impact on its subsequent foreign subsidiary location decision. Specifically, we observed that subsequent foreign investment decisions in a country had a significant bell-shaped relationship with prior region entries (see Figures 1, 2 and 3). Locating subsequent entries regionally proximate to prior ones can be seen as an attempt to take advantage of regional aggregation effects and

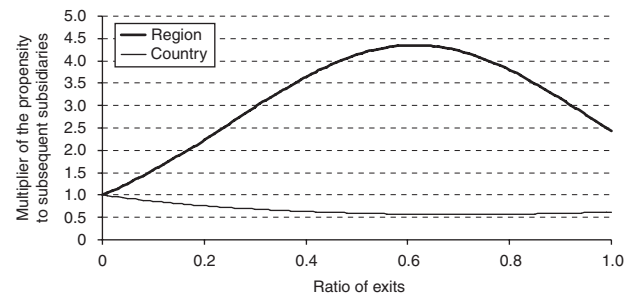


Figure 4 Effects of exited foreign subsidiaries on the propensity to subsequent subsidiaries in a country.

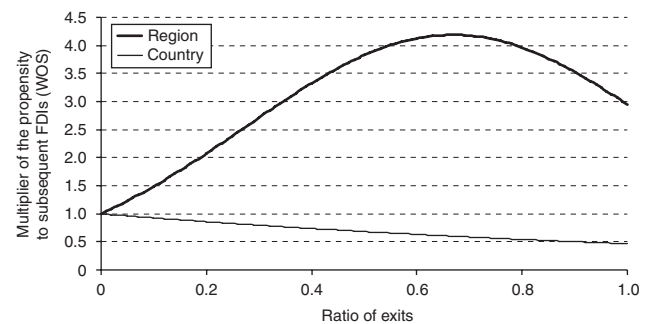


Figure 5 Effects of exits on the propensity to subsequent FDI (WOS) in a country.

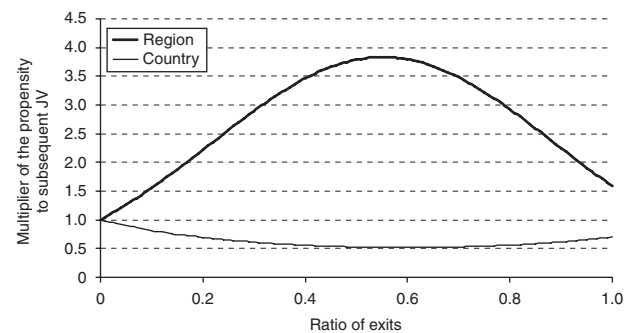


Figure 6 Effects of exits on the propensity to subsequent JV in a country.

RFSAs. Subsequent entries may also serve to replicate and legitimize prior decisions (Chan et al., 2006; Lu, 2002; Yiu & Makino, 2002), and thereby may support the argument for a parent firm isomorphism of entry decisions (Davis, Desai, & Francis, 2000). Such an effect works at the regional level in addition to the country level.

However, the foreign subsidiary agglomeration benefits may be limited by the finite availability of locally based resources and market opportunities (Nachum & Wymbs, 2005). There are costs and

Table 7 Results of the negative binomial model without region-level variables of interest

