

Greenfield or Acquisition Entry: A Review of the Empirical Foreign Establishment Mode Literature

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**GREENFIELD OR ACQUISITION ENTRY:
A REVIEW OF THE EMPIRICAL FOREIGN ESTABLISHMENT MODE
LITERATURE**

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Abstract

This paper reviews the empirical literature on the determinants of the choice by multinational enterprises between entering foreign countries through greenfields or acquisitions. We discuss and compare the main theoretical perspectives used, provide a detailed overview of the empirical findings, examine why these findings have often been inconsistent, and offer theoretical and methodological suggestions to guide future research.

Keywords: greenfield, acquisition, establishment mode choice, review

1. Introduction

Internationalizing firms can enter foreign countries through different entry modes, ranging from contractual modes such as direct exports and licensing, to equity modes such as greenfield joint ventures (JVs) and full acquisitions. The choice of foreign entry mode is one of the core topics in international management research (Werner, 2002), with many studies examining the *ex ante* determinants or the *ex post* performance implications of a firm's choice between certain modes, notably that between (i) contractual and equity modes, (ii) JVs and wholly-owned subsidiaries (WOSs) (for a review, see Brouthers and Hennart, 2007), and (iii) greenfield investments and acquisitions. In this paper we review the empirical literature on the determinants of the latter choice, the so-called foreign establishment mode choice (Cho and Padmanabhan, 1995)¹. Following Wilson's (1980) exploratory study, this literature has examined the determinants of the choice between greenfield and acquisition entry from a variety of theoretical perspectives and in different empirical settings, thereby often obtaining inconsistent findings. For example, only six of the 22 independent variables included in multiple studies have been found to have a consistent significant effect on the choice of establishment mode. Given the variety of theoretical perspectives used and the many inconsistent findings obtained by the empirical literature, we think it is important to review this literature, so as to (1) gain insight into the main theoretical perspectives used and the empirical findings obtained, (2) uncover why these findings have often been inconsistent, and (3) make theoretical and methodological recommendations to push establishment mode research forward. Our review complements Shimizu et al.'s (2004) excellent survey of the extant theoretical perspectives on cross-border acquisitions, in that we

¹ We thus exclude from our review purely theoretical contributions and modeling efforts (e.g., Buckley and Casson, 1998; Görg, 2000), as well as studies on the comparative performance (e.g., Li, 1995) and regional location (e.g., O'Huallachain and Reid, 1997) of greenfields and acquisitions.

examine in closer detail the perspective of acquisitions as an alternative to greenfield investments in foreign markets.

In the next section we introduce the empirical literature on the determinants of an MNE's establishment mode choice, and identify a subset of studies whose arguments and empirical findings can be meaningfully compared. We then sketch and compare the most important theoretical perspectives used by these comparable studies, and report on their empirical findings. We then discuss two possible reasons why these findings have been inconsistent, viz. the existence of unrecognized moderating effects and research-design related problems. We close with theoretical and methodological recommendations for future research.

2. Literature review

2.1. Empirical studies

Multinational enterprises (MNEs) can establish operations abroad through greenfield investments and through acquisitions. Making a greenfield investment means building a new subsidiary from scratch. The subsidiary can either be a WOS of the MNE, or a JV co-owned by a partner with complementary assets (Barkema and Vermeulen, 1998). Making an acquisition, on the other hand, means purchasing part or all of the equity of an existing firm (Barkema and Vermeulen, 1998; Larimo, 2003), implying that acquisitions can be partially and wholly owned as well. The price paid by the acquirer usually consists of the target's estimated going-concern value plus a takeover premium (Pennings et al., 1994; Caves, 1996). This premium is often much higher in cross-border deals than in domestic ones, presumably because international acquirers generally have less knowledge of the true value of their targets than domestic acquirers (Harris and Ravenscraft, 1991; Inkpen et al., 2000).

Through an extensive keyword search in ABI/Inform Global and our knowledge of other studies in the field, we found 23 empirical studies on the determinants of the choice between greenfield and acquisition entry. However, while most of the literature considers this choice to be independent from that between JV and WOS (e.g., Caves and Mehra, 1986; Hennart, 1991; Hennart and Park, 1993; Padmanabhan and Cho, 1996; Barkema and Vermeulen, 1998; Vermeulen and Barkema, 2001; Cho and Padmanabhan, 1995, 2005; Brouthers and Hennart, 2007), six of these 23 studies consider the two choices to be interrelated, thus making it difficult to compare the arguments and findings of these six studies to those of the other ones. We therefore exclude from the remainder of our review: (a) Kogut and Singh (1988), Anand and Delios (1997), and Chang and Rosenzweig (2001), who examine the choice between acquisitions (full and partial ones), greenfield JVs, and wholly-owned greenfields; (b) Shaver (1998), who distinguishes between the same three entry modes, but excludes greenfield JVs; (c) Hennart and Reddy (1997), who analyze the choice between greenfield JVs and full acquisitions; and (d) Meyer (1998), who distinguishes between wholly-owned greenfields, greenfield JVs, partial acquisitions, and full acquisitions, and examines what factors make MNEs prefer each of these entry modes over the other three. We also exclude Vermeulen and Barkema (2001) because their sample includes domestic subsidiaries, and Anand and Delios (2002) because their analysis is at the industry rather than at the subsidiary level. These exclusions leave us with 15 studies whose arguments and findings can be meaningfully compared, thus enabling us to examine why these findings have often been inconsistent. Table 1 summarizes the main characteristics of these 15 studies.

2.2. Theoretical perspectives and their predictions

Foreign market entry involves an MNE parent that establishes a subsidiary in a specific industry in a specific foreign country, indicating that establishment mode choices play themselves out at the parent, subsidiary, industry, and country level. Hence, a full understanding of the determinants of such choices requires theoretical perspectives that focus on these four levels. As we will show below, the perspectives most often used by the 15 selected studies typically focus on only one or two of these levels, leading most studies to rely on multiple perspectives complementing one another at least partly. As Table 1 shows, the most often-used perspectives are transaction cost/internalization theory, the organizational learning perspective, information economics, the theory of the growth of the firm, the industrial organization perspective, and institutional theory². Below we discuss and compare these perspectives and their most important predictions regarding the choice of establishment mode.

2.2.1. Transaction cost/internalization theory

Table 1 shows that the dominant theory used to explain an MNE's establishment mode choice is transaction cost/internalization theory, one of the core international business theories developed by Buckley and Casson (1976), Rugman (1981), and Hennart (1982). Like Williamson's (1975, 1985) version of transaction cost theory, transaction cost/internalization theory originally focused on the comparative costs of exchanging intermediate inputs through market transactions and internalizing the markets for these inputs. But in contrast to Williamson, who focuses on how asset specificity and uncertainty determine the choice between market exchange and internalization, transaction cost/internalization scholars put more emphasis on how the bounded rationality of actors lowers the efficiency of the markets for certain inputs, forcing MNEs to sometimes internalize these markets. If an input has a large tacit component, a potential

foreign buyer, being limitedly rational, will be unable to determine its exact characteristics, and will hence be unwilling to pay its full value. If the seller would reveal these characteristics to the buyer to obtain a fair price, the latter would obtain the input for free, and could behave opportunistically by refusing to pay afterwards (Arrow, 1962). This problem can be avoided by aligning the incentives of the seller and the foreign buyer. This alignment is most efficiently achieved by internalizing the market for the input, i.e. by organizing the transaction within a MNE (Hennart, 1982; 2000).

Although originally used to explain the choice by MNEs between exchanging inputs through market-like arrangements such as licensing and internalizing the markets for these inputs through foreign investment, transaction cost/internalization theory has been extended to explain the choice between JVs and WOSs (e.g., Gatignon and Anderson, 1988; Hennart, 1988, 1991), and that between greenfields and acquisitions (e.g., Hennart and Park, 1993). This extended transaction cost/internalization perspective contends that an MNE's choice between greenfields and acquisitions depends on a comparison of the costs associated with exploiting or obtaining intermediate inputs abroad through these two establishment modes.

One input that MNEs may want to exploit or obtain abroad is firm-embedded technological knowledge, which is often tacit and hence costly to exchange through the market (Hennart, 1982). MNEs that possess this type of knowledge may want to exploit it abroad to realize economies of scale or scope in R&D or production. The transaction costs associated with exploiting such knowledge through greenfield investments are generally lower than those associated with exploiting it through acquisitions, as greenfields enable MNEs to install their technologies from the outset and to transfer the accompanying skills to a carefully-selected

² All these perspectives have been used by at least two of the 15 selected studies.

workforce capable of and willing to absorb them (Hennart and Park, 1993)³. MNEs that lack proprietary technological knowledge, on the other hand, may be motivated to obtain it to improve their competitive position. Since such knowledge is time-consuming and costly to develop internally (Wernerfelt, 1984), and difficult to purchase on the market because of its generally tacit nature and its embeddedness in firms, it is most efficiently obtained through cross-border acquisitions (Hennart et al., 1996; Larimo, 2003). Hence, whereas MNEs with abundant firm-embedded technological knowledge are likely to choose greenfields, those lacking such knowledge are likely to choose acquisitions.

