GLOBAL STRATEGY AND MULTINATIONALS' ENTRY MODE CHOICE

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Abstract. This paper makes a case directed towards establishing the importance of global strategic considerations in choosing multinationals' entry mode. Specifically, it is our contention that beyond the environmental and transaction-specific factors well established in the literature to affect the entry mode decision, we should also consider the strategic relationship a multinational envisages between its operations across borders in reaching this decision. After incorporating various global strategic variables into an eclectic framework of the factors influencing the entry mode choice, this paper tests both the validity of the overall framework and the importance of each entry mode determinant in differentiating among entry modes. This is done based on ninety-six multinational managers' responses to a survey questionnaire concerning their entry mode decision experiences. The results suggest that an express incorporation of global strategic variables into an analysis of the entry mode decision is warranted.

This paper is concerned with the critical decision of multinationals' foreign entry mode choice. While existing studies have already identified a diversity of variables that influence this decision, in our view these variables can essentially be collapsed into one of two categories: environmental or transaction-specific factors. Common to existing studies identifying these factors is their underlying assumption that each entry decision is made *in isolation* and is driven essentially by efficiency considerations at the level of the individual entrant or subsidiary unit. Recent works by Anderson and Gatignon [1986]

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and Gatignon and Anderson [1988] provide an excellent review and integration of existing entry mode explanations within a transaction cost framework.

Notwithstanding the central role environmental and transaction-specific factors play in influencing multinationals' institutional mode choice, this paper makes a case directed towards establishing the importance of a third group of factors—global strategic considerations—in determining the foreign entry mode choice. Specifically, it is our contention that beyond the subsidiary unit level considerations already established in the literature, it is also important to consider the role that the global strategic posture of a multinational plays, namely the strategic relationship it envisages *between its operations across borders*, in reaching its entry mode decision.

The theoretical heritage of our contention can be traced in part to the seminal work of Perlmutter [1969] which acknowledged the increasing existence of geocentric approaches to multinational management. The geocentric approach outlined by Perlmutter provided a succinct explanation for the existence of and benefits attached to managing subsidiary units not as a portfolio of independent units but as an interdependent network. The more recent foundation upon which our argument rests, however, is the rich body of literature on global strategy (e.g., Hout, Porter and Rudden [1982]; Hamel and Prahalad [1985]; Kogut [1985a, 1985b]; Kim and Mauborgne [1988]; Yip, [1989]) which has either explicitly or implicitly built upon Perlmutter's geocentric conception.

Though the specific global strategic prescriptions advanced throughout the literature vary [Ghoshal 1987], they are identical in two fundamental respects. The first is that their overriding objective is unwaveringly overall corporate success, not the maximization of each individual subsidiary unit's efficiency. The second is that in achieving this objective, interdependencies across subsidiary units must be actively managed. To illustrate, positions in one country market should be continuously leveraged against those in other country markets and hence subsidiary units may well be established and managed for very untraditional reasons such as acting as a competitive scanning outpost in an otherwise unprofitable market or sacrificing subsidiary revenue to check the cashflow of a potential global competitor.

Given that multinationals increasingly compete against one another in multiple markets where the strategic actions taken by a multinational in one market can have repercussions in other markets (e.g., Watson [1982]; Kim and Mauborgne [1988]), as argued herein, we believe that a multinational's global strategic posture has a major impact on its entry mode choice. Thus, as a recent work of Hill, Hwang, and Kim [1990] has argued, an express incorporation of global strategic variables into an analysis of the entry mode decision is an essential research task.

Accordingly, this research incorporates various corporate, global-level strategic variables into what has been termed an eclectic framework of the factors influencing the entry decision (Hill, Hwang and Kim [1990]); this framework

consists of not only environmental and transaction-specific factors but also global strategic considerations. Unlike the pure conceptual work of Hill, Hwang and Kim [1990], however, this paper performs the important task of testing the framework at two different levels. First, we test the validity of the overall framework by examining the impact of the identified relevant entry mode variables *operated together* on the final entry mode choice. It is important to recognize that while each of the identified variables influence the entry mode choice, *it is the collective, simultaneous consideration* of all these factors that determines the ultimate decision. Second, we test the importance of each variable in differentiating among distinct entry modes; the aim here is to gain a better understanding of the relative importance of global strategic considerations vis-à-vis the other entry mode variables in determining multinationals' entry mode choice. Given the paucity of empirical research conducted at the firm level (e.g., Caves [1982]), such empirical examinations should make a meaningful contribution in advancing our knowledge of this topic beyond its largely conceptual state. Moreover, this study is the first to use firms' direct responses for an empirical investigation of this topic.

