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INSTITUTIONS, RESOURCES, AND ENTRY STRATEGIES

IN EMERGING ECONOMIES

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Institutions, Resources, and Entry Strategies in Emerging Economies

Abstract

We investigate the impact of market-supporting institutions on business strategies by

analyzing the entry strategies of foreign investors entering emerging economies. We apply

and advance the institution-based view of strategy by integrating it with resource-based

considerations. In particular, we show how resource-seeking strategies are pursued using

different entry modes in different institutional contexts. Alternative modes of entry—

greenfield, acquisition, and joint venture (JV)—allow firms to overcome different kinds of

market inefficiencies related to both characteristics of the resources and to the institutional

context. In a weaker institutional framework, JVs are used to access many resources, but in a

stronger institutional framework, JVs become less important while acquisitions can play a

more important role in accessing resources that are intangible and organizationally

embedded. Combining survey and archival data from four emerging economies, India,

Vietnam, South Africa, and Egypt, we provide empirical support for our hypotheses.

Running Head: Institutions, Resources, and Entry Strategies

Keywords: Institutional theory, emerging economies, strategic adaptation to context, modes

of entry, acquisitions, joint ventures.

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What determines foreign market entry strategies? To answer this question, most existing literature has focused on the characteristics of the entering firm, in particular its resources and capabilities (Barney, 1991; Anand and Delios, 2002) and its need to minimize transaction costs (Buckley and Casson, 1976; Anderson and Gatignon, 1986; Hill, Hwang, and Kim, 1990). While resources and capabilities are certainly important (Peng, 2001), recent work has suggested that strategies are moderated by the characteristics of the particular context in which firms operate (Hoskisson *et al.*, 2000; Meyer and Peng, 2005; Tsui, 2004; Meyer, 2006, 2007).

In particular, institutions—the 'rules of the game'— in the host economy also significantly shape firm strategies such as foreign market entry (Peng, 2003; Wright *et al.*, 2005). In a broad sense, macro-level institutions affect transaction costs (North, 1990). However, traditional transaction cost research (exemplified by Williamson, 1985) has focused on micro-analytical aspects such as opportunism and bounded rationality. As a result, questions of how macro-level institutions, such as country-level legal and regulatory frameworks, influence transaction costs have been relatively unexplored, remaining largely as 'background.'

However, a new generation of research suggests that institutions are much more than background conditions, and that 'institutions *directly* determine what arrows a firm has in its quiver as it struggles to formulate and implement strategy and to create competitive advantage' (Ingram and Silverman, 2002: 20, added italics). Nowhere is this point more clearly borne out than in emerging economies, where institutional frameworks differ greatly from those in developed economies (Khanna, Palepu, and Sindha, 2005; Meyer and Peng, 2005; Wright *et al.*, 2005; Gelbuda, Meyer, and Delios, 2008). Given these institutional differences, how do foreign firms adapt entry strategies when entering emerging economies?

Focusing on this key question, we argue (1) that institutional development (or underdevelopment) in different emerging economies directly affects entry strategies, and (2)

that investors' needs for local resources impact entry strategies in different ways in different institutional contexts. In essence, we advocate an *integrative* perspective calling not only for explicit considerations of institutional effects, but also for their integration with resource-based considerations. This article thus responds to the call issued by Meyer and Peng (2005), Peng (2001, 2003, 2009), Wright *et al.* (2005), and Yamakawa, Peng, and Deeds (2008) for more integration between institutional and resource-based views. We achieve this integration by focusing on a central concept in both lines of theorizing, namely, the effectiveness of markets in facilitating access to sought resources. We thus depart from much of the existing entry strategy literature, which either focuses on the institutional side (Brouthers and Brouthers, 2000; Meyer, 2001; Hitt *et al.*, 2004) or the resource-based side (Anand and Delios, 2002). Specifically, we examine how multinational enterprises (MNEs), when entering emerging economies, choose among three modes of entry involving foreign direct investment (FDI): (1) greenfield, (2) acquisition, and (3) joint venture (JV).

We test our hypotheses by integrating unique survey data with archival data from Egypt, India, South Africa, and Vietnam (Estrin and Meyer, 2004). These emerging economies are selected because they show substantial variation in formal and informal institutions. They also represent a cross-section of midsized emerging economies that substantially liberalized their economies since the 1990s.

Overall, this article makes three contributions. First, we enrich an institution-based view of business strategy (Oliver, 1997; Peng, 2003; Peng, Wang, and Jiang, 2008) by providing a more fine-grained conceptual analysis of the relationship between institutional frameworks and entry strategies. Our primary hypotheses suggest that institutional development reduces the need for a JV partner and thus facilitates acquisition and greenfield entry, while resource needs increase the preference for both acquisition and JV, but not greenfield entry. Second, we argue that institutions moderate resource-based considerations when crafting entry strategies. More specifically, where the institutional framework is weak,

JVs are used to access many resources. However, where institutions are stronger and ensure a higher degree of market effectiveness, JVs become less important while acquisitions become a more significant tool to access resources that are intangible. Finally, by amassing a primary survey database from four diverse but relatively underexplored countries and combining such data with archival data, we extend the geographic reach of empirical research on emerging economies. Earlier studies of entry in emerging economies have concentrated on Central and Eastern Europe (Meyer, 2001; Brouthers and Brouthers, 2003; Meyer and Peng, 2005) and China (Tse, Pan, and Au, 1997; Luo and Peng, 1999; Quer, Claver, and Rienda, 2007). Never before have foreign entrants in four diverse emerging economies been systematically studied via a common research design and survey instrument as we have done in this study.

ENTRY MODE CHOICES

The modes of establishing an FDI project can be classified into three types: (1) greenfield, (2) acquisition, and (3) JV (Kogut and Singh, 1988; Anand and Delios, 2002; Elango and Sambharya, 2004). JVs and acquisitions both provide access to resources held by local firms, with JVs partially integrating selected local resources from a local partner and acquisitions integrating the local firm *in toto*. A greenfield project does not directly access a local firm as a bundle of organizational resources, but allows the entrant to buy or contract for resource components available on local markets, such as real estate and labor.

Theoretically, each of these three modes is distinct and satisfies different objectives. However, most research has used frameworks that imply the choices would be sequential and bimodal: on the one hand JV versus acquisition/greenfield (Anderson and Gatignon, 1986; Hennart, 1988, Hill *et al.*, 1990; Tse *et al.*, 1997) and on the other hand acquisition versus greenfield (Hennart and Park, 1993; Barkema and Vermeulen, 1998; Anand and Delios, 2002). These models suggest that ownership and entry mode can be viewed as sequential decisions, with firms first deciding partial (JV) versus full ownership (acquisition/greenfield)

and then, if full ownership is preferred, choosing between acquisition and greenfield. In practice, the two stages in such a sequence are often blurred, as indicated by case studies (Estrin and Meyer, 2004) and large-sample studies that examine these three entry choices simultaneously (Kogut and Singh, 1988; Chang and Rosenzweig, 2001; Elango and Sambharya, 2004; Dikova and van Witteloostuijn, 2007). Moreover, the institutional issues affect the ownership and entry mode questions simultaneously. Consequently, we analyze the three entry choices as being interdependent and consider them *simultaneously*.