Two other assets that are often tacit are knowledge of how to successfully operate internationally and in particular host countries (Hennart, 1982). Such knowledge is to a large extent experiential, meaning that it is primarily developed through experience (Johanson and Vahlne, 1977). MNEs with limited international or host-country experience will thus lack this knowledge and, given its tacitness, will find it costly to purchase it on the market in disembodied form, i.e. separately from its owner. Such inexperienced MNEs are therefore likely to make acquisitions to efficiently gain access to the required knowledge, while those with extensive international or host-country experience are likely to choose greenfields, as they already possess this knowledge (Hennart and Park, 1993; Caves, 1996; Larimo, 2003).

A similar line of reasoning holds for product-specific knowledge, i.e. knowledge of how to manufacture particular products. Such knowledge is also experiential and largely tacit, and hence costly to develop internally or to purchase on the market in disembodied form. MNEs that expand abroad to manufacture products which are very different from those manufactured at home generally lack the knowledge required to manufacture such products and should hence

³ This advantage of greenfields over acquisitions may be smaller for greenfield JVs with a strong local partner because such a partner may be less receptive to the MNE's technology. We thank an anonymous reviewer for raising

prefer to make acquisitions, as this is the most efficient way to obtain this tacit experiential knowledge. MNEs expanding abroad to manufacture products that are closely related or the same as those manufactured at home, on the other hand, already possess most or all of the required knowledge and are hence more likely to choose greenfields (Hennart and Park, 1993; Caves, 1996).

Another prediction of the modified version of transaction cost/internalization theory is that widely-diversified MNEs prefer acquisitions over greenfields, as the main advantage of such MNEs consists of advanced management control systems based on output control that reduce the incremental costs of making and managing acquisitions (Caves and Mehra, 1986; Zejan, 1990; Hennart and Park, 1993). MNEs operating in a limited number of industries, on the other hand, do not possess such skills and are therefore more inclined to make greenfield investments (Larimo, 2003).

Finally, several studies have used the extended version of transaction cost/internalization theory to argue that an MNE's establishment mode choice is affected by cultural distance, defined as the extent to which the shared values in one country differ from those in another (Hofstede, 2001). The larger the cultural distance to a country, the more costly it is for MNEs to transfer intangible assets such as organizational and managerial practices to subsidiaries located in that country (Hennart, 2000). However, this increase in costs is likely to differ between greenfield and acquired subsidiaries. The costs of transferring practices to acquired subsidiaries increase substantially with cultural distance, because such subsidiaries come with employees who are used to different practices (Hennart and Park, 1993). The larger the cultural distance, the less familiar and comfortable these employees will be with the practices of their MNE acquirer, and hence the more difficult it will be for MNEs to successfully install their practices in acquired

this point.

subsidiaries (Cho and Padmanabhan, 1995; Larimo, 2003). The costs of transferring intangibles to greenfield subsidiaries, on the other hand, will hardly increase with cultural distance, because MNEs can staff such subsidiaries with fresh employees who are not yet used to any practices and hence more willing to accept those of the MNE (e.g., Hennart et al., 1996; Larimo, 2003). An MNE's preference for greenfields over acquisitions should therefore increase with the cultural distance to the target country (Cho and Padmanabhan, 1995; Larimo, 2003).

2.2.2. The organizational learning perspective

In the last decade, several scholars (Cho and Padmanabhan, 1995; Barkema and Vermeulen, 1998; Padmanabhan and Cho, 1999) have started to look at an MNE's establishment mode choice from an organizational learning perspective. This perspective postulates that firms operating in many different settings are exposed to a wide variety of events and ideas that strengthen their knowledge base and technological capabilities (Fiol and Lyles, 1985; Huber, 1991; March, 1991). Based on this idea, Barkema and Vermeulen (1998) argue that MNEs operating in many countries are likely to have learned a broad range of technological skills and that such internationally-experienced MNEs therefore tend to abstain from cross-border acquisitions, as such acquisitions would be unlikely to provide them with additional technological skills⁴. Internationally-experienced MNEs are thus expected to have a clear preference for greenfield investments – a prediction in line with that of the extended transaction cost/internalization perspective.

Cho and Padmanabhan (1995) and Barkema and Vermeulen (1998) apply a similar line of reasoning to MNEs operating in a variety of industries (i.e., product-diversified MNEs). Such MNEs are also likely to have learned many technological skills and should therefore prefer

⁴ Note that Barkema and Vermeulen argue that international experience results in technological skills and not in knowledge of foreign markets, as the Uppsala internationalization model (Johanson and Vahlne, 1977) proposes.

greenfields to acquisitions as well. However, while Cho and Padmanabhan (1995) argue that this should be the case at any level of product diversity, Barkema and Vermeulen (1998) suggest that if the number of industries in which the MNE operates becomes very large, its preference for greenfields changes into one for acquisitions. The reason they put forward is that the senior management of widely-diversified MNEs is no longer capable of comprehending all events and ideas to which their firms are exposed, leading them to change their firms' structure into an M-form. Because it is difficult to transfer knowledge between the loosely-connected divisions of an M-form firm (Szulanski, 1996), this change in structure constrains intra-organizational learning, and results in fewer technological capabilities and hence a higher likelihood of acquisitions. Barkema and Vermeulen (1998) thus predict an inverted U-shaped relationship between an MNE's level of product diversity and its preference for greenfields.

Cho and Padmanabhan (1999) identify two other important sources of learning that affect an MNE's establishment mode choice, i.e. (i) its experience with greenfields and (ii) its experience with acquisitions. They argue that MNEs with much experience with one of these establishment modes are likely to use that same mode for future expansions as well, as such MNEs have learned over time how to effectively manage it⁵.

2.2.3. Information economics

Several studies have used insights from information economics to explain an MNE's establishment mode choice (Hennart and Park, 1993; Hennart et al., 1996). Information economics studies how information affects economic decisions by focusing on the existence of information asymmetries (Stigler, 1961; Akerlof, 1970). Such asymmetries are typically present in acquisitions, in that acquirers often have incomplete information on the value and culture of

their targets. As a result, acquirers may find it difficult to evaluate these targets *ex ante* (the inspection problem) or to integrate them in their corporate network after the deal has been completed (the interaction problem) (Ravenscraft and Scherer, 1987). This information asymmetry is likely to be especially large for MNEs with little host-country experience. The reason is that such MNEs are typically unfamiliar with existing local firms and will hence find it very difficult to evaluate and integrate these firms, leading them to opt for greenfields instead. MNEs with extensive experience of a particular country, on the other hand, will be better able to evaluate potential takeover targets located in that country and will be more familiar with their culture, making these MNEs more likely to choose acquisitions (Hennart and Park, 1993; Hennart et al., 1996).

Likewise, MNEs expanding into unrelated foreign industries are likely to face a larger information asymmetry in making acquisitions than those expanding in their main line of business. MNEs expanding into unrelated industries, intending to manufacture products different from those manufactured at home will be unfamiliar with the firms operating in these industries, whereas MNEs expanding in their main line of business, intending to manufacture the same products as at home, will be quite familiar with the firms in that business. Consequently, MNEs expanding in their main business should be more likely to make acquisitions than those expanding into new industries (Hennart and Park, 1993).

2.2.4. *The theory of the growth of the firm*

The theory of the growth of the firm (Penrose, 1959) forms one of the bases for the resource-based view (Wernerfelt, 1984; Barney, 1991) and attributes the growth of firms to their internal processes. One of its claims is that firms are constrained in their growth because they can recruit

⁵ Padmanabhan and Cho (1999) acknowledge that MNEs may also opt for the same establishment mode because they have become isomorphic, copying their past behavior, and not necessarily because they have learned from past

and train only a limited number of new managers in a given time period. This constraint mainly applies to growth through greenfield investments, since acquisitions come with their own managers. The larger a subsidiary, the larger the number of managers required to run it, and hence the less likely that its MNE parent has the capacity to recruit and train these managers itself. Consequently, subsidiaries that are relatively large compared to their parents are likely to have been acquired rather than built from scratch (Caves and Mehra, 1986; Hennart and Park, 1993). Small subsidiaries on the other hand, which are often established to obtain a foothold in a market, require relatively few managerial resources and are hence more likely to have been greenfields.