Variables	Dependent variable					
	Number of foreign subsidiaries		Number of WOSs		Number of JVs	
Ratio of prior exits in the country (Ratio of prior exits in the country) ²	−0.1157 −0.0737	(0.3402) (0.4485)	−0.0892 −0.0892	(0.1924) (0.1924)	−0.6050 0.5622	(0.4856) (0.6102)
<i>Control variables:</i>						
No. of prior-created foreign subsidiaries in the country (No. of prior-created foreign subsidiaries in the country) ²	0.0798*** −0.0019***	(0.0110) (0.0003)	0.0967*** −0.0023***	(0.0157) (0.0004)	0.0479* −0.0009*	(0.0150) (0.0004)
Intercept	−9.0131***	(0.5344)	−12.4468***	(0.8924)	−6.3927***	(0.7268)
R&D	7.4235***	(0.7115)	9.9388***	(0.9131)	2.2257*	(1.1296)
Advertising	−4.9788*	(1.5837)	−1.1322	(1.9560)	−10.3588***	(2.6644)
ln(Sales)	0.2300***	(0.0214)	0.1355***	(0.0297)	0.3375***	(0.0308)
ln(Firm's total international experience)	0.1174***	(0.0282)	0.3014***	(0.0414)	−0.0120	(0.0388)
ln(Other firms' experience in the country)	0.7613***	(0.0261)	0.8651***	(0.0363)	0.6614***	(0.0380)
ln(Other firms' experience in the region)	−0.0155	(0.0452)	−0.0037	(0.0814)	−0.1065	(0.0581)
Ratio Other firms' exits in the country (Ratio Other firms' exits in the country) ²	−8.4386*** 12.8466***	(1.3279) (2.5004)	−8.3198*** 14.8884***	(1.8275) (3.3341)	−8.2725*** 10.0697*	(2.0238) (4.0801)
Ratio Other firms' exits in the region (Ratio Other firms' exits in the region) ²	11.1331*** −34.6977***	(2.5336) (6.3333)	10.4137** −30.7228***	(3.6605) (9.2665)	1.5007 −12.5879	(3.8011) (9.3684)
Political hazard index	−0.0704	(0.1040)	−0.4180*	(0.1688)	0.0911	(0.1344)
ln(GDP/capita)	−0.4142***	(0.0206)	−0.1903***	(0.0299)	−0.5807***	(0.0308)
Growth of GDP/capita	7.8688***	(0.9903)	11.6769***	(1.5926)	4.7661***	(1.3060)
ln(Firm's country experience)	0.9720***	(0.0250)	0.9749***	(0.0326)	0.9521***	(0.0385)
Deviance	10,183.68		6142.05		6067.62	
AIC	10,225.68		6182.05		6109.62	
SBC	10,399.44		6347.54		6283.39	

***p<0.001; **p<0.01; *p<0.05. Standard errors in parentheses.

Table 8 Elasticity ratio of the region and country-level effects

		Dependent variable		
		Number of foreign subsidiaries: Model 1a	Number of JVs: Model 2a	Number of WOSs: Model 3c
Number of prior foreign subsidiaries	Country level	0.09	0.07	0.09
	Region level	0.08	0.08	0.08
Ratio of prior exits	Country level	0.79	0.85	0.76
	Region level	7.13	6.96	6.33

risks associated with the concentration of activities in a particular country and/or region. It may create intense and inefficient competition among a firm's many subsidiaries. It may also expose the firm to unnecessary economic and political risks. Moreover, it can increase the redundancies in the network of a firm's foreign subsidiaries, diminishing its exploration or access to new or heterogeneous resources or knowledge. Therefore, beyond a certain point, relationships between the propensity of subsequent entries and prior ones in the same

region will change direction. This saturation effect seems stronger at the country level than at the region level, which can be explained by the larger diversity and geographic area of a region compared with a country.

Our findings also show that prior country and regional exits had a significant relation with subsequent entries in an opposite manner, confirming the region as the arbitrage level. The ratio of country exits has a small and negative effect on the propensity to further entries (see Figures 4, 5

and 6). This can be interpreted as a signal of deteriorating local conditions, which discourages further investments in the same country. Only the presence of relatively massive exits (exit ratio higher than 0.7 and 0.6) may lead to a less negative effect on subsequent entries for foreign subsidiaries and JVs. Whatever the type of foreign investment, the resources freed by these exits have no positive impact on the subsequent foreign investments in the same countries. In contrast, regional exits exhibit a bell-shaped relationship with subsequent entries. The relationship is strongly positive for foreign subsidiaries, WOSs and JVs, as regional exits seem to fuel further entries in the countries in this region. The resources freed up by the exits would thus be reinvested in other countries from the same region. The intensity of this effect remains positive, but its strength decreases only in the presence of an important regional exodus of foreign investments (exit ratio higher than 0.6 for foreign subsidiaries, 0.7 for WOSs and 0.5 for JVs), probably the result of region-wide deteriorating conditions or a major shift in strategy. Compared with the earlier case for entries, regional exits were found to have a greater impact than host-country ones.