INTERNATIONAL ENTRY MODES

Of empirical interest in this paper are the three distinct international entry modes of licensing, joint venturing, and wholly owned subsidiaries. Although something of a simplification, much of the international business literature focuses on these three distinct modes and suggests that each of these entry modes is consistent with a different level of control (e.g., Calvet [1984]; Caves [1982]; Davidson [1982]; Root [1987]) and resource commitment (e.g., Vernon [1983]). Control here means authority over operational and strategic decisionmaking; resource commitment means dedicated assets that cannot be redeployed to alternative uses without loss of value. A review of the literature (e.g., Hill, Hwang and Kim [1990]) suggests that while wholly owned subsidiaries can be characterized by a relatively high level of control and resource commitments, the opposite can be said of licensing agreements. With respect to joint ventures, although the levels of control and resource commitments admittedly vary with the nature of the ownership split, their extent can nevertheless be said to lie between that of wholly owned subsidiaries and licensing agreements.

THE INCORPORATION OF GLOBAL STRATEGIC VARIABLES

In an attempt to expand the existing entry mode analyses beyond the narrow confines of each entry decision in isolation, this paper considers the extent of: (1) global concentration; (2) global synergies; and (3) global strategic motivations exercised by the firm. This broader conception will allow us to expressly consider the strategic relationship a multinational envisages between its operations across borders in reaching its entry mode decision.

As shown in Figure 1, three groups of variables are believed to influence the entry mode decision. These are the global strategic variables highlighted herein as well as the already well-established environmental variables (host country risk, location unfamiliarity, demand uncertainty, and competition intensity) and transaction-specific variables (value of firm-specific know-how and tacit nature of know-how). Firm-specific know-how refers to knowledge that is proprietary to a given firm. Tacit know-how involves non-codifiable knowledge not embodied in physical items such as capital goods, equipment, and blueprints. Rather it is the information that must be obtained typically via consulting or advisory services for physical equipment or "hardware" to be absorbed and utilized effectively by the firm Teece [1977]. While we believe that it is the collective, simultaneous consideration of all three groups of factors that determines the ultimate entry decision, this paper argues that beyond environmental and transaction-specific factors, global strategic variables would play a critical role in differentiating among distinct entry modes.