2.2.5. The industrial organization perspective

Several studies (Caves and Mehra, 1986; Zejan, 1990; Hennart and Park, 1993; Meyer and Estrin, 1997) have used the industrial organization literature (e.g., Oster, 1990) to argue that an MNE's establishment mode choice is influenced by the conditions in the foreign industry entered. One major difference between greenfield and acquisition entry is that the former increases local supply. This increase in supply associated with greenfields would be especially large in concentrated industries, as greenfield entrants would need to enter such industries at a large scale in order to be able to compete with the few large incumbents. However, such large-scale greenfield entry would result in a large decrease in prices and profits and hence in a competitive response from incumbents. MNEs will therefore prefer to enter concentrated industries through acquisitions, so as to avoid increases in supply and hence retaliation by incumbents (Caves and Mehra, 1986). However, this assumes that host governments allow acquisitions. In practice governments may oppose acquisitions in concentrated industries in order to keep MNEs from dominating the industry and from capitalizing on the low level of experiences.

competition (Hennart and Park, 1993). This may force MNEs to enter concentrated industries through greenfield investments after all.

Incumbents are also more likely to respond to greenfield entry if an industry is growing slowly, as they will lose market share in this case. MNEs will therefore prefer to enter slow-growth industries through acquisitions. If an industry is growing rapidly, on the other hand, greenfield entry will not cause incumbents to lose market share and will hence be more tolerable for them, making such entry more likely (Zejan, 1990). However, greenfield subsidiaries take time to become operational, and this delay may result in high foregone profits if an industry is growing very rapidly (Caves and Mehra, 1986). This suggests that MNEs will opt for acquisitions rather than greenfields if an industry is either growing very slowly (so as to avoid retaliation by incumbents) or very rapidly (so as to avoid foregone profits) (Caves and Mehra, 1986; Hennart and Park, 1993).

A final characteristic of the industry entered that may strongly affect an MNE's establishment mode choice is the availability of suitable local takeover targets (e.g., Caves and Mehra, 1986; Zejan, 1990; Larimo, 2003). When such targets are lacking, as is often the case in infant industries or small countries (Caves, 1996), MNEs are also forced to enter through greenfields.

2.2.6. Institutional theory

Institutional theory claims that firms tend to conform to the rules and norms prevailing in their environment in order to gain legitimacy and survive (DiMaggio and Powell, 1983). Scholars applying this theory to the MNE have argued that subsidiaries of MNEs experience conformity pressures from both their internal (parent) and external (host country) environments (Rosenzweig and Singh, 1991; Kostova and Zaheer, 1999), i.e. pressures for global integration and local responsiveness (Prahalad and Doz, 1987). Harzing (2002) uses these ideas to explain the impact

of an MNE's international strategy on its choice of establishment mode. She argues that subsidiaries of MNEs following a global strategy are subject to strong pressures for internal conformity, while those of MNEs following a multidomestic strategy are exposed to strong pressures for external conformity. According to her, internal conformity is easier to realize through greenfields because they allow an MNE's resources to be deployed from the outset, while external conformity is easier to achieve through acquisitions because they are local firms already embedded in the host-country environment. As a result, MNEs following a global strategy are likely to prefer greenfields, and those following a multidomestic one acquisitions.

2.2.7. Summary and comparison

Table 2 summarizes the main predictions of the six dominant theoretical perspectives used by the empirical literature. Although these predictions refer to parent, subsidiary, industry, as well as country-level determinants of establishment mode choices, the table clearly shows that most perspectives tend to focus on the parent and subsidiary levels, i.e. the firm level. Transaction cost/internalization theory is the only perspective identifying a country-level determinant (i.e., cultural distance), while the industrial organization literature is the only perspective focusing on industry-level factors. However, as we will show below, other country-level factors besides cultural distance may also affect establishment mode choices, and hence need to be taken into account in empirical analyses. Because of its focus on industry-level determinants, the industrial organization literature constitutes an excellent complement to the other five perspectives predominantly or exclusively focusing on the firm level.

All five firm-level perspectives agree that an MNE's resources and capabilities play a central role in its establishment mode choice. Establishment mode studies applying the extended transaction cost/internalization perspective argue that MNEs choose between greenfields and

acquisitions on the basis of the type of capabilities they own and the sort of complementary capabilities they seek. While MNEs exploiting firm-embedded technological knowledge are more likely to opt for greenfields because this is the most efficient way to transfer such knowledge, diversified MNEs exploiting management control skills will choose acquisitions because these skills reduce the cost of making and managing acquisitions. MNEs lacking host-country or industry-specific knowledge are more likely to choose acquisitions to efficiently obtain this tacit knowledge, and can thus be considered to be resource or strategic asset seekers (Dunning, 1993).

Resources also play a central role in establishment mode studies that have applied the theory of the growth of the firm. The main prediction of these studies, viz. that relatively large subsidiaries are more likely to have been acquired, is based on the assumption that MNEs short of managerial resources are likely to make acquisitions to obtain such resources, while those with sufficient resources will exploit them abroad through greenfields. In terms of Dunning's (1993) motives for foreign expansion, MNEs short of managerial resources can thus be considered to be resource seekers as well. As explained above, establishment mode scholars using transaction cost theory also pay attention to managerial resources, but distinguish between different types of such resources. They argue that MNEs run by managers with substantial experience of a particular country are more likely to opt for greenfields, while those run by managers with advanced management control skills are more likely to make acquisitions.

As shown in Table 2, both transaction cost/internalization theory and the organizational learning perspective predict that internationally-experienced MNEs prefer greenfield entry. Yet, the logic behind both perspectives is quite different. Like establishment mode scholars using the theory of the growth of the firm, those relying on the organizational learning perspective do not

distinguish between the different types of capabilities held or sought by MNEs, and hence do not consider the possibility that these different types of capabilities affect establishment mode choices in different ways. Organizational learning scholars argue that both product diversity, either at all levels (Cho and Padmanabhan, 1995) or up to a certain point (Barkema and Vermeulen, 1998), and international diversity endow MNEs with many technological skills, leading them to exploit these skills through greenfields. In contrast, transaction cost/internalization proponents distinguish between different types of knowledge that accrue through international and product diversity: international diversity results in knowledge of how to operate internationally, thereby reducing the need to make acquisitions and hence encouraging greenfield entry, while product diversity yields management control skills, which are most efficiently exploited through acquisitions.

Table 2 also shows that the main predictions of information economics oppose those of transaction cost/internalization theory. These opposing predictions arise because establishment mode scholars drawing on information economics focus exclusively on the capabilities needed to evaluate and integrate acquisitions, while those applying transaction cost/internalization theory also emphasize the capabilities needed to set up and manage greenfield subsidiaries. For example, establishment mode scholars using information economics argue that MNEs with little host-country experience lack the knowledge to evaluate and integrate existing local firms, leading such MNEs to choose greenfields. Establishment mode scholars applying transaction cost theory, on the other hand, suggests that MNEs with little experience of a particular country will find greenfield investments in such countries even costlier because such MNEs lack the capabilities to successfully run a business there. They predict that these MNEs will prefer acquisitions to obtain these tacit capabilities.

While couched in different terms, the logic behind the prediction of institutional theory that MNEs following global strategies will prefer greenfields and those following multidomestic ones acquisitions bears resemblance to transaction cost/internalization reasoning. This is because MNEs striving for internal conformity, i.e. those with a global strategy, typically possess substantial firm-embedded tacit knowledge of how to manufacture technologically-advanced products that require little local adaptation. In line with institutional theory, transaction cost/internalization theory predicts that such MNEs will prefer to expand abroad through greenfields because this is the most efficient way to exploit firm-embedded technological knowledge, and because MNEs with global strategies do not need to obtain intimate knowledge of local consumer preferences through the acquisition of local firms. MNEs exposed to strong pressures for external conformity, on the other hand, i.e. those following a multidomestic strategy, do require such market knowledge, which, according to transaction cost/internalization theory, will lead them to expand abroad through acquisitions⁶.

The above discussion makes clear that the main theoretical perspectives used by the establishment mode literature sometimes advance opposing predictions. Table 2 shows that for five variables – i.e., the parent’s host-country experience, the relatedness of the subsidiary’s products to those of its parent, the parent’s degree of product diversity, and the concentration level and growth rate of the industry entered – the perspectives contradict one another. The predictions for the latter three variables are even mixed within their own underlying perspectives, with organizational learning scholars predicting both negative and inverted U-shaped effects of the parent’s degree of product diversity on its propensity to acquire, and industrial organization scholars predicting both positive and negative effects of an industry’s concentration level and both negative and inverted U-shaped effects of an industry’s growth rate. In the next section we

⁶ We thank an anonymous reviewer for suggesting this link between transaction cost and institutional theory.

examine the extent to which the predictions of the dominant theories are supported by empirical findings.

2.3. Empirical findings

Table 3 provides a detailed overview of the empirical findings of the 15 comparable studies included in our review, with explanatory variables grouped into parent, subsidiary, industry, and country-level ones⁷. It shows that each study has entered a different set of variables and that findings have often been inconsistent (Shimizu et al., 2004), with some studies finding that a specific variable has a positive effect on an MNE's propensity to acquire, others finding that it has a negative effect, and still others that it has a non-linear or non-significant effect. In fact, only six of the 22 variables that have been included in more than one study have fully consistent significant effects, and only five of these 22 variables have reasonably consistent effects across six or more studies. These five variables are the parent's R&D intensity, the subsidiary's relative size, the growth rate of the industry entered, the per capita income of the host country, and the year in which an entry took place.