JVs and acquisitions are used to access resources previously embedded in another organization. Yet, why would investors not rather buy the specific resources they need using standard market transactions? Acquiring a firm exposes a firm to major challenges in managing the purchased business (Haspeslagh and Jemison 1991; Capron, Mitchel, and Swaminathan, 2001), and a JV creates substantial coordination challenges (Kogut, 1988; Buckley and Casson, 1998). Thus, if the local markets for the necessary resources are efficient, foreign entrants may buy the required resources (or their components) using market transactions and thus establish a greenfield operation based on these purchased resources (or their components). However, efficiency of local markets is not always the norm (Estrin, 2002). Markets for acquisitions (buying and selling companies) may be especially problematic in emerging economies (Peng and Heath, 1996). More generally, markets for acquiring local resources may be suboptimal because of the institutional environment governing the transaction (North, 1990; Peng, 2006). They may also be suboptimal because of the characteristics of the sought resources (Buckley and Casson, 1976; Williamson, 1985). We proceed to discuss these two phenomena and their interaction in the following sections.

INSTITUTIONS AND ENTRY STRATEGIES

Institutions have an essential role in a market economy to support the effective functioning of the market mechanism, such that firms and individuals can engage in market

transactions without incurring undue costs or risks (North, 1990; Peng, 2009). These institutions include, for example, the legal framework and its enforcement, property rights, information systems, and regulatory regimes. We consider institutional arrangements to be 'strong' if they support the voluntary exchange underpinning an effective market mechanism. Conversely, we refer to institutions as 'weak' if they fail to ensure effective markets or even undermine markets (as in the case of corrupt business practices). Where institutions are strong in developed economies, their role, though critical, may be almost invisible. In contrast, when markets malfunction, as in some emerging economies, the absence of market-supporting institutions is 'conspicuous' (MacMillan, 2007).

Institutional differences are particularly significant for MNEs operating in multiple institutional contexts (Globerman and Shapiro, 1999). Formal rules establish the permissible range of entry choices (e.g., with respect to equity ownership) but informal rules may also affect entry decisions. Thus, legal restrictions may limit the equity stake that foreign investors are allowed to hold (Delios and Beamish, 1999) and informal norms, such as norms concerning whether bribery is acceptable, may favor locally owned firms over MNEs (Peng, 2003). In other words, because the transactions costs of engaging in these markets are relatively higher, MNEs have to devise strategies to overcome these constraints (Peng, 2009).

Institutions also provide information about business partners and their likely behavior, which reduces information asymmetries—a core source of market failure (Arrow, 1971; Casson, 1997). In many emerging economies, weak institutional arrangements may magnify information asymmetries so firms face higher partner-related risks (Meyer, 2001) and need to spend more resources searching for information (Tong, Reuer, and Peng, 2008).

The strengthening of the institutional framework thus lowers costs of doing business (Estrin, 2002; Bengoa and Sanchez-Robles, 2003; Bevan, Estrin, and Meyer, 2004) and influences foreign entrants' mode decisions by moderating the costs of alternative organizational forms (Williamson, 1985). In consequence, the relative costs associated with different entry

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modes are affected by the institutional framework (Henisz, 2000; Meyer, 2001).

In particular, JVs provide a means to access resources held by local firms, including resources such as networks that may help to counteract idiosyncrasies of a weak institutional context (Delios and Beamish, 1999). However, the need for a partner may decline with the strengthening of the institutional framework (Meyer, 2001; Peng, 2003; Steensma *et al.*, 2005). For example, as the regulatory environment in an emerging economy improves, more sectors will be opened to FDI and foreign entrants will face fewer formalities, permits, and licenses. Hence, a reduction of restrictions on FDI may reduce the need for a local JV partner as an interface with local authorities (Gomes-Casseres, 1990; Delios and Beamish, 1999; Peng, 2006). Similarly, improved regulatory frameworks may reduce the need to rely on relationships of a local JV partner when dealing with local businesses (Oxley, 1998; Meyer, 2001).

Entry by acquisition is an entry mode that is particularly sensitive to the efficiency of markets, especially financial markets and the market for corporate control (Peng, 2009). Transactions in financial markets are greatly facilitated by an institutional framework that ensures transparency, predictability, and contract enforcement (Peng and Heath, 1996; Beim and Calomiris, 2003). However, institutional arrangements and the efficiency of financial markets vary considerably. In developed countries, firms can be taken over via a friendly or hostile bid after the acquisition of a substantial proportion of the equity. The restructuring of the acquired firm then allows the separation of wanted and unwanted business units (Capron *et al.*, 2001), which may also favor foreign entry by acquisition.

However, the weakness of institutions in emerging economies can lead to smaller, more volatile, and less liquid stock markets, which reduces the potential for acquisitions (Lin *et al.*, 2008). In such an environment, firms are typically controlled by a dominant stakeholder (individual or family), a business group, or the state (Khanna and Palepu, 2000; Kock and Gullen, 2000; Kedia, Mukherjee, and Lahiri, 2006; Young *et al.*, 2008). In addition, weak institutions lead to a lack of transparent financial data and other information

on firms and a shortage of specialized financial intermediaries (Khanna *et al.*, 2005). Many of the resources and organizational structures of local firms are built around nonmarket forms of transactions, and are therefore harder for potential acquirers to evaluate (Tong *et al.*, 2008). This raises the complexity and transaction costs of undertaking the due diligence and contract negotiations necessary for acquisitions and post-acquisition restructuring (Peng, 2006). Thus, costs and risks increase when institutional frameworks are weaker.

Combining these arguments, we posit that foreign entrants may need access to local resources in emerging economies to overcome inefficiencies caused by weak institutions. Yet, at the same time, weak institutional frameworks make it more difficult to access these resources via market transactions (which inhibit greenfield entry) and raise the costs of acquiring local firms (which make acquisitions challenging). In contrast, JVs provide a means to access local resources where arm's-length market transactions are difficult. Therefore: H1: The stronger the market-supporting institutions in an emerging economy, the less likely foreign entrants are to enter by joint venture (as opposed to greenfield or acquisition).

RESOURCES AND ENTRY STRATEGIES

Entry by acquisitions or JVs takes the form of pooling resources between a foreign entrant and a local firm. In contrast, greenfield projects do not provide access to resources embedded in local firms. The choice of entry mode thus depends on whether and to what degree foreign entrants require such resources. In emerging economies, investing firms usually require context-specific resources to achieve competitive advantages (Delios and Beamish, 1999; Meyer and Peng, 2005). In contrast, the strategic management literature on entry strategies has primarily focused on the characteristics of resources to be transferred (Kogut and Zander 1993) and the characteristics of the investing firm (Anderson and Gatignon, 1986; Hennart and Park, 1993). This suggests a need to complement this literature by considering the characteristics of

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these sought resources.

Context-specific resources come in at least two forms. First, where legal institutions such as contract law and enforcement of property rights are weak, firms may also need to rely more on network- and relationship-based strategies, thereby developing the ability to enforce contracts, which are often informal, using norms as opposed to litigation. Therefore, networks and relationships with other firms, with agents in the distribution channels, and with government authorities are all important assets in emerging economies (Peng and Heath, 1996).