Such results argue for the regional effect of foreign subsidiary location decisions. Obviously, firms adopt a regional perspective that complements their decisions at the country and firm levels, and which seeks regional agglomeration benefits. They also make arbitrage decisions among countries in the same region. Therefore our results confirm the semi-globalization or regionalization hypothesis. Firms account for the forces of regional integration active in several regions of the world. Entry strategies would be part of a pattern for an effective and efficient coverage of an entire region. In turn, the termination of a subsidiary in one country would not signal complete retreat from a region. It could be seen as the relocation of these activities in an adjacent country. This phenomenon of a “mobile” subsidiary could be an attempt by MNEs to maximize the advantages among different locations, as proposed by traditional theory (Dunning, 1993), without losing their perspective over an entire region. Countries compete to attract foreign investments – the “location tournaments” (Oxelheim & Ghauri, 2003) – by providing local advantages and support. In such cases, MNEs could be seen as transferring activities to areas that provide them with better conditions within the same region.

Moreover, such results empirically support the concept of region-bound FSAs. Firms reallocate

their resources among countries at a regional level to keep benefiting from their region-bound FSAs. Linked to these region-bound FSAs, the existence of regional sunk costs (the negative side of region-bound FSAs) favors staying in a region while restructuring foreign subsidiaries among countries. In short, a firm’s prior entry and exit decisions at the regional level do matter.

This regional perspective may also reflect an attempt to reduce the complexity of location decisions, thereby reducing the complexity of managing foreign subsidiaries in more than 100 countries into six or seven regional zones. The regional level can facilitate the management of the foreign subsidiaries located in a geographic area by reducing, or at least structuring, some of this complexity for the headquarters. Such a role can be formally embodied in the position of regional managers or the role of regional headquarters. Nevertheless, our results are about the integration and arbitrage decisions taking place among foreign subsidiaries at the country and region levels – both mechanisms encompassed in the semi-globalization idea. Therefore we do not test or study whether the role of country-level managers is more or less important than the role of regional-level managers in the choice to localize foreign subsidiaries in a country: this is a different research question.

Considering our control variables, the presence of isomorphism in market entry decisions is now well documented (Chan et al., 2006; Davis et al., 2000; Kostova & Zaheer, 1999). In particular, MNEs have been found to make foreign investments decisions imitating other MNEs while their own country-level location history had only a weak impact on their location decisions (e.g., Chan et al., 2006; Guillén, 2002). Our study both confirms and nuances this mimetic effect. The country experience of other Japanese firms shares a positive relationship with the probability of subsequent entry for foreign subsidiaries, WOSs and JVs. Furthermore, country exits by these other Japanese firms have a U-shaped relationship with future country decisions. Initial country exits discourage subsequent entries up to a point where the space left by Japanese competitors motivates the firm to return to that country environment. However, our results also support the existence of distinct regional dynamics. At the regional level, the presence of other firms with extensive regional experience reduces the likelihood of entry for foreign subsidiaries and JVs, probably for reasons of access to markets and locally based resources. In

turn, regional exits stimulate the establishment of foreign subsidiaries up to a point where massive exits lead the firm to join these other Japanese firms in leaving the region. Therefore mimetic forces do not appear to have the same relevance and impact at the regional level compared with the country level and for foreign subsidiaries, WOSs and JVs.

Still, in suggesting and measuring for the first time a regional effect of foreign subsidiary decisions, this paper argues for a perspective balancing the effects of the external and internal institutional environment of the firm. It may therefore also serve to reconcile apparently inconsistent results. Our results put the focus back on the firm's own prior decisions as a key driver of foreign subsidiary locations by assessing the relative significance of both between- and within-firm isomorphism.

CONCLUSION

This paper investigated factors explaining the foreign subsidiary location decisions of Japanese MNEs. Consistent with our hypotheses, results suggested the presence of a regional effect of those decisions. Indeed, subsequent country-level location decisions were found to be significantly related to a firm's prior entries and exits in this country's continental region, in addition to prior entries and exits in the country.