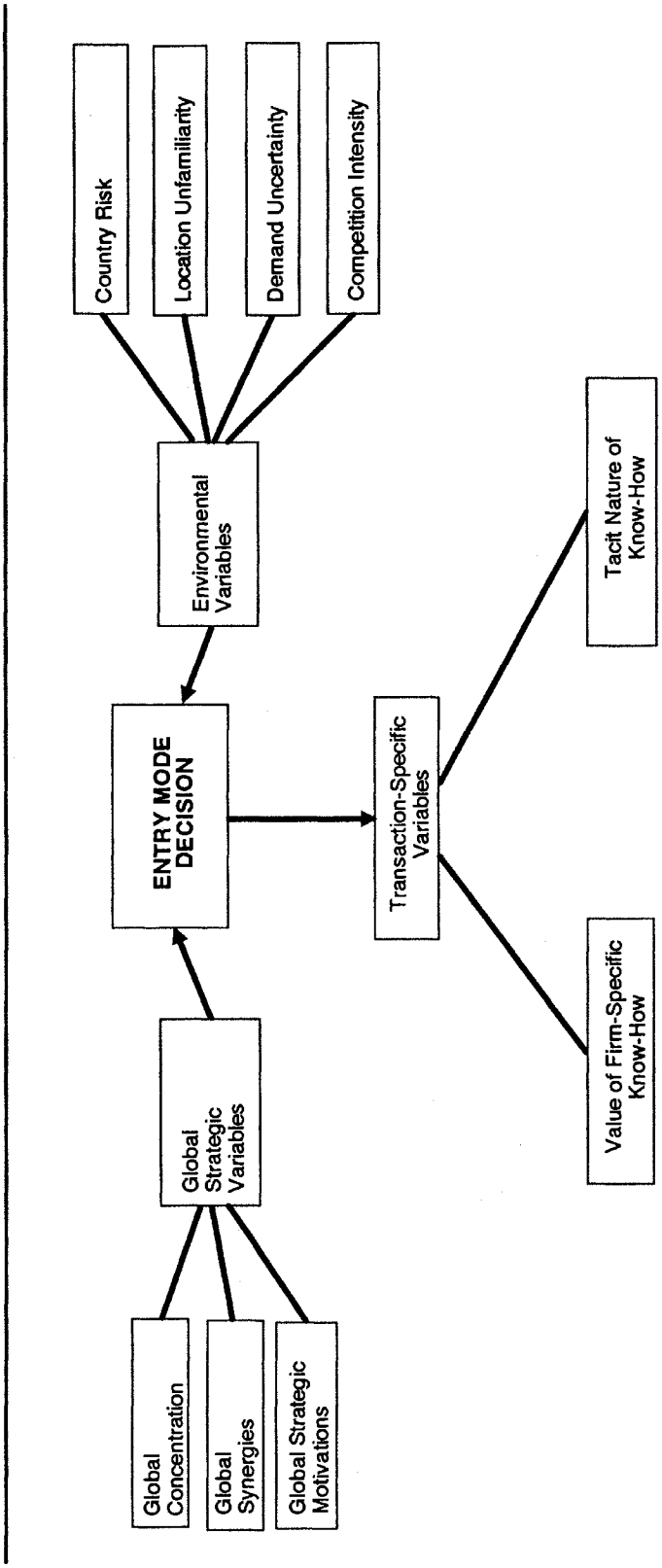
In the following, we first discuss the effects of the three global strategic variables on the entry mode decision. We then briefly review the effects of the existing environmental and transaction-specific variables shown in Figure 1 on the institutional mode choice.

Global Strategic Variables

Global Concentration. Increasingly multinational corporations (MNCs) find themselves in industries that are characterized by a limited number of players who confront each other in many different national markets around the globe. That is, the global industry has become highly concentrated. In such industries, conditions of oligopolistic interdependence spill over national boundaries creating a high level of competitive interdependence among players. When global competitive interdependence exists, the actions taken by an MNC in one market often have repercussions in other national markets (e.g., Watson [1982]; Kim and Mauborgne [1988]). For competitive interdependence implies that organizations can influence one another not only directly but also indirectly in any of the diverse national markets in which they compete.

An example of this is the case of Michelin versus Goodyear. When the North American subsidiary of Michelin decided to expand its share of the North American tire market it employed the traditional marketing tactic of lowering the price of its tires. Such tactic, it surmised, would attract new customers and most likely not be matched by its chief competitor, Goodyear, due to the significance of Goodyear's North American sales and the attendant non-trivial costs such a parallel move would impose on the North American giant. What Michelin did not anticipate, however, was that Goodyear could counter its move not directly but indirectly. Because of the oligopolistic nature of the global tire industry, Goodyear was able to skillfully parry

FIGURE 1
An Eclectic Framework of the Entry Mode Choice



Michelin's tactic by dropping the price of its tires in Michelin's profit sanctuary, Europe. This caused a non-trivial negative impact on Michelin's main cash source, causing the firm to retract its North American price drop and in effect rendering its marketing tactic futile and costly.

Given such global industry settings, it follows that MNCs may well be inclined to exercise a high level of control over foreign operations. High control enhances an MNC's ability to ensure that strategic actions taken by a subsidiary in one national market do not produce negative ramifications in other national markets above and beyond the expected gains to be made by a focal subsidiary's strategic move. At the same time, a high level of control enhances a multinational's ability to call on its subsidiary located in one market to assist in a competitive battle being fought in another market for the benefit of the overall organization, as exemplified by the actions of Goodyear. Altogether, this suggest the proposition that: *Other things being equal, when the global industry is highly concentrated, MNCs will favor high control entry modes.*

Global Synergies. Global synergies arise when the inputs of a multinational "are shared, or utilized jointly with complete congestion" [Willig 1978:346]. By inputs we refer to the core factors of a multinational such as R&D, marketing, or manufacturing. Examples of multinationals leveraging core competencies in an effort to exploit global synergies abound. A good example of this would be Honda who globally leveraged its advanced engine technology in motorcycles to expand into the automobile, lawn mower, and snow-blower industry segments worldwide. Another example is that of Yves Saint Laurent who leveraged its prestigious global brand name in high fashion to expand into the perfume, cosmetic and recently cigarette industry domains across the globe.