Second, context-specific capabilities, such as strategic and organizational flexibility, may enhance competitiveness in the volatile environments of emerging economies (Lane, Salk, and Lyles, 2001; Uhlenbruck, Meyer, and Hitt, 2003). Other important capabilities may relate to managing large local labor forces, managing interfaces with government authorities, and developing capabilities that enable firms to build and maintain networks and relationships (Kock and Guillén, 2000; Henisz, 2003; Van de Ven, 2004). Foreign entrants that consider local resources to be important for their competitiveness may prefer to establish their operation with a local partner as a JV or through acquisition as opposed to greenfield. Thus:

H2a: The stronger the need to rely on local resources to enhance competitiveness, the less likely foreign entrants are to enter an emerging economy by greenfield (as opposed to acquisition or joint venture).

However, the likelihood of facing malfunctioning markets varies with the characteristics of the resources sought. A key distinction in the literature is between *tangible* assets (such as real estate) and *intangible* assets (such as brands). The transaction cost literature has analyzed entry strategies with respect to the assets, especially knowledge-based assets, that an investor would transfer to the new subsidiary (Anderson and Gatignon, 1986; Hennart and Park 1993). A contract would be preferred if the resource contributions of at least one partner can be sold in a reasonably efficient market (Buckley and Casson, 1998). Three arguments have been put forward to suggest that certain types of resources are less

suitable to market exchange. While this literature has typically focused on resources to be transferred, we extend this line of thought by suggesting that the logic of the argument equally applies to resources *sought*.

First, *information asymmetries* are a classic source of market failure. The market for information is prone to failure because buyers cannot assess the quality of the information prior to the exchange. However, once the information is known to both parties, buyers no longer have the incentive to reveal their true valuation of the information (Arrow, 1971; Akerlof, 1970). The prevalence of information asymmetries between buyers and sellers thus has long been a core motivation for the internalisation of transactions within firms (Buckley and Casson, 1976; Casson, 1997) and for the choice of a JV (Buckley and Casson, 1998; Brouthers and Hennart, 2007) or an acquisition (Hennart and Park, 1993) as a mode of entry.

Second, *asset specificity* is at the core of Williamson's (1985) transaction cost based explanation of organization forms, which has been applied to entry modes extensively following Anderson and Gatgnon (1986). Essentially, the more that business partners invest in resources specific to a transaction, the more they create interdependencies that expose them to potential opportunistic behaviour (Brouthers and Hennart, 2007; Brouthers *et al.*, 2003). This threat may inhibit transactions or encourage firms to internalise operations. Asset specificity arises in FDI in particular from partner-specific learning processes.

Third, *tacitness of knowledge* inhibits its transfer unless instructor and receiver interact directly in a form of learning by doing, but this can make the transfer of knowledge very costly (Teece, 1977). Such learning by interpersonal interaction is difficult to organize via markets, and may be encouraged more effectively within organizations (Kogut and Zander, 1993). In consequence, interactions that involve the exchange of tacit knowledge may be internalised, again favoring acquisition or JV over greenfield entry.

All three lines of argument are more relevant for intangible assets than for tangible assets (Bruton, Dess, and Janney, 2007). Asset specificity can in principle occur when

resources are either intangible or tangible while information asymmetries and costs of tacit knowledge are challenges that arise from knowledge-components of resources, which are likely to be higher for intangible assets. Entrants may thus prefer to acquire another firm with the pertinent resources, but where such acquisitions are not feasible—for instance in contexts with weak institutions—they are more likely to opt for JV. Hence:

H2b: The effect of H2a is stronger when requiring intangible assets compared to tangible assets.

Note that our hypotheses suggest that institutions discriminate primarily between JV and acquisition/greenfield, while resource needs primarily discriminate between greenfield and JV/acquisition. We thus go beyond much of the literature that, even when empirically testing three modes (Kogut and Singh, 1988; Chang and Rosenzweig, 2001; Elango and Sambharya, 2004), has not provided theoretical arguments for effects separating all three modes. However, how do the institutional and resource effects *interact* with each other?

INSTITUTIONS + RESOURCES

To understand how the two dimensions of institutions and resources interact, consider two extreme cases (Figure 1). If institutions are very weak and thus fail to ensure even modest efficiency of markets, foreign entrants would not be able to rely on markets to access local resources (cells 1-3). Under such conditions, acquisition may be prohibitively costly because of financial markets inefficiency. Moreover, in this situation it is likely that the resources of the acquired firm could not be properly valued and their integration would be challenging. Hence, foreign entrants in need of local resources would prefer creation of a new entity in partnership with a local firm, with both partners contribution selected resources and sharing control. This would apply to both tangible and intangible resources (cells 2 and 3).

* * * Figure 1 about here * * *

In the opposite extreme case, where strong institutions make markets highly *efficient*, foreign entrants would probably be able to use contracts to arrange most transactions (cells 4-6). Thus, greenfield entry becomes highly feasible. In this situation, acquiring resources in the form of tangible assets would not posit substantial challenges (cell 5). However, the three sources of market failure outlined above would still affect transactions in intangible resources. For example, transactions in goods or services with a high content of knowledge would be potentially subject to information asymmetries (Arrow, 1971; Buckley and Casson, 1998), asset specificity (Williamson, 1985), or costly transfer of tacit knowledge (Teece, 1977; Kogut and Zander, 1993). However, under strong institutions, the market for corporate control is relatively efficient and enables firms to engage in acquisition (cell 6).

Hence, we expect that under strong institutions, acquisitions would be more likely to be used when foreign entrants seek intangible resources held by local firms (cell 6), while greenfield operations are appropriate when relatively fewer local resources are required (cell 4), or when resources are tangible and can be acquired or accessed using market transactions (cell 5). Specifically:

H3a: Under conditions of strong institutions, the greater the need of foreign entrants for intangible resources, the more likely they are to use acquisition or joint venture rather than greenfield.

H3b: Under conditions of strong institutions, the need for local <u>tangible</u> resources will <u>not</u> influence the choice of entry mode.

Overall, in the empirical analysis, we expect a significant moderating effect of intangible resource needs on the institutional effect that is opposite to the direct effect, while the corresponding moderating effect of tangible resources may not be significant.

METHODOLOGY

Four Emerging Economies

To test our hypotheses we require a cross-country sample that shows variation on the focal independent variable, yet, limited variation on other dimensions. We have thus selected four emerging economies with considerable variation in their institutional environment: Egypt, India, South Africa, and Vietnam (Table 1). However, they all show similarities with respect to other features that may influence FDI. For example, each is an important economy in its region, and each has pursued significant economic reforms since the 1990s. As a result of reforms, each experienced a surge of inward FDI during the 1990s. Annual FDI inflows peaked at \$3 billion in Egypt (1999), \$3.4 billion in India (2001), \$6.7 billion in South Africa (2001), and \$2.6 billion in Vietnam (1997) (United Nations, 2005). FDI inflows have remained relatively strong since then.

* * * Table 1 about here * * *

Variations in the local institutional environments include, for example, a fairly developed financial infrastructure in South Africa. Moreover, the institutional environment has been evolving differently in the four countries—improving particularly markedly in Vietnam (Meyer and Nguyen, 2005). The cross-country diversity implies that data pooled from these four economies provide significant variations in terms of institutions that may affect MNE entry strategies.