In line with transaction cost/internalization theory, R&D-intensive MNEs – i.e., MNEs with a high R&D expenditures to sales ratio, a widely-used proxy for proprietary technological skills, have been found to prefer greenfields in all nine studies that included this variable, presumably because the many technological assets of these MNEs are largely firm-embedded and hence more costly to exploit through acquisitions (Hennart and Park, 1993)⁸. Consistent with the main prediction derived from the theory of the growth of the firm, four out of six studies found that MNEs that expand through relatively large subsidiaries are more likely to make acquisitions

⁷ The year in which an entry took place is the only variable that cannot be attributed to one of these categories. We therefore put this variable in a 'miscellaneous' category.

rather than greenfield investments. The likely reason is that MNEs often lack the capacity to recruit and train the many managers required to run a large greenfield subsidiary (Caves and Mehra, 1986).

Two predictions derived from the industrial organization literature are also supported across a large number of studies. First, all seven studies examining the impact of the growth rate of the industry entered found that the likelihood of greenfield entry initially increases with industry growth. The likely reason is that the increase in capacity that comes with greenfield investments is more tolerable for incumbents when an industry is expanding than when it is static (Zejan, 1990). It is less clear, however, what happens when an industry is growing very rapidly. Three studies found that greenfield entry becomes even more likely, while the other four found that acquisitions become more likely, presumably because they make speedy entry possible, which is desirable when an industry is growing very rapidly (Caves and Mehra, 1986; Andersson and Svensson, 1994). Second, five out of six studies found that MNEs are more likely to enter countries with higher per capita incomes through acquisitions, presumably because suitable takeover targets are more readily available in such countries (e.g., Zejan, 1990). A final consistent finding obtained by seven out of eight studies is that more recent entries are more likely to have been acquisitions rather than greenfield investments.

A few other predictions of the dominant perspectives described in section 2.2 have also received empirical support. Specifically, Padmanabhan and Cho (1999) found support for their organizational-learning based prediction that MNEs with extensive greenfield experience prefer greenfields and those with extensive acquisition experience acquisitions, while Harzing (2002) found support for her institutional theory-based argument that MNEs following a global strategy

⁸ Exploiting technological assets through acquisitions may be especially difficult in developing countries because this is likely to require many changes in the acquired unit. We thank an anonymous reviewer for bringing this point

prefer greenfields and those following a multidomestic strategy acquisitions. These predictions have so far not been tested in other studies.

Table 3 shows that the findings for many other variables have been inconsistent. To give a striking example, even though the transaction cost/internalization and the organizational learning perspective both predict that MNEs with extensive international experience are more likely to choose greenfields, only four out of 12 studies found empirical support for this prediction (Wilson, 1980; Barkema and Vermeulen, 1998; Padmanabhan and Cho, 1999; Brouthers and Brouthers, 2000), with the other eight finding that such MNEs are either more (Caves and Mehra, 1986; Forsgren, 1989; Andersson and Svensson, 1994; Harzing, 2002) or equally likely (Zejan, 1990; Cho and Padmanabhan, 1995; Meyer and Estrin, 1997; Larimo, 2003) to choose acquisitions. Similarly, although several studies found that subsidiaries offering products different from those offered by their parents are more likely to be established through acquisitions (Hennart and Park, 1993; Hennart et al., 1996; Larimo, 2003; Chen and Zeng, 2004), others found that such subsidiaries are either more (Brouthers and Brouthers, 2000) or equally likely (Caves and Mehra, 1986; Zejan, 1990; Cho and Padmanabhan, 1995; Barkema and Vermeulen, 1998; Padmanabhan and Cho, 1999) to be established through greenfield investments. In the next section we will try to reconcile these findings by identifying several potential causes for their inconsistency.

3. Causes of the inconsistent findings

As shown above, the empirical literature on the determinants of establishment mode choice has often obtained inconsistent findings. We argue that these inconsistencies are caused by (1)

to our attention.

the existence of unrecognized moderating effects and (2) research-design related problems⁹.

3.1. Unrecognized moderating effects

Table 2 showed that transaction cost/internalization theory and information economics disagree on how an MNE's establishment mode choice is affected by its host-country experience and the extent to which its products are related to those of the focal subsidiary. Moreover, Table 3 shows that the empirical findings for these two variables have been inconsistent as well. Transaction cost/internalization theory predicts that MNEs with little host-country experience prefer acquisitions in order to efficiently obtain tacit knowledge of the local market (Hennart and Park, 1993; Caves, 1996), while information economics suggests that such MNEs prefer greenfields because they are likely to lack the knowledge to evaluate and integrate local takeover targets (Hennart and Park, 1993; Hennart et al., 1996). Given the inconsistent empirical findings, we argue that the effect of host-country experience on the propensity to acquire is moderated by the extent to which MNEs intend to integrate the focal subsidiary into their corporate network. If they intend to tightly integrate the focal subsidiary, as is often the case when the objective of foreign expansion is to exploit capabilities of the parent, MNEs with little host-country experience will prefer greenfields because they will find it very difficult to integrate acquisitions made in countries with which they have little experience. Moreover, MNEs that tightly integrate their subsidiaries do not aim to be locally responsive and hence do not need to make acquisitions to obtain local market knowledge. In contrast, if they intend to grant the focal subsidiary considerable autonomy, MNEs with little host-country experience will prefer acquisitions, because quasi-autonomous acquisitions are relatively easy to manage, even for MNEs with little

⁹ As suggested by an anonymous referee, another cause of the mixed findings, and particularly of the many non-significant ones, could be that the statistical power of the empirical tests performed in the 15 studies was insufficient. However, given the generally large samples analyzed (see Table 1), we contend that low power is unlikely to be a major cause of the mixed findings.

experience of the host country. In addition, MNEs granting their subsidiaries much autonomy aim to be locally responsive and hence need to have intimate knowledge of the local market. Such MNEs will be eager to obtain this knowledge through acquisitions, especially when they have little host-country experience.

A similar argument can be made for the relatedness of a subsidiary's products to those of its MNE parent. Transaction cost/internalization theory posits that MNEs which expand abroad to manufacture products very different from those produced at home tend to make acquisitions to obtain the required tacit product-specific knowledge (Hennart and Park, 1993; Caves, 1996), while information economics suggests that such MNEs prefer greenfields because they lack information on existing firms in the new industries entered (Hennart and Park, 1993). Given that both of these predictions have received empirical support, it may again be that their validity is contingent upon the level of subsidiary integration. If they intend to tightly integrate the focal subsidiary, MNEs expanding into new industries may prefer greenfields because they may find it too difficult to integrate acquisitions made in industries with which they have little experience. On the other hand, if they intend to grant the focal subsidiary much autonomy, MNEs expanding into new industries may prefer acquisitions, since they will find it relatively easy to manage acquisitions made in unfamiliar industries if they grant these acquisitions much autonomy. In sum, the opposing predictions of transaction cost/internalization theory and information economics can be reconciled by introducing the level of subsidiary integration desired by the MNE as a moderating variable, with transaction cost/internalization theory having more explanatory power at low levels of integration and information economics at high levels.

The mixed findings regarding the relationship between cultural distance and establishment mode choice may also be due to the fact that the level of subsidiary integration moderates this

relationship. As shown in Table 3, three studies found support for the prediction of the extended transaction cost/internalization perspective that the likelihood of greenfield entry increases with cultural distance (Barkema and Vermeulen, 1998; Harzing, 2002; Larimo, 2002), while three others did not (Cho and Padmanabhan, 1995; Padmanabhan and Cho, 1999; Brouthers and Brouthers, 2000). These mixed findings may be caused by the fact that the additional costs of transferring practices to an acquired subsidiary located in a culturally-distant country over the costs of transferring these practices to a greenfield subsidiary located in such a country depend on the extent to which the subsidiary is integrated by its MNE parent. Parents intending to tightly integrate their subsidiaries will typically try to transfer their practices to these subsidiaries. For such parents it will be more costly to transfer their practices to acquired subsidiaries located in culturally-distant countries than to greenfield subsidiaries located in such countries, as the former come with employees who are used to radically-different practices, whereas the latter come with fresh employees who are more open to the MNE's practices. As a result, MNEs intending to tightly integrate their subsidiaries are more likely to enter culturally-distant countries through greenfields rather than through acquisitions. Parents intending to grant their subsidiaries much autonomy, on the other hand, often let these subsidiaries use local practices. In such cases there will hardly be any cross-border transfers of practices, and the attractiveness of greenfield over acquisition entry will not increase with cultural distance. Another possibility is that the relationship between cultural distance and the likelihood of greenfield entry is contingent upon an MNE's international or host-country experience. For MNEs with little international or host-country experience acquisitions in culturally-distant countries may indeed be more problematic than greenfields, but for those with extensive international or host-country experience this may not be the case.