The implications of global synergies with respect to competitive advantage have become increasingly clear; they produce a positive impact on corporate profitability (e.g., Hamel and Prahalad [1985]; Ghoshal [1987]; Kim, Hwang and Burgers [1989]). This is typically actualized through enhanced innovative capability or some form of cost reduction [Baumol, Panzer and Willig 1982]. For example, Honda's engine technology, once developed for producing motorcycles, was virtually costlessly available for the production of engines in the different capacities in which Honda exploited it across the globe.

Researchers (e.g., Jones and Hill [1988]; Harrigan [1985a, 1985b]; Porter [1980]) have argued that the benefits of synergy, including economies of scope, increase firms' commitment to business units and can best be exploited through hierarchical control. Jones and Hill [1988:161] argue that hierarchy is necessary as market-mediated exchanges aimed at the realization of synergies will typically be beset with hazards. The difficulty is this. To achieve synergies, inputs between transacting parties must be shared or utilized jointly. However, the very fact that inputs must be shared or utilized jointly makes it hard to sort out the unique contribution and performance of each

transacting party. This presents a monitoring problem and hence creates room for managerial discretion. Absent internal organization, the very existence of managerial discretion tends to trigger opportunistic behavior and the shirking of activities between independent transacting parties [Williamson 1975]; hence, the need for hierarchy. Altogether, this suggests the proposition that: *Other things being equal, when the extent of potential global synergies between the extrant and other sister business units is great, MNCs will demand a high level of control in the foreign operation.*

Global Strategic Motivations. When MNCs enter foreign markets, especially their global contenders' home markets, they may have strategic motivations that go beyond the narrow calculus of choosing the most efficient entry mode; that is, they may have global strategic motivations [Edwards 1971; Watson 1982; Hout, Porter and Rudden 1982; Hamel and Prahalad 1985; Kim and Mauborgne 1988]. Examples of multinationals possessing global strategic motivations, which often go against economic efficiency maximization of a particular business unit, have become a common occurrence in today's reality of global competition. Such motivations for establishing a foreign business unit can range anywhere from setting up a strategic outpost for future global expansion, to developing a global sourcing site, to attacking actual or potential global competitors. Hence, global strategic motivation can be defined as motivation to fulfill strategic aims set at the corporate level for the purpose of overall corporate efficiency maximization.

To effectively achieve global strategic motivations, recent studies have argued the importance of tight coordination across global business units (e.g., Porter [1986]; Bartlett [1984]). Tight coordination is necessary for the effective and efficient execution of global strategic motivations, especially as their implementation often requires business units to "sacrifice" subsystem gains for the benefit of the overall organization (e.g., Hedlund [1986]). That tight coordination is difficult to accomplish under conditions of coalition formation or licensing has been argued (e.g., Porter and Fuller [1986]); such agreements link a foreign entrant to other independent firm(s) with potentially different strategic motivations. Altogether, this suggests the proposition that: *Other things being equal, MNCs exercising global strategic motivations will favor high control entry modes.*

Environmental Variables

Country Risk. When country risk is high, existing works indicate that an MNC would do well to limit its exposure to such risk by restricting its resource commitments in that particular national domain [Kobrin 1983; Vernon 1983; Bradley 1977]. Rephrased, other things being equal, when country risk is high, MNCs will favor entry modes that involve relatively low resource commitments.

Location Unfamiliarity. Previous studies argue that the greater the perceived distance between the home and host country in terms of culture, economic

systems, and business practices, the more likely it is that MNCs will shy away from direct investment in favour of licensing or joint venture agreements [Anderson and Coughlan 1987; Davidson 1980; Green and Cunningham 1975; Johanson and Vahlne 1977; Kobrin 1983; Stopford and Wells 1972]. This is because the latter institutional modes enhance MNCs' flexibility to withdraw from the host market should they be unable to comfortably acclimatize themselves to the unfamiliar setting. Restated, other things being equal, when the perceived distance between the home and host country is great, MNCs will favor entry modes that involve relatively low resource commitments.