Methods of Empirical Analysis

The collection of the data for this article has been an ambitious, multicountry endeavor with project team members based in Western Europe as well as in each of the four emerging economies. Joint meetings were held in these four countries to prepare the study and to discuss key findings with the local business community. We collected our data in the four countries by combining questionnaire data with archival data. Our survey instrument provides data about the local subsidiaries, the parent MNEs, and managers' perceptions of the local environment. In addition, we conducted twelve highly informative field-based case studies, three in each country, that helped us design this study (Estrin and Meyer, 2004).

Questionnaire. Our survey targeted CEOs of local MNE subsidiaries—both local executives and expatriates—as they are the most appropriate informants on the crucial aspects of the local context and the local operations. The questionnaire was developed by the authors in cooperation with the field research team leaders in each of the four countries, including a pilot on about 35 firms during 2001. The questionnaire was revised based on the feedback provided in the pilot stage and the insights generated by the case studies.

Base population. The base population for our survey was defined as all FDI projects newly registered in the four countries between 1990 and 2000 that had a minimum employment of 10 persons and minimum of 10% equity stake by the foreign investor. For the current analysis, we only use the subset of post-1994 entries to reduce biases that may affect survey data referring to events too distant in the past. The stipulations concerning size and equity stake of the foreign investor ensured that sampled firms were substantive and operational businesses. The base population was constructed from locally available databases. In India and Vietnam, comprehensive databases were obtained from FDI regulatory authorities. In Egypt and South Africa, the base population had to be constructed from scratch using commercial databases supplemented with research by the country research teams.

Data collection. The questionnaire was administered between 2001 and 2002. MNE subsidiaries were selected using stratified random sampling. The stratification was used to ensure that the inter-industry distribution of firms in the sample closely resembled that of the population at the 2-digit level. Once a firm was selected, teams that were specially trained for the administration of the questionnaire interviewed a top-level manager, usually the CEO. A total of 613 responses were received—response rates were 10% in Egypt, 11% in India, 23% in Vietnam, and 31% in South Africa. If less than 150 firms responded in any country, the

English is established as the major language of business and we abstained from translation.

¹ In Vietnam, respondents received the questionnaire with both English and Vietnamese versions—in the case of Chinese/Taiwanese parent firms, they also received a Chinese version. The translations to Vietnamese and Chinese were done with the established back-translation procedures. While the Chinese version turned out to be an important instrument to establish contact and trust with the firms, almost all preferred to complete the Vietnamese or English versions. In the other three countries,

sample size was made up by replacement using randomly selected firms in each 2-digit industry. However, we dropped observations referring to entries before 1994 or with missing values, so our regression model uses 336 responses.

We investigated whether the pattern of missing values might lead to bias in the estimation. We analysed the characteristics of enterprises by missing values in terms of country, sector, size and entry mode, testing whether the observations had to be dropped because missing values were systematically different from those retained in the sample. Similar tests were conducted to compare the questionnaire returns with the base population. Overall, we found little evidence of significant sample selection bias.²

Main Variables and Models

Our dependent variable is a categorical one, taking the value of 1 for greenfield, 2 for acquisition, and 3 for JV. The classification is based on the self-classification by respondents in the questionnaires, and has been triangulated by other questions in the survey.

We use a multinomial logit (M-Logit) regression model that estimates the effect of the independent variables on the probability (differential odds) that one of the alternatives is chosen. Independent variables combine respondents' assessment on Likert-type scales and objective measures like data on the parent firm as well as archival data (notably, on institutions) to avert common method bias. The explanatory variables are as follows—the survey instrument is available upon request.

Institutions. Based on archival data, we proxy the strength of market-supporting institutions by five items of the *economic freedom* index developed by the Heritage Foundation (Kane *et al.*, 2007). This index provides information about a broad notion of institutions, focusing on the freedom of individuals and firms in a country to pursue their business activities. It contains data about 50 independent variables divided into 10 categories.

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² We employed the two step Heckman procedure. In the first stage a probit model was estimated with the dummy dependent variable taking the value 1 if an observation is included in the sample and zero otherwise. This regression had a poor fit and the coefficients of the Inverse Mills Ratio in the second stage regressions were not significant.

This index has been used extensively, usually in its aggregate form, and has been found to be related positively to FDI inflows (Bengoa and Sanchez-Robles, 2003), economic growth (Easton, 1997; Berggren and Jordahl, 2005), and social welfare (Stroup, 2007).

Our theoretical considerations suggest that our concept of institutions focuses on institutions that support market efficiency. Therefore, we have selected five categories that most closely reflect the efficiency of markets: (1) business freedom, (2) trade freedom, (3) property rights, (4) investment freedom, and (5) financial freedom.³ This index incorporates the World Bank's (2006) *Doing Business* indices that are used in similar research. We used the economic freedom data published in 2007, which report each category on a scale of zero to 100, but include data since the original creation of the index.⁴ This proxy has an essential advantage over other measures used in the literature as it is available as time series, which allow us to assign each observation the value pertaining to the year of entry.⁵

Resource needs. We constructed two indices to measure the need of investors for tangible assets and intangible assets. The survey instrument asked the MNE subsidiaries to respond to two related questions out of a list of 17 items (see appendix), which was generated from our case research and refined in the pilot study. The first asked them to identify the three types of resources that were most important to the success of their business ventures. The second question asked the respondents to provide information about the extent to which these resources were contributed by the parent MNE, the local subsidiary (if any), overseas markets, and the local market (in percentage terms). We classified each resource as tangible or intangible, and defined the share of resources sourced from the host country as the sum of the shares sourced

³ The items not included are fiscal freedom (a measure of taxation rates), freedom from government (share of government in GDP), monetary freedom (inflation and price controls), freedom from corruption and labour freedom. These do not directly support the efficiency of markets and therefore not a suitable measure of our theoretical construct.

⁴ However, these data are incomplete for the early 1990s, such that we truncated the data to include only entrants from 1994 onwards. Moreover, we interpolated the economic freedom index for some missing years as it used to be published only every second year.

⁵ Other studies use for instance the World Competitiveness indices (Gaur and Lu, 2007; Yiu and Makino, 2002), which however are not available for longer periods using a consistent definition.

from the local partner and the host country market. Given this information, we defined the tangible index and intangible index, which reflect the relative contribution of local resources to the overall package of resources that the firm considers essential for its competitiveness, giving more weight to the resources ranked as more important.

Specifically, let the percentage of a resource i sourced from the host country be x_i . Each resource is assigned a weight corresponding with its ranking by the respondent, which may be 1, 2, 3, or 0 (not ranked). Let w_i be the weight associated with each x_i , so that $w_1 = 3$, $w_2 = 2$, $w_3 = 1$, and $w_0 = 0$. For both types of resources, the index was calculated using the formula

$$\sum_i w_i x_i / \sum_i w_i$$
.

Control Variables

We need to control for variation in the data arising from three sources: the MNE, the country of origin, and the host economy. In addition, we include a time trend.