In measuring how geographic regions matter in the foreign subsidiary location decision, our paper contributes empirically to the regionalization and semi-globalization debate. Our results validate such an approach and propose a regional dimension for foreign subsidiary location decisions, in addition to a host country dimension and global dimension. Firms' international strategy is set not only on a country-by-country basis or at the global (world) level. As intermediaries between local and global factors, regional considerations play an important role. They show that the six geographical regions considered in this study are important in Japanese MNEs' foreign subsidiary strategy. These firms adopt a regional perspective that complements their decisions at the country level. In localizing subsidiaries, firms consider agglomeration benefits and costs at both levels, and also make arbitrage decisions among countries in the same region. These results confirm the role of geographic regions as presented by Rugman and Verbeke (2007), Buckley and Ghauri (2004), and Ghemawat (2003).

Our results have four crucial implications for future IB research. First, researchers analyzing MNEs' foreign subsidiary activity should add a

regional level in their models and analyses. Working only at the foreign subsidiary and parent firm level ignores an important intermediate level, which may bias the results and our understanding of foreign subsidiary activity, as illustrated in Table 7. Second, our results support the existence and value of a "big question" specific to IB research, underlining the integration of imperfect geographic markets. Third, they show the relevance of the geographic dimension to understanding MNEs' foreign investments localization strategy. Finally, they highlight with others (e.g., Arregle et al., 2006; Chan et al., 2006; Makino et al., 2004) the value of using multilevel models to develop and test new models addressing crucial questions in IB.

We defined six regions that were deemed relevant for understanding the international strategy formulation of Japanese firms. These results warrant further research on the regional dimensions of firms' international strategy. Among others, the organizational responses to this regionalization of strategy, as well as its performance outcomes, could be investigated. As there is not an unambiguous and consistent definition of a region in the IB literature, our own classification requires further validation. Future research could propose a more precise map of these regions and compare the quality of the results with our own definition. Another potential area of research would be testing whether the regional effect plays the same role in non-Japanese MNEs.

NOTES

¹As we also test separate models explaining the number of subsequent WOSs and number of subsequent JVs, we measured a firm's prior investment activity in each mode of entry over the period 1990–1995 with two variables: Number of prior WOSs and Number of prior JVs.

Research about foreign subsidiary localization (e.g., Henisz & Delios, 2001; Maitland, Rose, & Nicholas, 2005; Zhou, Delios, & Yang, 2002) or country-level agglomeration effects does not differentiate between prior modes of entry (e.g., Bastos & Greve, 2003; Belderbos & Zou, 2006; Chan et al., 2006) as previous experience, agglomeration benefits and arbitrage can be transferred across modes of entry (Buckley & Casson, 1998; Chang, 1995; Kogut, 1983; Kogut & Kulatilaka, 1994). In contrast, other IB research about transaction costs, path dependency and institutional theory makes a distinction about different underlying dynamics and the tendency of firms to have a dominant mode of entry (e.g., Anderson & Gatignon,

1986; Guillén, 2003; Hennart, 1988; Lu, 2002; Yiu & Makino, 2002). Faced with these different perspectives, we measured prior decisions in both ways for the WOS and JV models. The results for the WOS and JV models with these independent variables

are not reported, because of space constraints. They were similar to those presented in this paper, but their AIC and SBC indicators are larger, indicating a lower goodness of fit. These results are available from the authors.