As stated earlier, even though transaction cost/internalization theory and the organizational learning perspective both predict that an MNE's preference for greenfields increases with its international experience, empirical tests of prediction have yielded inconsistent findings. These inconsistencies may have arisen because the relationship between an MNE's international experience and its preference for greenfields is likely to be moderated by its product diversity. When they produce only a few products, internationally-experienced MNEs are likely to prefer greenfields, either because they want to efficiently exploit their gradually-accumulated technological skills (Barkema and Vermeulen, 1998), or because they already possess sufficient knowledge of the international arena and hence do not need to make acquisitions to obtain this knowledge (Larimo, 2003). At high levels of product diversity, however, MNEs typically have an M-form structure (Barkema and Vermeulen, 1998) and advanced management control skills, which reduces the costs of making and managing acquisitions (Caves and Mehra, 1986). As a result, internationally-experienced MNEs producing many different products are more likely to make acquisitions. This conjecture is supported by Barkema and Vermeulen (1998), who found that internationally-experienced MNEs were less likely to choose greenfields when they were highly product diversified.

Figure 1 summarizes the above discussion in a conceptual model, which may serve as a template for future establishment mode studies. The exact set of control variables required depends on the research design chosen, an issue to which we will turn now.

3.2. Research-design related problems

The second reason why the findings of the establishment mode literature have frequently been inconsistent is that many studies suffer from research-design related problems. As we will show below, most studies have included multiple home or host countries in their sample but have been

unable to enter or accurately operationalize all relevant variables, thereby introducing the risk that their findings contain biases.

Multiple host countries. As shown in Table 1, 11 of the 15 studies reviewed analyzed MNE entries into multiple countries. A disadvantage of this research design is that these countries are likely to have, to a varying extent, governmental and/or institutional barriers to acquisition¹⁰. Host-government restrictions on foreign acquisitions constitute the most well-known acquisition barrier. Virtually all countries imposed such restrictions during the time periods covered by most establishment mode studies, notably the 1970s and 1980s. Some countries prohibited all foreign acquisitions (e.g., China), others required prior governmental approval (e.g., Japan), and some restricted acquisitions in strategic industries (e.g., Canada) (Cho and Padmanabhan, 1995). Although several countries relaxed their foreign acquisitions restrictions in the 1990s (UNCTAD, 2000), many countries still have a certain amount of such restrictions in place. It therefore remains important to control for them, because they still limit the possibilities of MNEs to make acquisitions. Cho and Padmanabhan (1995), Barkema and Vermeulen (1998), and Padmanabhan and Cho (1999) included a dummy variable equal to one if the government of a host country imposed restrictions on foreign acquisitions¹¹. However, this approach is sub-optimal for several reasons. First, governmental restrictions vary in intensity across countries and over time, and hence require a more fine-grained measure than a binary one (Gomes-Casseres, 1990). Second, including a restrictive host-country dummy makes it impossible to determine

¹⁰ Inter-country differences in acquisition barriers result in large differences in foreign acquisition activity across countries (see e.g., Healy and Palepu, 1993).

¹¹ Surprisingly, Cho and Padmanabhan (1995) and Padmanabhan and Cho (1999) found that Japanese entries into countries with governmental restrictions on foreign acquisitions are *more* likely to be acquisitions. Cho and Padmanabhan (1995) offer three possible explanations. Firstly, it may be that governmental restrictions on acquisitions are not binding, but negotiable. Secondly, the existence of such restrictions may signal that suitable acquisition candidates are present, which may attract foreign acquirers. Thirdly, there may be a bias towards acquisitions in countries with governmental restrictions if MNEs that fail to obtain governmental approval decide not to invest at all, instead of making a greenfield investment.

whether the effects of the independent variables reflect the preferences of MNEs for either greenfields or acquisitions, or whether they reflect the outcome of a bargaining process between these MNEs and restrictive host-country governments. Separating these two explanations in samples containing entries into both restrictive and non-restrictive countries requires a more sophisticated statistical approach, such as the one used by Gomes-Casseres (1990). Finally, governmental restrictions are not the only acquisition barrier affecting establishment mode choices by MNEs. Other barriers include acquisition restrictions in firms' statutes of incorporation (Lam, 1997), the existence of shares without voting rights (Rydqvist, 1992), and share ownership by parties who are reluctant to sell their shares, such as families, governments, and banks (Healy and Palepu, 1993). The height of these additional acquisition barriers has been found to vary across countries (Lam, 1997; Rydqvist, 1992; Healy and Palepu, 1993; Pedersen and Thomsen, 1997) and even across industries within a given country (Pedersen and Thomsen, 1999).

Since most of the above acquisition barriers are hard to measure, many establishment mode studies were unable to control for their existence. This is likely to have reduced the effects of the variables analyzed in these studies to an extent that varies with the overall height of these barriers in each sample, and may thus explain some of the mixed empirical findings. In samples where acquisition barriers were absent or low, on one hand, such as in samples composed of entries into the US, the regression coefficients of the parent, subsidiary, industry, and country-level variables are likely to reflect the true effects of these variables. In samples where acquisition barriers were more prominent, on the other hand, the coefficients of these variables are likely to be biased towards non-significance. The reason is that such samples are likely to

include greenfield entries that would have been acquisition entries had there not been acquisition barriers.

A second disadvantage of studying MNE entries into multiple countries is that it is difficult to obtain (comparable) industry-level archival data for multiple countries. As a result, several studies (Wilson, 1980; Cho and Padmanabhan, 1995; Padmanabhan and Cho, 1999; Harzing, 2002; Larimo, 2003) were forced to exclude theoretically-important industry-level variables from their models (see Table 3), which may have biased some of their empirical findings. Cho and Padmanabhan (1995) and Padmanabhan and Cho (1999), for example, found relatively many non-significant effects for their parent and subsidiary-level variables, such as a subsidiary's relative size. Although the effect of this variable may have been truly insignificant, it may also have been driven by the structural conditions of the industries entered by the MNEs included in Cho and Padmanabhan's sample. It may be, for example, that these MNEs did prefer to establish small subsidiaries from scratch and to acquire large ones (as predicted by the theory of the growth of the firm), but that a generally slow growth of the industries they entered persuaded many of them to acquire small subsidiaries as well, so as to avoid retaliation by incumbents. The omission of industry growth may thus have attenuated the effect of the focal subsidiary's relative size on the choice of establishment mode. Similarly, Harzing (2002) hypothesized and found that MNEs following global strategies prefer greenfields, while those following multidomestic strategies prefer acquisitions. Unfortunately, she was also unable to include industry-level variables, which leaves her findings open to alternative explanations. Specifically, since many industries in which MNEs follow global strategies go through stages of rapid growth¹², and since she did not control for industry growth, it may be that the MNEs in her sample preferred

¹² High-technology industries are an example of such industries.

greenfields over acquisitions because they entered fast-growing industries, and not because they followed a global strategy.

Some studies that analyzed MNE entries into multiple countries attempted to control for industry growth but used sub-optimal proxies. Specifically, Andersson and Svensson (1994), Barkema and Vermeulen (1998), and Larimo (2003) included in their models the growth rate of the host economy as a whole rather than that of the industry entered. It is hardly surprising that two of these studies found that this country growth rate had no effect on the establishment mode choices of the MNEs included in their sample, since industries within a given country may exhibit radically-different growth rates.

Multiple home countries. As shown in Table 1, six of the 15 studies included in our review analyzed foreign entries by MNE parents from different home countries. A disadvantage of this approach is that it is difficult to obtain archival data on parents located in different countries, as such data may be partly or fully unavailable for specific countries, or non-comparable across these countries owing to national differences in accounting practices (Hennart and Park, 1993). Parent-level data on R&D expenditures, for example, is only available for a few countries, including Japan. As a result, some authors examining foreign entries by MNE parents from different home countries had to proxy the firm-embedded technological skills of these parents by the R&D intensity of their home industry (Larimo, 2003) or by that of the foreign industry entered (Caves and Mehra, 1986)¹³. However, the R&D intensity of MNEs expanding abroad may systematically diverge from these industry-level R&D intensities. Foreign MNEs are typically at a disadvantage compared to their host-country rivals because they have less knowledge of the local market, and will therefore only expand abroad if they can compensate for

¹³ Chen and Zeng (2004) also included the R&D intensity of the industry entered, but they did so to capture the presence of technological barriers to entry rather than an MNE's unique technological skills.

this disadvantage by having superior product or process technologies (Hymer, 1976). Hence, the average R&D intensity of the foreign industry entered systematically underestimates an MNE's unique technological skills, which may explain why Caves and Mehra (1986) found this intensity to have no effect on establishment mode choice. A more accurate proxy for an MNE's firm-specific technological skills is its own R&D intensity. As stated earlier, all nine studies that used this proxy found that it had the expected positive effect on the likelihood of greenfields¹⁴.