Demand Uncertainty. When future host country demand for an MNC's product is uncertain, existing works indicate that an MNC may be unwilling to invest substantial resources in the country to effectively adjust to oscillating conditions and to enhance its ability to exit the market without incurring substantial sunk costs should demand fail to reach a significant level (e.g., Harrigan [1983]). Thus, other things being equal, when demand uncertainty is high, MNCs will favor entry modes that involve low resource commitments.

Intensity of Competition. When the intensity of competition is high in a host market, existing works (e.g., Harrigan [1985a, 1985b]) assert that firms would do well to avoid internal organization, as such markets tend to be less profitable and therefore do not justify heavy resource commitments. Hence, other things being equal, the greater the intensity of competition in the host market, the more MNCs will favor entry modes that involve low resource commitments.

Transaction-Specific Variables

Value of Firm-Specific Know-How. Transaction cost theory or internalization theory stresses the importance of the firm-specific advantages MNCs enjoy relative to host country enterprises [Dunning 1981; Rugman 1981; Hennart 1982; Hill and Kim 1988; Teece 1977, 1981, 1983; Buckley and Casson 1976]. This theory suggests that when the quasi-rents that can be earned from an MNC's firm-specific know-how are non-trivial, the propensity of licensees (or venture partners) to disseminate that know-how or expropriate it for their own self-interested purposes is likely to be high; quasi-rent being defined as the realizable returns entitled to a firm by way of its differential advantage in know-how. Hence, other things being equal, the greater the quasi-rent stream generated by an MNC's proprietary know-how, the greater the probability that the MNC will favor an entry mode with high control.

Tacit Nature of Know-How. When the nature of firm-specific know-how transferred by an MNC is tacit, it is by definition difficult to articulate [Nelson and Winter 1982; Teece 1977]. This makes the drafting of a contract to transfer such know-how particularly problematic, resulting in the licensee often lacking the informal routines needed to turn a technological blueprint

into a successful product. That internal organization enhances an MNC's ability to utilize its human capital and draw on its organizational memory to transfer tacit know-how is well established. Hence, other things being equal, the greater the tacit component of firm-specific know-how, the more an MNC will favor high control entry modes.

DATA

The data were gathered via a survey methodology. The survey instrument consisted of an extensive mail questionnaire composed of four parts: modes of entry, global strategic factors, environmental factors, and transaction-specific factors. The questionnaire was distributed to a total of 629 U.S.-based multinationals listed in *The International Directory of Corporate Affiliations 1987/1988 (IDCA)*, with the major line of business for each of the selected firms residing in the manufacturing sector. *IDCA* is an extensive directory of multinationals, listing approximately 1,800 U.S.-based MNCs and their foreign subsidiaries; it also includes U.S. family members of foreign ultimate parent corporations. In an effort to focus our attention on the most current entry mode cases, the 1987/1988 version of *IDCA* was carefully compared with the 1982/1983 version to select those multinationals that experienced international expansion during the recent five years.

The questionnaires were sent to senior-level management including vice-presidents/directors of international operations, presidents, and CEOs. In line with the logic of John [1984], who argues for selecting knowledgeable informants, the choice of this respondent group was based on the belief that people in these positions are most knowledgeable on international investment projects and the dynamics of the overall foreign entry decision process. In responding to the questionnaire, managers were asked to reflect back to a recent foreign entry mode decision they were involved in and to answer questions according to the logic employed in reaching that decision. A follow-up letter was sent to those firms that did not respond to the questionnaire two months after its distribution date.

A total of 137 questionnaires were returned, representing a 22% response rate. Of these, forty-one were later deemed unusable due to incomplete responses in eight cases, respondents' evaluation of investment projects undertaken prior to 1980 in five cases, and respondents' evaluation of entry modes not classified as licensing, joint venturing, or wholly owned subsidiaries in ten cases. Eighteen cases were further eliminated because management provided a positive response to the question item of whether government regulations imposed restrictions on the mode options available to their firm. Note here that the study examined investment projects undertaken only from 1980 and onwards since it was felt that the investment results of these recent undertakings would most likely not be known at the time of questionnaire completion. The aim here was to minimize respondents' retrospective rationalizations for their entry mode decisions.