MNE parent. Prior research has shown that resources contributed by the *foreign* partner are a major cause of internalization. Thus, foreign investors transferring assets that are potentially subject to market failure would be more likely to establish greenfield or acquisition rather than JV, which is well established in the literature (Gatignon and Anderson, 1988; Kogut and Zander, 1993; Brouthers and Hennart, 2007). Thus, we control for R&D-based capabilities (Kogut and Singh, 1988; Hennart and Park, 1993; Brouthers and Brouthers, 2000), which we proxy by *R&D intensity*, measured by R&D expenditures as a percentage of sales on a scale from 1 (0-0.5%) to 7 (over 15%). Moreover, firms focusing on specific product lines, where they possess unique knowledge of processes and practices, may prefer greenfield entry, while diversified firms may prefer acquisition or JV (Hennart and Larimo, 1998; Brouthers and Brouthers, 2000). Thus, we include a dummy variable that takes the value of 1 if the parent is a *conglomerate* MNE, and 0 if it is focused or related diversified.

MNEs establishing subsidiaries that are large relative to their existing operations may not possess all the required resources, and thus may opt for a JV or acquisition to access

complementary resources (Hennart and Park, 1993; Brouthers and Brouthers, 2000). Therefore, we control for this effect using *relative size*, which is based on a 6-point scale reported in the questionnaire, where 1 stands for 0 to 0.1% and 6 stands for over 20% of the MNE's global turnover. Moreover, the experience of foreign entrants influences international strategies (Barkema and Vermeulen, 1998; Luo and Peng, 1999), for which we control with two dummy variables. They capture respectively prior commercial experience in the same host country (*experience country*) or other emerging economies (*experience EM*).

Local context. We control for other aspects of the local context that in addition to institutions affect entry strategies in multiple ways. First, we include *GDP of the host* economy as a measure of market size. Second, we control for unobserved characteristics of the local industries, using five *industry dummies*. Third, we control for other time varying effects, such as a general improvement of the business climate, by including a *time trend* from 1 for 1994 to 7 for 2000. This allows us to separate the institutional effects from other environmental changes.

Two measures control for characteristics of potential local target firms that may influence the available options for entry (Hitt *et al.*, 2004). *Local firm quality* is a 3-item measure of respondents perceptions about the quality of the resources of local competitors at the time of entry, each based on a 5-point Likert scale (Crombach's alpha 0.79). *Local firm quantity* is based on a five-point scale, where responds reported how many competitors there were in the market before the subsidiary started operations, ranging from 1 (none) to 5 (more than 10).

Country of origin. The national origin of investors may impact the choice of entry mode (e.g. Hennart and Larimo, 1998). Therefore, we include *GDP per capita* of the investor's home country and we control for cultural differences between home countries, using a cluster approach suggested by Ronen and Shenkar (1985). Thus, eight dummies are introduced based on nine clusters of countries of origin.⁶

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⁶ Because none of the firms in the sample originated in Latin America, we used only seven of Ronen and Shenkar's (1985) eight clusters. In addition, we combined Japan (an independent) with Korea (not

Of the sampled FDI operations, 41.1% were established by greenfield, 11.7% by acquisition, and 47.1 % by JV. Table 2 shows that no substantive correlations affect the other independent variables.

*** Table 2 about here ***

RESULTS

The results of the multinomial regression model are shown in Table 3. We report the *marginal effects* of the probability that any of the three alternatives being chosen over the other two. Two equations are presented: Model 1 incorporates the direct effects of both institutions and resource and Model 2 introduces the moderating effects. In other words, Model 1 is nested in Model 2. We gain confidence in our regression specification from the fact that the model statistics reported in the table are satisfactory. Model 2 provides a better fit with substantially higher Wald and R² statistics, indicating that the moderating effects are significant. In fact, on the basis of F tests we cannot accept the restriction that the moderating influences are insignificant, which implies that Model 2 is statistically the preferred specification. This indicates that the model with interaction effects should be used primarily to assess the hypotheses. The models also predict well—Model 2 generates 61.7% correct predictions, compared to a baseline random prediction of 40.6% (an increase of 52.1%).

* * * Table 3 about here * * *

We also report results with and without a time trend in Tables 3 and 4, respectively. The time trend is not significantly related to any of the core variables (Table 2), suggesting the institutional variation in the dataset arises primarily due to cross-country variation rather than common trends across countries and time. One might, however, speculate that time trend and institutions are related. Thus, a conservative interpretation of the results would suggest

covered), and we added a cluster for other countries not covered by Ronen and Shenkar (1985), all of which are emerging economies.

K. E. Meyer, S. Estrin, S. Bhaumik, and M. W. Peng (2008) Institutions, resources, and entry strategies in emerging economies (*SMJ*, forthcoming)

using whichever model that shows the *weaker* support for hypotheses.

*** Table 4 about here ***

The results are largely consistent with our hypotheses. In Hypothesis 1, we proposed that stronger institutions would discourage JVs and facilitate greenfield and acquisition entry. Using Model 2, strong support emerges for the hypothesis on all three coefficients: significantly positive on greenfield and acquisition, and significantly negative on JV. The time trend slightly weakens the size of the coefficients on institutions (compare Table 3 and 4), suggesting that the time trend may be capturing a part of the strengthening of institutions experienced in these countries. In Models 1 (Table 3) and 3 (Table 4), with only direct effects, the hypothesis is also supported with respect to acquisitions, while the coefficients on greenfield and JV are correctly signed. We note that the institutional effect on acquisitions is the only effect that has a 1%-level effect on acquisitions in Model 2, suggesting that institutions are particularly important to facilitate acquisition entry.

The results are more mixed with respect to Hypotheses 2. Commencing with Hypothesis 2a, the results are different using the models with and without interaction effects. Without interaction effects, the regression results appear to provide strong support for Hypothesis 2a (Model 1 in Table 3 and Model 3 in Table 4), with negative effects on greenfield and positive effects on JV and acquisition. In the preferred model with interaction effects, however, the size of the coefficients are similar but the standard deviations are higher so the estimates are not significant (Models 2 and 4). With respect to Hypothesis 2b, we find that the differences in the size coefficients are as expected, but very small. Thus, our findings are consistent with the proposed signs of the hypothesis but are not significant.

With respect to Hypothesis 3a, we find that, as predicted, the moderating effect is positive on greenfield and negative on JV (Model 2 in Table 3 and Model 4 in Table 4), and thus opposite to the direct effect of institutions. Hence, firms seeking intangible resources would use JV even when the institutional framework becomes stronger. Moreover, the

moderating effect on tangible resources is not significant, as predicted in Hypothesis 3b. Hence, firms seeking local tangible resources, like those not seeking any local resources, become less likely to enter by JV when institutions become stronger.

We conclude that, as predicted, institutional and resource effects crucially interact. Strengthening the institutional environment directly encourages acquisition and greenfield entry at the expense of JV entry. However, even when institutions are better developed, if foreign entrants need intangible local resources, they may still use JVs as an entry mode because they are exposed to product-related inefficiencies in markets.

The pattern of control variables also largely corresponds to our expectations.

Conglomerate MNEs entering an emerging economy are more likely to choose JV entry, consistent with earlier studies (Hennart and Larimo, 1988; Brouther and Brouthers, 2000). Of particular interest may be the country-of-origin effects, which account for a large share of explanatory power of the model, according to Wald tests. Germanic, Japanese/Korean, and Arab MNEs are more likely to opt for JVs and against greenfield than US and UK MNEs. In addition, investors originating from high income countries are more likely to choose JV as entry mode. Entrants from Near East (Greece, Turkey, and Israel in Ronan and Shenkar's [1985] definition) and from other emerging economies are less likely to enter by acquisition. These patterns are interesting because we did not find significant effects when we used the more popular index of cultural distance developed by Kogut and Singh (1988) (regressions not reported). Thus, the Ronan and Shenkar (1985) clusters may be more suitable than the Kogut and Singh index to control for country of origin variations in entry mode equations.