A second disadvantage of studying foreign entries by MNEs from different countries is that an MNE's national origin may affect its establishment mode choice. There is, for instance, evidence that MNEs from uncertainty-avoiding countries prefer both partially and wholly-owned greenfields to full acquisitions (Kogut and Singh, 1988). While some studies account for potential national origin effects by including parent-country dummies (Wilson, 1980; Hennart et al., 1996; Meyer and Estrin, 1997), others do not, which may have biased their parent-level variables, as these are sometimes correlated with parent-country characteristics. For example, whereas the organizational learning and the transaction cost/internalization perspective both predict that internationally-experienced MNEs are more likely to choose greenfields, Caves and Mehra (1986) and Harzing (2002) found that such MNEs are more likely to choose acquisitions. These scholars may have obtained these unexpected findings because they did not control for differences in the level of economic development of the home bases of the MNEs in their sample. Internationally-experienced MNEs are more likely to be based in developed than in developing countries because firms from developed countries started to internationalize earlier. According to UNCTAD (2000) figures, MNEs based in developed countries have a higher preference for acquisitions than those based in developing countries. Had Caves and Mehra

¹⁴ Two other studies (Meyer and Estrin, 1997; Larimo, 2003) included the parent's R&D expenditures and the R&D intensity of the industry of the parent, respectively, and found that these variables had a positive effect on the

(1986) and Harzing (2002) controlled for parent-country differences in economic development levels, they might have obtained the predicted negative effect of an MNE's international experience on its propensity to acquire.

4. Conclusions and Recommendations

4.1. Summary and conclusions

In this piece we reviewed the empirical literature on the determinants of an MNE's choice between greenfield investment and acquisition. To gain detailed insight of this literature, we first identified 15 studies that conceptualize these two establishment modes in the same way and whose arguments and findings can hence be meaningfully compared. We then reviewed the theoretical perspectives most often used by these studies, viz. transaction cost/internalization theory, the organizational learning perspective, information economics, the theory of the growth of the firm, the industrial organization literature, and institutional theory. We found that these perspectives complement each other to a considerable extent in that they identify different parent, subsidiary, industry, and country-level determinants of an MNE's establishment mode choice. However, we also found that the first three perspectives make several contradictory predictions. We showed that these contradictions arise because the perspectives model an MNE's capabilities or its lack thereof in different ways.

We then moved on to the empirical findings obtained by our 15 comparable studies, and found that these findings have often been inconsistent. For instance, only six of the 22 independent variables entered in multiple studies had robust significant effects across these studies. We discussed two potential causes of these mixed findings. The first is the existence of moderating effects which have not been considered by the literature. Specifically, the effects of an MNE's host-country experience and the relatedness of its products to those of the focal

likelihood of greenfields as well.

subsidiary are likely to be contingent upon the level of subsidiary integration desired by the MNE. The impact of cultural distance may also be moderated by the level of subsidiary integration, or by an MNE's international or host-country experience. Finally, the impact of an MNE's international experience may hinge on its degree of product diversity. The second potential cause of the mixed findings is that, owing to their choice of research design, scholars have frequently been forced to exclude relevant variables or to rely on suboptimal proxies. Various acquisition barriers, industry-level variables, and characteristics of the MNE's home country have often been omitted, and several variables have been poorly operationalized, thereby introducing the risk that the regression coefficients of some or all of the included variables have been biased.

We believe that future establishment mode research will benefit from considering the issues addressed in this paper. We have a number of recommendations, some of which – although directed to establishment mode researchers – may also prove useful to other international management scholars.

4.2. Recommendations

To synthesize the opposing theoretical predictions and mixed empirical findings with respect to several key variables, we identified several possible moderating effects in our review. We urge future research to examine whether these moderating effects indeed exist, so as to assess whether some of the seemingly contradictory theoretical perspectives can be integrated at least partly, and whether some of the mixed empirical findings can be reconciled.

As stated earlier, the firm-level theoretical perspectives used by the establishment mode literature typically focus on an MNE's resources and capabilities or its lack thereof. These perspectives thus ignore the role of local resources and capabilities, as well as the difficulties of

combining them with those of the MNE. The 15 studies reviewed have, for instance, largely ignored the potential synergies resulting from an acquisition, as well as the costs of realizing them. More theoretical contributions in this area, especially those focusing on the complementary resources and capabilities of local firms (Shimizu et al., 2004), are therefore called for. One such contribution, initiated by Hennart and Park (1993) and further developed in Hennart (2000), is the conceptualization of both greenfield investments and acquisitions as combinations of MNE and local assets. From this perspective, the key difference between both establishment modes is that the complementary local assets are obtained from different markets, i.e. from the market for inputs such as land, equipment, and labor in case of a greenfield, and from that for corporate control in case of an acquisition. This conceptualization suggests that an MNE's choice between a greenfield and an acquisition hinges on which establishment mode combines the MNE and local assets in the most efficient way. MNEs may be expected to choose that establishment mode whose combination of MNE and local assets provides the highest net benefits. Consider the following cases. Japanese car manufacturers, on the one hand, entered the US in the 1980s through greenfields because their main competitive asset, i.e. sophisticated labor management practices, would have been difficult to combine with the assets of existing US firms (Hennart, 2000), as the workforce of these US firms would have had to unlearn many of their existing practices (Barkema and Vermeulen, 1998; Harzing, 2002). US food companies, on the other hand, typically entered Eastern Europe in the 1990s through acquisitions because their most important competitive asset, i.e. superior advertising and distribution skills, could easily be combined with the locally-established brand names and quality products of existing Eastern-European food companies which had superior knowledge of local consumer tastes and production conditions (Hennart, 2000). We recommend that future studies take these important

bundling issues into account, for instance by drawing on the strategic management literature on acquisitions, which has extensively examined the synergies and costs associated with acquisitions (e.g., Capron, 1999).

Another perspective that has received relatively little attention in the establishment mode literature is institutional theory. Although Harzing (2002) has used this theory to show that MNEs' establishment mode choices are affected by both parental and host-country pressures for conformity, the empirical literature has not yet examined whether these choices are also affected by other institutional factors, such as the establishment mode choices made by firms from the same home country or by firms already operating in the target country. Recent empirical work has shown that such institutional factors strongly affect subsidiary ownership choices by MNEs (Lu, 2002; Guillen, 2003), and may hence serve as a valuable template for future establishment mode studies on this topic.

As stated earlier, establishment mode scholars using transaction cost/internalization theory have argued that tacit technological knowledge is time-consuming to develop internally and difficult to purchase on the market, and that MNEs lacking such knowledge will therefore choose acquisitions to efficiently obtain it. However, these scholars have ignored the fact that MNEs that have obtained this knowledge through acquisitions may need to transfer it to other parts of their network in order to benefit from it. According to the knowledge-based view, such intra-firm transfers of knowledge are difficult and time consuming, and should hence not be taken for granted (e.g., Kogut and Zander, 1993; Martin and Salomon, 2003), especially when the acquired subsidiary has only weak ties with the other subsidiaries of the MNE (Szulanski, 1996; Kostova, 1999). We encourage future establishment mode studies to take into account these transfer costs

and to examine why, or under which conditions, these costs are likely to be lower than the costs of obtaining tacit knowledge through market exchange or through internal development.

On the methodological side we encourage scholars to select their research design more carefully. Scholars interested in parent, subsidiary, or industry-level determinants of an MNE's establishment mode choice should preferably analyze samples of entries by MNE parents from a single home country into a single host country (cf. Hennart and Park, 1993; Chen and Zeng, 2004). The reason is that this research design does not require controls for home and host-country effects, such as hard-to-measure host-country acquisition barriers. Scholars intending to use archival data should select their home and host country on the basis of the availability of reliable and comparable parent, subsidiary, and industry-level data. A caveat with this research design is that the empirical findings obtained may not be generalizable. For instance, Hennart and Park's (1993) and Chen and Zeng's (2004) findings may only apply to Japanese MNEs entering a highly-developed country like the US, and may have limited applicability to MNEs from other countries entering different host markets.

On the other hand, scholars interested in country-level determinants should include a large number of heterogeneous home and/or host countries. Specifically, studies focusing on *home*-country determinants, such as the culture of an MNE's home base, should preferably use samples of entries by MNE parents from a large number of culturally-dissimilar home countries into a single host country, while those focusing on *host*-country effects should take the opposite approach¹⁵. Whenever multiple home and/or host countries are involved, scholars should properly control for potential parent, subsidiary, and industry-level effects predicted by

¹⁵ Note that the effect of some variables can be examined through several research designs. For example, scholars interested in the impact of cultural distance may either analyze foreign entries by MNEs (i) from one home country into multiple host countries, (ii) from different home countries into one host country, or (iii) from different home

complementary theories (see Table 2). Another way to control for these effects is to limit samples to specific types of MNEs, such as those with similar levels of international experience, active in a specific industry. Table 4 summarizes these possibilities.