REFERENCES

- Aguilera, R. V., Flores, R. G., & Vaaler, P. M. 2007. Is it all a matter of grouping? Examining the regional effect in global strategy research. In S. Tallman (Ed.), *International strategic management: A new generation*: 209–228, Northampton, MA: Edward Elgar Publishers.
- Amburgey, T. L., & Miner, A. S. 1992. Strategic momentum: The effects of repetitive, positional and contextual momentum on merger activity. *Strategic Management Journal*, 13(5): 335–348.
- Anderson, E., & Gatignon, H. 1986. Modes of foreign entry: A transaction cost analysis and propositions. *Journal of International Business Studies*, 17(3): 1–26.
- Arregle, J. L., Hébert, L., & Beamish, P. W. 2006. Mode of international entry: Advantages of multilevel methods. *Management International Review*, 46(5): 557–618.
- Audretsch, D. 2003. Managing knowledge spillovers: The role of geographic proximity. *Advances in Strategic Management*, 20: 23–48.
- Barcikowski, R. S. 1981. Statistical power with group mean as the unit of analysis. *Journal of Educational Statistics*, 6(3): 267–285.
- Bartlett, C. A., & Ghoshal, S. 1989. *Managing across borders: The transnational solution*. Boston, MA: Harvard Business School Press.
- Bastos, P. V., & Greve, H. R. 2003. Interorganizational learning and the location of manufacturing subsidiaries: Is chain migration also a corporate behavior? *Advances in Strategic Management*, 20: 159–192.
- Belderbos, R., & Zou, J. 2006. Foreign investment, divestment and relocation by Japanese electronics firms in East Asia. *Asian Economic Journal*, 20(1): 1–27.
- Benito, G. R. G. 1997. Divestment of foreign production operations. *Applied Economics*, 29(10): 1365–1377.
- Benito, G. R. G. 2005. Divestment and international business strategy. *Journal of Economic Geography*, 5(2): 235–251.
- Benito, G. R. G., Grøgaard, B., & Narula, R. 2003. Environmental influences on MNE subsidiary roles: Economic integration and the Nordic countries. *Journal of International Business Studies*, 34(5): 443–456.
- Bliese, P. D., & Hanges, P. J. 2004. Being both too liberal and too conservative: The perils of treating grouped data as though they were independent. *Organizational Research Methods*, 7(4): 400–418.
- Bowman, E. H., & Helfat, C. E. 2001. Does corporate strategy matter? *Strategic Management Journal*, 22(1): 1–23.
- Brouthers, K. D. 2002. Institutional, cultural and transaction cost influences on entry mode choice and performance. *Journal of International Business Studies*, 33(2): 203–221.
- Buckley, P. J., & Casson, M. C. 1998. Models of the multinational enterprise. *Journal of International Business Studies*, 29(1): 21–44.
- Buckley, P. J., & Ghauri, P. N. 2004. Globalization, economic geography and the strategy of multinational enterprises. *Journal of International Business Studies*, 35(2): 81–98.
- Buckley, P. J., Clegg, J., Forsans, N., & Reilly, K. T. 2001. Increasing the size of the country: Regional economic integration and foreign direct investment in a globalised world economy. *Management International Review*, 41(3): 251–274.
- Chan, C. M., Makino, S., & Isobe, T. 2006. Interdependent behavior in foreign direct investment: The multi-level effects of prior entry and prior exit on foreign market entry. *Journal of International Business Studies*, 37(5): 642–665.
- Chang, S. J. 1995. International expansion strategy of Japanese firms: Capability building through sequential entry. *Academy of Management Journal*, 38(2): 383–407.
- Davis, P. S., Desai, A. B., & Francis, J. D. 2000. Mode of international entry: An isomorphism perspective. *Journal of International Business Studies*, 31(2): 239–258.
- Delios, A., & Beamish, P. W. 1999. Ownership strategy of Japanese firms: Transactional, institutional and experience influences. *Strategic Management Journal*, 20(10): 915–933.
- Delios, A., & Beamish, P. W. 2005. Regional and global strategies of Japanese firms. *Management International Review*, 45(1): 19–36.
- Delios, A., & Henisz, W. J. 2000. Japanese firms' investment strategies in emerging economies. *Academy of Management Journal*, 43(3): 305–323.
- Delios, A., & Henisz, W. J. 2003. Policy uncertainty and the sequence of entry by Japanese firms, 1980–1998. *Journal of International Business Studies*, 34(3): 227–241.
- Doz, Y., Santos, J., & Williamson, P. 2001. *From global to metanational: How companies win in the knowledge economy*. Boston, MA: Harvard Business School Press.
- Dunning, J. H. 1993. *Multinational enterprises and the global corporation*. New York: Addison-Wesley.
- Dunning, J. H. 1995. Reappraising the eclectic paradigm in an age of alliance capitalism. *Journal of International Business Studies*, 26(3): 461–491.
- Dunning, J. H., Fujita, M., & Yakova, N. 2007. Some macro data on the regionalisation/globalisation debate: A comment on the Rugman/Verbeke analysis. *Journal of International Business Studies*, 38(1): 177–199.
- Enright, M. J. 2005a. Regional management centers in the Asia-Pacific. *Management International Review*, 45(1): 59–82.
- Enright, M. J. 2005b. The role of regional management centers. *Management International Review*, 45(1): 83–102.
- Flores, R., & Aguilera, R. 2007. *Globalization and location choice: An analysis of US multinational firms in 1980 and 2000*. Working Paper series, University of Illinois at Urbana-Champaign.
- Ghemawat, P. 2003. Semiglobalization and international business strategy. *Journal of International Business Studies*, 34(2): 138–152.
- Goerzen, A. 2007. Alliance networks and firm performance: The impact of repeated partnerships. *Strategic Management Journal*, 28(5): 487–509.
- Guillén, M. F. 2002. Structural inertia, imitation, and foreign expansion: South Korean firms and business groups in China, 1987–95. *Academy of Management Journal*, 45(3): 509–525.
- Guillén, M. F. 2003. Experience, imitation, and the sequence of foreign entry: Wholly owned and joint-venture manufacturing by South Korean firms and business groups in China, 1987–1995. *Journal of International Business Studies*, 34(2): 185–198.
- Head, K., Ries, J., & Swenson, D. 1995. Agglomeration benefits and location choice: Evidence from Japanese manufacturing