DISCUSSION

Contributions

In response to recent calls for more integration between institution-based and resource-based perspectives in emerging economies (Peng, 2001; Meyer and Peng, 2005;

Wright *et al.*, 2005; Yamakawa *et al.*, 2008), this article makes three theoretical, empirical, and methodological contributions. Theoretically, we argue that (1) the level of development of an emerging economy's market-supporting institutions directly influences MNEs' entry strategies by facilitating entry by greenfield and acquisition, and that (2) institution-based considerations *complement* resource-based considerations when crafting entry strategies. Therefore, we enrich an institution-based view of business strategy (Oliver, 1997; Peng, 2003, 2009; Gelbuda *et al.*, 2008; Peng *et al.*, 2008) by providing a fine-grained analysis of the relationship between institutional frameworks and entry strategies.

Empirically, through a rigorous, four-country survey design combined with archival data, we find that the stronger the institutional framework, the more likely investors would choose acquisitions and greenfield. The literature has so far investigated the role of institutions at aggregate levels (Meyer, 2001; Wan and Hoskisson, 2003; Dikova and van Witteloostuijn, 2007) or focusing on indirect effects such as uncertainty due to instable institutions (Delios and Henisz, 2000; Brouthers and Brouthers, 2003). We have argued that it is their effect on the effectiveness of markets—or their reduction of institutional voids (Khanna and Palepu, 2000; Kedia *et al.*, 2006)—that provides the incentives to internalize resource acquisitions and this influences entry choices.

Moreover, we tease out how institution-based and resource-based variables complement and interact to predict entry strategies. We have argued that these two decisions are interdependent because both resource and institutional variables affect the suitability of markets as channel to access local resources (Figure 1). Hence, studies on entry modes focusing on product and firm characteristics (Hennart and Park, 1993; Luo, 2002) may generate results that cannot be generalised beyond the specific host context in which the study has been conducted (Meyer, 2006, 2007).

Of particular interest may be our findings with respect to acquisitions. The positive effect of institutional development on acquisition entry is significant even *without* controlling

for interaction effect, and moreover it stands out as the only highly significant effect explaining acquisition entry. Thus, more efficient markets facilitate acquisition entry. In part this may be due to the development of financial markets. However, other markets (such as product, labor, and technology markets) may be also important for effective acquisitions because they provide critical information that in turn is essential to value the acquisition target (Lee, Peng, and Lee, 2008). Moreover, where institutions are weak, firms may rely to a large extent on network- and relationship-based interaction (Peng and Heath, 1996), yet such network and relationship resources are hard to value as well. Furthermore, acquisitions are strongly negatively associated with certain countries of origin, namely the Near East and emerging economies. This may be because MNEs from these countries have fewer financial resources to draw upon, or they lack experience in this mode due to the relatively inactive market for corporate control in their own home countries (Tsang and Yip, 2007).

Finally, we also make two small methodological contributions. First, we introduce time varying proxies of institutions—economic freedom. In the spirit of Peng (2003), this approach allows empirical studies to analyze the impact of institutions (or other country-level variables) to exploit variation over time, where cross-country variation closely correlates with other country-level variables. Second, we find that the Ronen and Shenkar (1985) cultural clusters provide a more powerful means to control for country-of-origin effects than the popular Kogut and Singh (1998) index. Therefore, studies controlling for country effects may need to consider the Ronen and Shenkar clusters, especially when dealing with emerging economies. Moreover, more research is warranted to explore the nature and causes of the country-of-origin variation that emerges so powerfully in our results (Tsang and Yip, 2007).

Limitations and Future Research Directions

First, a pertinent question for empirical studies is always whether the empirical relationships identified in the study could be explained by different mechanisms than those proposed by the authors. In our case, we may be concerned about possible correlations of our

institutional variable based on the *economic freedom* index with other country-specific effects. To minimize this possibility, we use a time-varying measure and control for a time trend, GDP, and source country characteristics, the most likely additional influences. Future researchers may wish to work with larger sets of countries, so as to increase the cross-country variance in the set of institutional independent variables.

A second concern is the quality of proxies. We collected local data to get as close as possible to the context (the focus of our research), and thus distinguish ourselves from earlier study designs driven by MNE headquarters perspectives. At the same time, we are able to represent a wide cross-section of host and home countries. This compares very favourably with numerous studies using single-country data. Moreover, we combine two different types of data—namely, archival and survey data—to avert common method biases. However, this approach implies that our controls for the parent firms may not be as good as in earlier research. Future research may aim to improve this by collecting data at two sites in each firm—both headquarters and local subsidiary.

Third, we only investigate equity-based foreign entry modes (Tse et al., 1997) and do not differentiate levels of subsidiary ownership (Dhanaraj and Beamish, 2004). An advanced modelling approach may try to integrate non-equity modes (Wang and Nicholas, 2007; Welsh, Benito, and Petersen, 2007) in the analysis to test for possible interdependencies of this decision with the choice between JV, acquisition and greenfield, and/or to differentiate equity modes by their level of ownership.

Finally, our study leaves a number of questions awaiting future research. Addressing these questions will not only make more progress on research focusing on emerging economies, but will also propel the global research agenda. These questions are:

- What are the specific aspects of institutions that explain variations of business strategies
 both over time and between countries?
- What exactly are the resources that foreign entrants acquire from local partners, and in

what ways are transactions in these resources inhibited by the specific market failures of emerging economies to such an extent that they would become internalized?

How does the supply side of local resources, embedded in local firms or otherwise,
 constrain entry strategies? In particular, what aspects of local firms and industry would
 significantly inhibit acquisition strategies?

CONCLUSION

What determines market entry strategies into emerging economies? Our answer is (1) that institutions directly influence such entry strategies, and (2) that this effect is moderated by the entrant's need for different types of local resources. Our theoretical framework shows that this interaction arises from the simultaneous impacts of resource and institutional characteristics on the efficiency of markets for a given transaction, in particular foreign entrants' interest in local resources—both tangible and intangible. In conclusion, if this article could only contain one message, we would like it to be a sense of not only the strong explanatory and predictive power of institutions, but also the significant increase of our understanding when the institution-based view is *integrated* with the resource-based view.

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Figure 1. Resources, Institutions, and Market Failure (NOTE to typesetter: Please let this figure occupy TWO columns of one page—it will lose its visual impact if you let it only occupy the space of one column. Thx!)