Overall, a total of ninety-six responses were deemed usable for the analyses. A profile of the respondents participating in the study reveals that 89% are senior management, including CEOs, presidents, vice-presidents, and directors. With respect to the location of foreign operations under discussion, no special concentration of country/region exists, rather, the geographic coverage of foreign locations is widely and relatively evenly distributed among major geographic regions: twenty-five in Pacific Asia, seventeen in South America, twenty-five in Europe, sixteen in North America, four in Africa, and nine in the Middle East.

MEASUREMENT

Entry Modes. Respondents were asked to identify which of the three distinct entry modes—licensing, joint venturing, or wholly owned subsidiaries—represents the chosen mode of the foreign operation under discussion. In joint venturing cases, respondents were asked to explicitly state the percentage of their equity participation in the foreign operation and the number of partners involved. It is worth noting that a fourth choice was also given to respondents, that of "other," for those respondents who did not feel that any of the aforementioned categories correctly reflected the form of entry mode characterizing their foreign operation under discussion. The responses showing this category were excluded from the analyses. Of the ten responses classified as such, six were identified by respondents as franchising agreements and two were identified as contract management; the remaining two went unspecified.

Of the ninety-six foreign entry launches used in the analyses, thirty-two were wholly owned subsidiaries, thirty-eight were joint ventures, and twenty-six were licensing agreements. It should be noted that despite U.S.-based multinationals' strong preference for wholly owned subsidiaries, we were able to obtain a sufficient number of joint ventures and licensing agreements for our analyses. This was possible since we asked managers to report the cases of joint venturing or licensing rather than of wholly owned subsidiaries when their firm recently engaged in multiple foreign entry decisions. Moreover, while we checked for the possibility of a nonresponse bias, no clear evidence for its existence was found; there was no systematic nonresponse either from multinationals with any specific industry profile or regarding any specific regional location of foreign ventures. With respect to joint ventures, in most cases (82%) respondents specified the existence of only one equity partner in the foreign venture. Moreover, the equity participation held by respondent firms, in 73% of the cases, showed a majority position.

Key Determinants of Entry Mode. The nine key variables recognized to influence the focal decision of foreign entry mode are latent in that they are linked to the empirical world only through indicators. Moreover, they appear to be wide-ranging, multifaced constructs. As such, psychometric measurement

based on multiple items rather than a single-item proxy seemed a more fitting approach [Peter 1979; Fornell 1982; Churchill 1979], and was used in the analyses.

As no established scales with proven psychometric properties exist to measure the nine constructs, it was necessary to develop indicators that could represent the domain of each construct. Accordingly, a compendium of items thought to be associated with each of the nine constructs was drawn from the relevant literature. Respondents were asked to evaluate the foreign venture under discussion across each of these items on a 7-point Likert-type scale.

After data collection, an iterative procedure was employed to refine the set of indicators for each construct. The item-to-total correlation, i.e., the correlation between the score of each indicator and the total score of those indicators used to capture each construct, was then examined. Following the steps suggested by Nunnally [1978], those indicators with a low correlation with the total score (i.e., $r<.25$) and those indicators below a sudden drop off in the item total correlation were eliminated. A Cronbach's coefficient *alpha* was then calculated for the remaining set of items.

Drawing on Nunnally [1978], Churchill [1979:68] suggests that in the early stages of basic research reliabilities of .50 or .60 suffice. Because this research represents a first attempt at developing multiple-item measures of the identified constructs in the context of market entry, .60 was the cut-off point set for coefficient *alpha*. Accordingly, the aforementioned iterative procedure was performed until those items associated with each construct were reduced to a reliable set (i.e., Cronbach's coefficient *alpha* greater than .60). The final set of indicators used to measure each construct and Cronbach's coefficient *alpha* for each scale are provided in Table 1.