- investments in the United States. *Journal of International Economics*, 38(3–4): 223–247.
- Hedeker, D., & Gibbons, R. D. 2007. *SuperMix 1.1*. Chicago: Scientific Software International.
- Hedstrom, P. 1994. Contagious collectivities: On the spatial diffusion of Swedish trade unions, 1890–1940. *American Journal of Sociology*, 99(5): 1157–1179.
- Henisz, W. J. 2000. The institutional environment for multinational investment. *Journal of Law, Economics, and Organization*, 16(1): 334–364.
- Henisz, W. J., & Delios, A. 2001. Uncertainty, imitation, and plant location: Japanese multinational corporations, 1990–1996. *Administrative Science Quarterly*, 46(3): 443–475.
- Hennart, J.-F. 1988. A transaction costs theory of equity joint ventures. *Strategic Management Journal*, 9(4): 361–374.
- Hitt, M. A., Beamish, P. W., Jackson, S. E., & Mathieu, J. E. 2007. Building theoretical and empirical bridges across levels: Multilevel research in management. *Academy of Management Journal*, 50(6): 1385–1399.
- Hofstede, G. 1980. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Thousand Oaks, CA: Sage.
- Hox, J. 1997. Multilevel modeling: When and why. In I. Balderjahn, R. Mathar, & M. Schrader (Eds), *Classification, data analysis and data highway*: 147–154. New York: Springer Verlag.
- Khanna, T., Kogan, J., & Palepu, K. 2006. Globalization and similarities in corporate governance: A cross-country analysis. *The Review of Economics and Statistics*, 88(1): 69–90.
- Kogut, B. 1983. Foreign direct investment as a sequential process. In C. P. Kindleberger & D. Audretsch (Eds), *The multinational corporations in the 1980s*: 35–56. Cambridge, MA: MIT Press.
- Kogut, B., & Kulatilaka, N. 1994. Operating flexibility, global manufacturing, and the option value of a multinational network. *Management Science*, 40(1): 123–139.
- Kostova, T., & Zaheer, S. 1999. Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review*, 24(1): 64–81.
- Lu, J. W. 2002. Intra- and inter-organizational imitative behavior: Institutional influences on Japanese firms' entry mode choice. *Journal of International Business Studies*, 33(1): 19–37.
- Maitland, E., Rose, E. L., & Nicholas, S. 2005. How firms grow: Clustering as a dynamic model of internationalization. *Journal of International Business Studies*, 36(4): 435–451.
- Makino, S., & Beamish, P. W. 1998. Performance and survival of joint ventures with non-conventional ownership structures. *Journal of International Business Studies*, 29(4): 797–818.
- Makino, S., Isobe, T., & Chan, C. M. 2004. Does country matter? *Strategic Management Journal*, 25(10): 1027–1043.
- March, J. G. 1988. Variable risk preferences and adaptive aspirations. *Journal of Economic Behavior and Organization*, 9(1): 5–24.
- March, J. G. 1991. Exploration and exploitation in organizational learning. *Organization Science*, 2(1): 71–87.
- McNamara, G., & Vaaler, P. 2000. The influence of competitive positioning and rivalry on emerging market risk assessment. *Journal of International Business Studies*, 31(2): 337–347.
- Nachum, L., & Wymbs, C. 2005. Product differentiation, external economies and MNE location choices: M&As in global cities. *Journal of International Business Studies*, 36(4): 415–434.