Institutional Framework strong weak Extent of market failure (H1) CELL 1 CELL 4 Greenfield Greenfield Local none H3bresources CELL 2 CELL 5 required JV^1 Greenfield² tangible to market НЗа CELL 6 CELL 3 JV^1 Acquisition³ intangible

Table 1. Four Emerging Economies¹

Macro-context	Egypt	India	South Africa	Vietnam
GDP per capita	1490	460	3020	390
(US\$)				
GDP	102.21	461.35	132.88	31.17
(current US\$ billion)				
GDP growth	5.40	3.99	4.15	6.79
(annual %)				
Foreign direct investment, net inflows	1.24	3.58	0.97	1.30
(current US\$ billion)				
Institutions				
Business Freedom	30	30	70	10
Trade Freedom	50	40	56	46
Investment Freedom	50	30	70	30
Financial Freedom	30	30	50	30
Property Rights	50	50	50	10
Economic Freedom, 5-item index ²	42.0	35.9	59.2	25.2
Economic Freedom,10-item index	51.3	45.7	61.3	39.4

Sources: World Development Indicators, Heritage Foundation, authors' survey.

¹ In rare cases acquisition may be feasible (e.g. acquiring subsidiary of another MNE).

² Except when asset specificity is high, when acquisition or JV may be appropriate.

³ Except when market failure is bilateral and takeover is infeasible (e.g. due to scale issues), when JV may be appropriate.

¹ All data refer to the year 2000. Our survey was piloted in 2000 and administered in 2001-02.

² In our empirical analysis we use the 5-item index as the more appropriate measure of our theoretical construct; the Heritage Foundation publicizes the broader 10 item index.

K. E. Meyer, S. Estrin, S. Bhaumik, and M. W. Peng (2008) Institutions, resources, and entry strategies in emerging economies (*SMJ*, forthcoming)

Table 2. Descriptive Statistics and Correlations

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	13
1	Economic freedom	41.67	13.67												
2	Intangible assets	43.48	34.75	0.04											
3	Tangible assets	20.08	34.97	0.21	0.20										
4	Time trend	6.59	2.56	0.09	0.06	-0.01									
5	Local firm quality	2.84	1.03	0.12	0.08	0.07	0.04								
6	Local firm quantity	3.25	1.38	0.16	0.16	0.07	0.03	0.21							
7	Experience country #	0.45	0.50	0.15	0.02	0.03	0.09	-0.02	0.10						
8	Experience EM #	0.56	0.50	0.35	0.10	-0.03	-0.06	0.08	0.10	0.10					
9	Relative Size	3.17	1.80	-0.10	-0.08	0.07	0.00	-0.03	0.01	-0.09	-0.26				
10	R&D	3.11	2.09	0.16	-0.07	-0.07	-0.02	0.10	0.04	0.08	0.11	0.01			
11	Conglomerate #	0.16	0.36	-0.02	-0.01	0.06	-0.03	0.05	-0.03	0.05	-0.04	-0.14	-0.10		
12	GDP host (million)	142.7	125.2	0.07	0.06	-0.04	0.04	0.06	0.01	0.01	0.15	-0.11	0.07	-0.14	
13	GDP pc source	221691	104.56		0.07	0.01	0.11	-0.06	-0.03	0.11	0.16	-0.24	0.11	-0.08	0.25

Notes: N = 420; correlations of over 0.10* are significant at 5% level.

 Table 3. Multinomial Regression (Marginal Effects)

		Model 1			Model 2	
	Greenfield	Acquisition	JV	Greenfield	Acquisition	JV
Main Regressors						
Institutions (x10 ²)	0.33	0.13***	-0.45*	0.84**	0.12***	-0.95**
,	(0.25)	(0.04)	(0.25)	(041)	(0.04)	(0.41)
Intangible Assets	-0.25 ***	0.02 **	0.23 ***	0.30	0.00	-0.30
$(x10^2)$	(0.09)	(0.01)	(0.08)	(0.28)	(0.03)	(0.28)
Tangible Assets (x10 ²)	-0.24 ***	0.01	0.24 ***	-0.46	0.05	0.42
	(0.08)	(0.01)	(0.09)	(0.29)	(0.03)	(0.29)
Institutions x Intangible				-1.30**	0.00	1.28**
$(x10^4)$				(0.70)	(0.00)	(0.70)
Institutions x Tangible				0.48	0.01	-0.40
$(x10^4)$				(0.70)	(0.10)	(0.70)
Controls						, ,
Local firm quality	-1.71	0.11	1.59	2.10	0.06	2.04
$(x10^2)$	(2.93)	(0.24)	(2.93)	(2.96)	(0.18)	(2.96)
Local firm quantity	-0.39	0.22	0.17	-0.62	0.18	0.44
$(x10^2)$	(2.19)	(0.18)	(2.19)	(2.19)	(0.15)	(2.19)
Experience country #	-0.01	0.00	0.01	-0.01	0.00	0.01
1	(0.06)	(0.00)	(0.05)	(0.06)	(0.00)	(0.06)
Experience EM #	-0.07	0.01	0.06	-0.07	0.01	0.07
1	(0.06)	(0.01)	(0.06)	(0.06)	(0.00)	(0.06)
Relative Size	0.02	0.01	-0.02	0.02	-0.00	-0.02
	(0.02)	(0.13)	(0.02)	(0.02)	(0.00)	(0.02)
$R&D(x10^2)$	0.96	0.01	-0.96	1.13	-0.00	-1.13
Red (ATO)	(1.41)	(0.11)	(1.40)	(1.42)	(0.09)	(1.42)
Conglomerate #	-0.19***	0.00	0.18**	-0.19***	0.00	0.19**
congramerate ii	(0.07)	(0.01)	(0.07)	(0.07)	(0.01)	(0.07)
GDP host $(x10^2)$	-0.023	0.001	0.024	-0.026	0.001	0.024
()	(0.003)	(0.003)	(0.025)	(0.024)	(0.002)	(0.024)
GDP pc source $(x10^2)$	-0.015	0.003	0.011	-0.013	0.002	0.011
oblipe source (iiio)	(0.039)	(0.005)	(0.039)	(0.039)	(0.004)	(0.039)
Clust Near-eastern #	-0.15	-0.02 **	0.16	-0.15	-0.01**	0.16
Crast i (car casterii ii	(0.18)	(0.01)	(0.18)	(0.19)	(0.01)	(0.19)
Clust Nordic #	-0.11	-0.01	0.12	-0.13	-0.00	0.14
Clast I (orale II	(0.11)	(0.00)	(0.11)	(0.10)	(0.00)	(0.10)
Clust Germanic #	-0.21**	-0.00	0.20 **	-0.22**	-0.00	0.21**
Crust Cermanie "	(0.09)	(0.01)	(0.09)	(0.09)	(0.01)	(0.09)
Clust Latin-Europe #	-0.05	-0.00	0.05	-0.05	-0.00	0.05
erast Eath Earope "	(0.10)	(0.01)	(0.10)	(0.10)	(0.00)	(0.10)
Clust Far Eastern #	-0.03	-0.01	0.04	-0.02	-0.01	0.02
Crast Far Eastern "	(0.11)	(0.01)	(0.11)	(0.11)	(0.01)	(0.11)
Clust Japan/Korea #	-0.20**	0.01	0.19**	-0.20**	0.01	0.19**
Crast vapani Horea ii	(0.09)	(0.03)	(0.09)	(0.09)	(0.02)	(0.09)
Clust Arab #	-0.29 ***	-0.02	0.28 ***	-0.30***	-0.01	0.28***
Clust I Huo II	(0.09)	(0.04)	(0.10)	(0.09)	(0.02)	(0.10)
Clust Other EMs #	-0.29 **	-0.02 **	0.31 ***	-0.32***	-0.02**	0.33***
Clast Chici Elvis II	(0.11)	(0.01)	(0.11)	(0.10)	(0.01)	(0.10)
5 industry dummies	Yes**	Yes	Yes**	Yes**	Yes	Yes**
•	= 40		100	140		
Log likelihood		-326.0			-322.3	
Wald chi-square		6281.1***			7223.2***	
Pseudo R-square		20.2%			21.1%	
Observations		421			421	

Notes to Table 3 and 4: Levels of significance: *** = 1%, ** = 5%, * = 10%; standard errors in parentheses; $# = \frac{dy}{dx}$ is for discrete change of dummy variable from 0 to 1.