Besides focusing on entries by MNEs from a single home country into a single host country, another, perhaps second-best, strategy for scholars interested in parent, subsidiary, or industry-level determinants is to include multiple home and/or host countries and to control for country-level factors. Scholars including multiple *host* countries in their sample should carefully control for acquisition barriers such as governmental restrictions and corporate ownership by shareholders reluctant to sell their stakes (see Healy and Palepu, 1993; Makino and Beamish, 1998; Henisz, 2000), and for other relevant country-level factors such as cultural distance. Another option is to control for all these effects simultaneously by including host-country dummies (e.g., Estrin and Meyer, 1997). Scholars including multiple *home* countries are encouraged to control for potential home-country effects, such as culture-related establishment mode preferences. The most efficient way to do so is to include home-country dummies (Wilson, 1980).

We also urge scholars to include all relevant variables in their models, so as to avoid omitted-variable biases and to rule out alternative explanations. Specifically, we encourage future studies to take into account those theoretically-important constructs listed in Table 2 that could influence the choice of establishment mode in the selected empirical setting. To avoid biases, these constructs should be operationalized accurately, which has not always been the case. Table 5 lists several constructs whose operationalization could be improved, along with alternative measures

countries into multiple host countries, as all these research designs may produce sufficient variation in cultural distance.

used by other studies. If comparable archival data on industry and/or country-level factors is unavailable, industry and/or country dummies should be included.

Besides factual data, researchers could also rely on managerial perceptions to operationalize certain constructs. Except for Harzing (2002), who used such perceptions to measure an MNE's international strategy, all establishment mode studies included in our review relied exclusively on factual data. The main advantage of perceptual measures is that they make it possible, by carefully designing and formulating survey questions, to reflect theoretical constructs more closely, thus reducing the likelihood of biases. This is especially relevant for complex constructs that are difficult to measure through archival data, such as an MNE's firm-embedded technological skills and certain types of acquisition barriers. In addition, strategic decisions such as entry mode choices ultimately reflect managerial perceptions (Boyd et al., 1993), and may therefore be better explained by perceptual measures. Future establishment mode research could thus benefit from making wider use of such measures.

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Table 1
Main characteristics of the 15 comparable studies

Study	Theoretical perspective(s) used	Home market(s)	Host market(s)	Time period	Sample size	Method
Wilson (1980)	Exploratory	Various	Various	1900 – 1967/1971	?	OLS
Caves and Mehra (1986)	Theory of the growth of the firm, transaction cost/internalization theory, agency theory, industrial organization	Various	U.S.	1974 – 1980	138	Binary probit
Forsgren (1989)	Transaction cost/internalization theory, network theory	Sweden	Various	1970 – 1982	33	OLS
Zejan (1990)	Transaction cost/internalization theory, industrial organization	Sweden	Various	1969 – 1978	250	Binary probit
Hennart and Park (1993)	Transaction cost/internalization theory, industrial organization, information economics, theory of the growth of the firm, theory of capital market imperfections	Japan	U.S.	1978 – 1980 and 1984 – 1987	270	Binary logit
Andersson and Svensson (1994)	Resource-based view	Sweden	Various	± 1961 – 1990	± 1000	Binary logit
Cho and Padmanabhan (1995)	Transaction cost/internalization theory, organizational learning, bargaining power model	Japan	Various	1969 – 1991	756	Binary logit
Hennart, Larimo, and Chen (1996)	Transaction cost/internalization theory, industrial organization, information economics	Japan and Finland	U.S.	1978 – 1993	401	Binary logit
Meyer and Estrin (1997)	Transaction cost/internalization theory, industrial organization	Germany and U.K.	Various	early 1990s	211	Binary logit
Barkema and Vermeulen (1998)	Organizational learning	The Netherlands	Various	1966 – 1994	829	Binary logit
Padmanabhan and Cho (1999)	Organizational learning	Japan	Various	1969 – 1991	752	Binary logit
Brouthers and Brouthers (2000)	Institutional theory, cultural model, transaction cost/internalization theory	Japan	Six Western-European countries	1981 – ?	136	Binary logit
Harzing (2002)	Ownership-Location-Internalization paradigm, institutional theory	Various	Various	? – mid 1990s	277	Binary logit
Larimo (2003)	Transaction cost/internalization theory	The four Nordic countries	Various	1960 – 1999	3524	Binary logit
Chen and Zeng (2004)	Theory of barriers to entry	Japan	U.S.	1978 – 1980 and 1984 – 1987	269	Binary logit

Table 2

Predictions of the dominant theories

Construct	TCI	OL	IE	TGF	IO	IT
parent's technological knowledge	-					
parent's international experience	-	-				
parent's host-country experience	-		+			
relatedness of subsidiary's products to those of parent	-		+			
parent's degree of product diversity	+	- / U				
cultural distance between home and host country	-					
parent's experience with greenfields		-				
parent's experience with acquisitions		+				
relative subsidiary size				+		
concentration level of industry entered					+ / -	
growth rate of industry entered					- / U	
availability of takeover targets					+	
parent follows multidomestic rather than global strategy						+

+ = increases the likelihood of acquisition entry, - = increases the likelihood of greenfield entry, U = curvilinear effect on the likelihood of acquisition entry

TCI = transaction cost/internalization theory

OL = organizational learning perspective

IE = information economics

TGF = theory of the growth of the firm

IO = industrial organization perspective

IT = institutional theory

Table 3

Empirical findings (+ = increases the likelihood of acquisition entry)

<i>Parent-level variables</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
parent is British	- ¹														
parent is German	n.s. ¹								n.s. ³						
parent is Japanese	- ¹							- ²							
parent is American	+ ¹														
parent is non-European									- ³						
parent's % of subsidiaries in less-developed countries	-														
parent's international experience	-	+	+	n.s.		+	n.s.		n.s.	-	-	-	+	n.s.	
parent's regional experience									n.s.						
parent's host-country experience					n.s.	+	n.s.	∩		+	n.s.			n.s.	
parent's experience with greenfields											-				
parent's experience with acquisitions											+				
parent's degree of product diversity	+	+	+	+	n.s.		n.s.		+	∩	n.s.	+	n.s.	+	
parent's R&D intensity			-		-	-	-	-			-	-	-		-
parent's R&D expenditures									-						
parent is first to enter industry		n.s.													
parent is follower		n.s.			-										
parent size			n.s.			+	n.s.	n.s.	∩	n.s.	n.s.			+	
parent's endowment in human resources					+										
parent's leverage					n.s.										
parent's advertising intensity					n.s.										
parent's advertising expenditures in home country															n.s.
parent's advertising expenditures in host country															-
parent's market position							n.s.				n.s.				
factor costs motivation for entry									+						
parent's labor intensity									-						
parent's profitability										+					
parent follows multidomestic rather than global strategy													+		
<i>Subsidiary-level variables</i>															
relatedness of subsidiary's products to those of parent		n.s.		n.s.	-		n.s.	-		n.s.	n.s.	+		-	-
relative subsidiary size		+			+		n.s.				n.s.	+	+		
subsidiary is joint venture		-			n.s.			n.s.		n.s.				-	
entry is into durable goods industry		-													
entry is into resource-intensive industry								+							
entry is into non-food consumer goods industry									-						
entry is into food and beverage industry									+						

Table 3 (continued)

Empirical findings

<i>Industry-level variables</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
concentration level of industry entered		+			n.s.			-							-
growth rate of industry entered		∪		-	∪			∪	-			-			∪
number of firms in subsidiary's size-class		n.s.													
R&D intensity of industry entered		n.s.													n.s.
R&D intensity of industry in which parent is active														-	
advertising intensity of industry entered		n.s.													+
brand equity of industry entered (reputation barriers)															∪
percentage of industry shipments to retailers															+
<i>Country-level variables</i>															
size of host economy				n.s.						n.s.					
growth rate of host economy						n.s.				n.s.				-	
host-country per capita income				+		+	+			n.s.	+			+	
availability of bargains in host country					n.s.										
host-government restrictions							+			-	+				
cultural distance between home and host country							n.s.			-	n.s.	n.s.	-	-	
uncertainty avoidance of host country												-			
host-country risk										- ⁴					
<i>Miscellaneous</i>															
year of entry	+			+		+	n.s.			+	+		+	+	

¹ compared to what Wilson (1980) labels parents from 'other' countries, ² compared to Finnish parents, ³ compared to British parents, ⁴ partial support was found

+ = increases the likelihood of acquisition entry, - = increases the likelihood of greenfield entry, ∪ and ∩ = curvilinear effect on likelihood of acquisition entry, n.s. = not significant