- Oxelheim, L., & Ghauri, P. N. (Eds). 2003. *European Union and the race for inward FDI in Europe*. Oxford: Elsevier.
- Porter, M. E. 1986. *Competition in global industries*. Boston, MA: Harvard Business School Press.
- Prahalad, C. K., & Doz, Y. 1987. *The multinational mission*. New York: Free Press.
- Raudenbush, S., & Bryk, A. 2002. *Hierarchical linear models* (2nd ed.). Thousand Oaks, CA: Sage.
- Ricart, J. E., Enright, M. J., Ghemawat, P., Hart, S. L., & Khanna, T. 2004. New frontiers in international strategy. *Journal of International Business Studies*, 35(3): 175–200.
- Ronen, S., & Shenkar, O. 1985. Clustering countries on attitudinal dimensions: A review and synthesis. *Academy of Management Review*, 10(3): 435–454.
- Rosenkopf, L., & Almeida, P. 2003. Overcoming local search through alliances and mobility. *Management Science*, 49(6): 751–766.
- Rugman, A. M., & Verbeke, A. 2001. Subsidiary-specific advantages in multinational enterprises. *Strategic Management Journal*, 22(3): 237–251.
- Rugman, A. M., & Verbeke, A. 2004. A perspective on regional and global strategies of multinational enterprises. *Journal of International Business Studies*, 35(1): 3–18.
- Rugman, A. M., & Verbeke, A. 2005. Towards a theory of regional multinationals: A transaction cost economics approach. *Management International Review*, 45(1): 5–17.
- Rugman, A. M., & Verbeke, A. 2007. Liabilities of regional foreignness and the use of firm-level versus country-level data: A response to Dunning et al. (2007). *Journal of International Business Studies*, 38(1): 200–205.
- Snijders, T., & Bosker, R. 1999. *Multilevel analysis*. Thousand Oaks, CA: Sage.
- Sorenson, O., & Baum, J. A. C. 2003. Geography and strategy: The strategic management of space and place. *Advances in Strategic Management*, 20: 1–22.
- Stevens, M. J., & Bird, A. 2004. On the myth of believing that globalization is a myth: Or the effects of misdirected responses on obsolescing an emergent substantive discourse. *Journal of International Management*, 10(4): 501–510.
- Strang, D. 2003. The diffusion of TQM within a global bank. *Advances in Strategic Management*, 20: 293–316.
- UNCTAD. 2005. *World investment report: Transnational corporations and the internationalization of R&D*. New York: United Nations.
- Vermeulen, F., & Barkema, H. 2002. Pace, rhythm, and scope: Process dependence in building a profitable multinational corporation. *Strategic Management Journal*, 23(7): 637–653.
- Yip, G. S. 1995. *Total global strategy*. Upper Saddle River, NJ: Prentice Hall.
- Yiu, D., & Makino, S. 2002. The choice between joint venture and wholly owned subsidiary: An institutional perspective. *Organization Science*, 13(6): 667–683.
- Zaheer, S., & Manrakhan, S. 2001. Concentration and dispersion in global industries: Remote electronic access and the location of economic activities. *Journal of International Business Studies*, 32(4): 667–687.
- Zhou, C., Delios, A., & Yang, J. G. 2002. Locational determinants of Japanese foreign direct investment in China. *Asia Pacific Journal of Management*, 19(1): 63–86.

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