Table 4. Multinomial Regression (Marginal Effects): Controlling for Time Trend

		Model 3			Model 4	
	Greenfield	Acquisition	JV	Greenfield	Acquisition	JV
Main Regressors						
Institutions (x10 ²)	0.22	0.13***	-0.34	0.74*	0.12***	-0.86**
	(0.26)	(0.04)	(0.26)	(040)	(0.04)	(0.41)
Intangible Assets	-0.26***	0.02**	0.25***	0.29	0.00	-0.29
$(x10^2)$	(0.08)	(0.01)	(0.08)	(0.28)	(0.03)	(0.28)
Tangible Assets (x10 ²)	-0.22***	0.01	0.22**	-0.42	0.05	0.37
, ,	(0.09)	(0.01)	(0.09)	(0.29)	(0.03)	(0.28)
Institutions*Intangible				-1.32**	-0.00	1.29**
$(x10^4)$				(0.70)	(0.00)	(0.70)
Institutions*Tangible				0.43	0.01	-0.35
$(x10^4)$				(0.60)	(0.10)	(0.60)
Controls						
Time Trend	0.03**	-0.00	-0.03**	0.03**	-0.00	-0.03**
	(0.01)	(0.00)	(0.01)	(0.01)	(0.00)	(0.01)
Local firm quality	-2.11	0.13	1.98	2.51	0.07	2.45
$(x10^2)$	(2.93)	(0.24)	(2.93)	(2.97)	(0.17)	(2.97)
Local firm quantity	-0.22	0.22	0.01	-0.43	0.17	0.26
$(x10^2)$	(2.20)	(0.18)	(2.20)	(2.20)	(0.14)	(2.20)
Experience country #	-0.03	0.00	0.02	-0.02	0.00	0.02
	(0.06)	(0.00)	(0.06)	(0.06)	(0.00)	(0.06)
Experience EM #	-0.06	0.01	0.05	-0.06	0.01	0.06
	(0.06)	(0.01)	(0.06)	(0.06)	(0.00)	(0.06)
Relative Size	0.02	0.01	-0.02	0.02	-0.00	-0.02
result to bize	(0.02)	(0.14)	(0.02)	(0.02)	(0.00)	(0.02)
$R&D(x10^2)$	1.13	0.00	-1.14	1.28	-0.00	-1.28
KCD (XIO)	(1.43)	(0.12)	(1.42)	(1.44)	(0.09)	(1.42)
Conglomerate #	-0.18**	0.00	0.18**	-0.18***	0.00	0.18**
Congramerate #	(0.07)	(0.01)	(0.07)	(0.07)	(0.01)	(0.07)
GDP host $(x10^2)$	-0.029	0.001	0.028	-0.029	0.001	0.028
ODI nost (XIO)	(0.024)	(0.003)	(0.024)	(0.024)	(0.002)	(0.024)
GDP pc source $(x10^2)$	-0.040	0.003	0.037	-0.038	0.002)	0.024)
ODI pe source (x10)	(0.040)	(0.005)	(0.041)	(0.041)	(0.004)	(0.041)
Clust Near-eastern #	-0.16	-0.02**	0.17	-0.16	- 0.01 **	0.18
Clust Ineat-eastern #	(0.17)		(0.17)	(0.17)		(0.17)
Clust Nordic #	-0.12	(0.01) -0.01	0.17)	-0.14	(0.01) -0.00	0.17)
Clust Nordic #	-0.12 (0.11)	(0.00)	(0.11)	(0.11)	(0.00)	(0.14)
Clust Germanic #		0.00	0.11) 0.21**		0.00	, ,
Clust Germanic #	-0.21**		(0.09)	-0.22**		0.22**
Class Latin Farman #	(0.09)	(0.01)	` ′	(0.09)	(0.00)	(0.09)
Clust Latin-Europe #	-0.08	0.00	0.08	-0.09	-0.00	0.09
Cl 4 E E 4	(0.10)	(0.01)	(0.10)	(0.10)	(0.00)	(0.10)
Clust Far Eastern #	-0.10	-0.01	0.10	-0.08	-0.01	0.09
C1 . I . /IZ . !!	(0.11)	(0.01)	(0.11)	(0.11)	(0.01)	(0.11)
Clust Japan/Korea #	-0.23***	0.01	0.22**	-0.23**	0.01	0.22**
C1 1 . !!	(0.08)	(0.03)	(0.09)	(0.09)	(0.02)	(0.09)
Clust Arab #	-0.34***	0.02	0.32***	-0.34***	0.01	0.32***
a	(0.09)	(0.04)	(0.09)	(0.09)	(0.02)	(0.09)
Clust Other EMs #	-0.32***	-0.02**	0.34***	-0.35***	-0.02**	0.36***
5 industry dymanics	(0.09)	(0.01)	(0.09)	(0.08)	(0.01)	(0.08) Yes**
5 industry dummies	Yes**	Yes	Yes**	Yes**	Yes	r es**
Log likelihood		-322.8			-319.1	
Wald chi-square		5897.7***			6909.2***	
Pseudo R-square		20.8%			21.7%	
Observations		420			420	

Appendix: Selected Items from the Questionnaire

Resources for Successful Performance

Which of the following types of resources were most crucial for the successful performance of the affiliate during the first two years of operation. Please <u>rank</u> the three most important ones as 1, 2, 3.

For example, if Equity, Loans and Patents were, in that order, the three most important resources, then put 1 against Equity, 2 against Loans, and 3 against Patents.

1.	Buildings and real estate	
2.	Brand Names	
3.	Business network relationships	
4.	Distribution network	
5.	Equity	
6.	Innovation capabilities	
7.	Licences	
8.	Loans	
9.	Machinery and equipment	
10.	Managerial capabilities	
11.	Marketing capabilities	
12.	Networks with authorities	
13.	Patents	
14.	Sales outlets	
15.	Technological know-how	·
16.	Trade contacts	·
17.	Other (Specify:)	·

Where did the affiliate obtain the three resources indicated above during the first two years of operation? Please provide approximate percentages:

	Resource 1	Resource 2	Resource 3
1. Local firm (JV-partner or acquired firm)	%	%	%
2. Foreign parent firm	%	%	%
3. Other local sources	%	%	%
4. Other foreign sources	%	%	%
5. Other (specify:)	%	%	%
	100%	100%	100%

Note: As tangible resources were classified: buildings and real estate, equity, loans, machinery and equipment, patents, sales outlets, and licences. Intangible resources included brands, business network, distribution network, managerial capabilities, innovation capabilities, marketing capabilities, networks with authorities, technological know-how, and trade contacts. The "other" option received only a negligible number of entries.