- | | | |
|----------------------------|-------------------------------------|------------------------------------|
| 1. Wilson (1980) | 6. Andersson and Svensson (1994) | 11. Padmanabhan and Cho (1999) |
| 2. Caves and Mehra (1986) | 7. Cho and Padmanabhan (1995) | 12. Brouthers and Brouthers (2000) |
| 3. Forsgren (1989) | 8. Hennart, Larimo, and Chen (1996) | 13. Harzing (2002) |
| 4. Zejan (1990) | 9. Meyer and Estrin (1997) | 14. Larimo (2003) |
| 5. Hennart and Park (1993) | 10. Barkema and Vermeulen (1998) | 15. Chen and Zeng (2004) |

Table 4

Types of research designs and when to use them

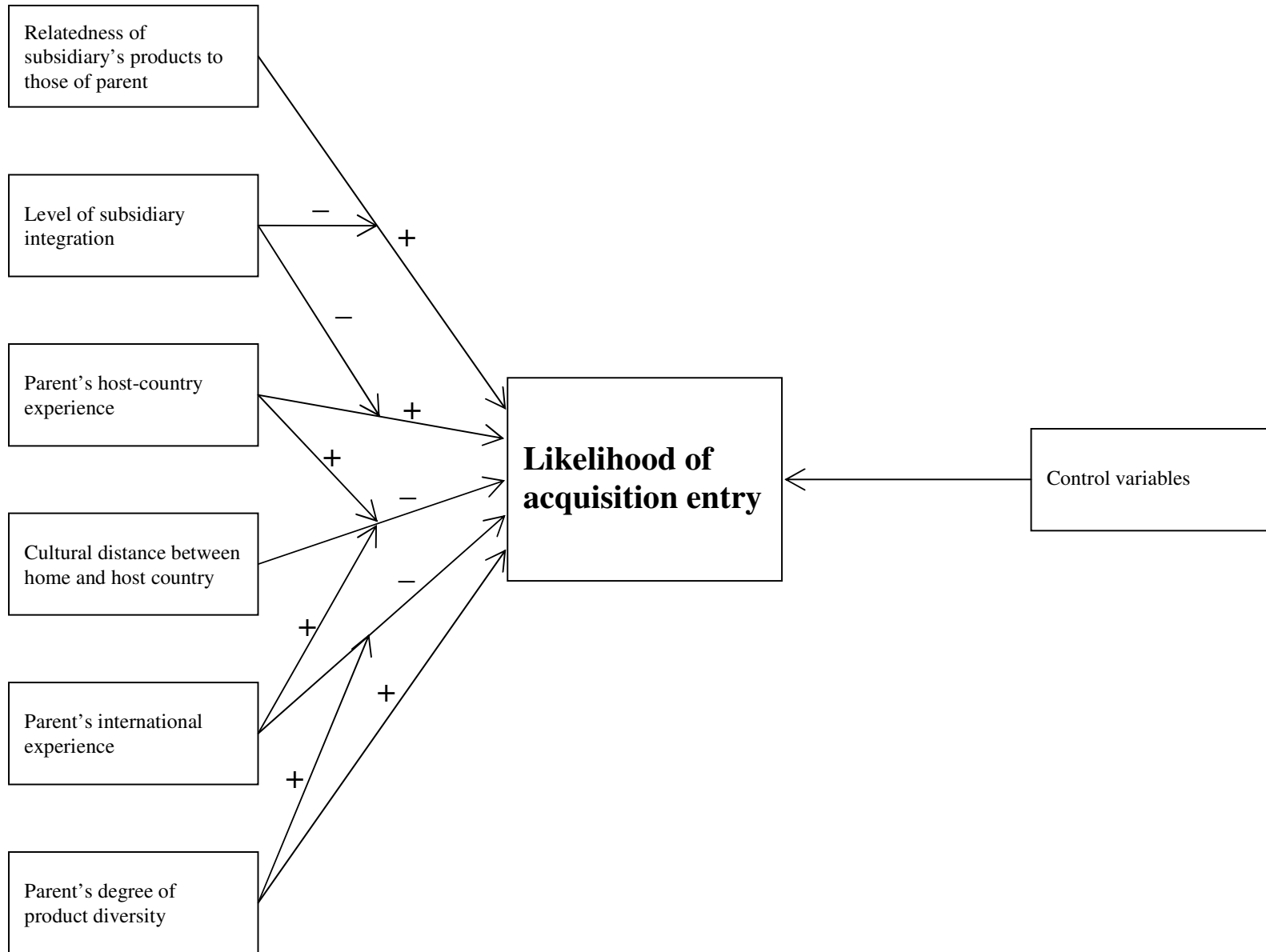
Type of research design:	To be used by scholars interested in:	How to obtain reliable results?
One home country, multiple host countries	Host-country factors (e.g., institutional quality of host country)	<ul style="list-style-type: none"> - Control for parent, subsidiary, and industry-level variables, or focus on MNEs that are similar (e.g., in terms of experience) and/or active in a single industry - Control for other host-country factors
Multiple home countries, one host country	Home-country factors (e.g., cultural characteristics of home country)	<ul style="list-style-type: none"> - Control for parent, subsidiary, and industry-level variables, or focus on MNEs that are similar (e.g., in terms of experience) and/or active in a single industry - Control for other home-country factors
Multiple home and host countries	Home- and host-country factors	<ul style="list-style-type: none"> - Control for parent, subsidiary, and industry-level variables, or focus on MNEs that are similar (e.g., in terms of experience) and/or active in a single industry - Control for other home- and host-country factors
One home and host country	Parent, subsidiary, and industry-level factors	Results are likely to be reliable but are not necessarily generalizable

Table 5

Constructs whose operationalization could be improved

Construct	Study	Operationalization	Limitation	Preferred operationalization through archival data
Parent's firm-embedded technological skills	<ul style="list-style-type: none"> - Caves and Mehra (1986) - Larimo (2003) 	<ul style="list-style-type: none"> - R&D intensity of industry entered - R&D intensity of industry in which parent is active (low, medium, high) 	An industry's R&D intensity is unlikely to accurately reflect a firm's technological skills	Parent's R&D intensity (e.g., Hennart, 1991; Agarwal, 1994; Cho and Padmanabhan, 1995)
Parent's marketing skills	Caves and Mehra (1986)	Advertising intensity of industry entered	An industry's advertising intensity is unlikely to accurately reflect a firm's marketing skills	Parent's advertising intensity (e.g., Hennart, 1991; Hennart and Park, 1993)
Parent's international experience	<ul style="list-style-type: none"> - Forsgren (1989) - Brouthers and Brouthers (2000) 	<ul style="list-style-type: none"> - Foreign to total sales - Parent's export ratio 	Firms with a high share of foreign sales or a high export ratio may still have limited international experience (cf. Johanson and Vahlne, 1977)	<ul style="list-style-type: none"> - Number of foreign subsidiaries (e.g., Gatignon and Anderson, 1988; Andersson and Svensson, 1994) - Number of years firm has been operating abroad (e.g., Erramilli, 1991; Cho and Padmanabhan, 1995) - Number of countries in which firm has subsidiaries (e.g., Barkema and Vermeulen, 1998; Vermeulen and Barkema, 2001) - Total count-years of international experience (Padmanabhan and Cho, 1999; Cho and Padmanabhan, 2005)
<ul style="list-style-type: none"> - Benefit to quick entry - Scope for new firms 	<ul style="list-style-type: none"> - Andersson and Svensson (1994) - Barkema and Vermeulen (1998), Larimo (2003) 	<ul style="list-style-type: none"> - Host country's GDP growth - Host country's GNP growth 	Industries within a given country may exhibit radically-different growth rates	<ul style="list-style-type: none"> - Growth rate of industry entered (e.g., Brouthers and Brouthers, 2000; Chang and Rosenzweig, 2001) - Absolute value of industry growth's deviation from its sample mean divided by its standard deviation (e.g., Caves and Mehra, 1986; Hennart and Reddy, 1997)
<ul style="list-style-type: none"> - Difficulty to establish a greenfield - Disturbances that a greenfield causes in the market shares and revenues of incumbents 	<ul style="list-style-type: none"> - Zejan (1990) - Barkema and Vermeulen (1998) 	<ul style="list-style-type: none"> - Host country's GDP - Host country's GNP 	It is unclear why it would be more difficult to establish greenfields in large countries, and why greenfields would cause large disturbances in incumbents' market shares and revenues in such countries	<ul style="list-style-type: none"> - Growth rate of industry entered (e.g., Brouthers and Brouthers, 2000; Chang and Rosenzweig, 2001) - Absolute value of industry growth's deviation from its sample mean divided by its standard deviation (e.g., Caves and Mehra, 1986; Hennart and Reddy, 1997)

Figure 1
Conceptual model



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