As shown in Table 1, the coefficient *alpha*s for all constructs were above the .6 cut-off point established here; in fact, they all either exceeded or came very close to Nunnally's .7 criterion for basic research. Hence, the reliabilities of these constructs were judged to be sufficient for our study. It should be noted, however, that while concentrating on the correlated items for each construct shown in Table 1 provides a more "accurate" evaluation of some aspects of the construct, the iterative procedure used here might have eliminated certain aspects of the construct that were not correlated but were still constitutive of the construct; hence it might have generated a partially incomplete set of indicators for the construct. With this limitation in mind, a score for each construct was derived using a unit weighing scheme. Einhorn and Hogarth [1975] recommended this approach for situations such as ours: a moderate sample size ($50<n<200$) and a vague or nonexistent criterion variable. Unit weighing has strengths in that it uses no degrees of freedom since weights are not estimated from the data, and is estimated without error. The means, standard deviations, and correlations among the nine constructs used in the analyses are reported in Table 2. The fact that most of the constructs are not highly correlated suggests that fairly independent constructs have been tapped.

TABLE 1
Final Indicators Used to Assess the Nine Key Constructs[a]

Constructs	Cronbach's *alpha*
Global Concentration	.8301
For the industry involved:	
Number of competing players (many/few)	
Global four firm concentration ratio (low/high)	
Proportion of global competitors exercising tight coordination across business units (low/high)	
Global Synergies	.7458
Extent of global scale economies (not at all/great)	
The level of possible sharing between the foreign business unit and the organization's other business units with respect to . . . (low/high)	
Manufacturing know-how	
Marketing know-how	
Management expertise	
R&D resources	
R&D personnel	
Production personnel	
Marketing personnel	
Distribution system	
Global Strategic Motivations	.6849
Strategic motivations for entering the host market:	
To attack global competitors (low/high)	
To establish a strategic outpost for future market expansion (weak/strong)	
To develop a global sourcing site (weak/strong)	
Country Risk	.7935
Instability of the host political system (low/high)	
Likelihood of host government taking actions to annihilate or limit company's ownership of the foreign venture (low/high)	
Likelihood of host government constraining the foreign operation by instituting policies with respect to . . . (low/high)	
Price control	
Local content requirements	
Transfer risk of host country with respect to . . . (low/high)	
Currency inconvertibility	
Remittance control	
Location Unfamiliarity	.7102
Company's prior experience with the host country (great/not at all)	
Perceived differences between the home and host country with respect to . . . (not at all/great)	
Culture	
Political systems	
Economic conditions	

TABLE 1
(continued)

Constructs	Cronbach's *alpha*
Demand Uncertainty	.8149
For the industry involved in the host market:	
Industry growth rate (high/low)	
Stage of industry life cycle (maturity/introduction)	
Frequency of major technological changes (low/high)	
Competition Intensity	.6971
Instability of market share (low/high)	
Number of existing and potential competitors (few/many)	
Level of fixed costs relative to value added (low/high)	
Costs facing the buyer of switching from one supplier (competitor) to another (substantial/negligible)	
Value of Firm-Specific Know-How	.7642
For the product or process involved in the foreign venture:	
The perceived level of reputation with respect to . . . (low/high)	
Design	
Quality	
Style	
International recognition of brand name (not at all/great)	
Technological innovativeness (low/high)	
Tacit Nature of Know-How	.7531
For the product or process involved in the foreign venture:	
Difficulty to assess the proper price (not at all/great)	
Difficulty to understand the manufacturing/marketing know-how (not at all/great)	
Difficulty to transfer the manufacturing/marketing know-how (not at all/great)	
R&D intensity (low/high)	

[a]All of these indicators were assessed on 7-point Likert-type scales. The anchors are shown in parentheses with the low end of the scale on the left.

EMPIRICAL TESTS

The outlined eclectic framework was tested at two different levels. First, we tested the validity of the overall framework using Multivariate Analysis of Variance (MANOVA). Here the analytical interest lay in testing the framework through an examination of the impact of the nine variables operated together on the ultimate entry modes choice. Under MANOVA, distinct entry modes served as the categorized independent variable with the nine constructs as the dependent variables. It is worth noting that MANOVA has a strength in that it takes the inter-relationships among the constructs into account [Pedhazur 1982; Tatsuoka 1971].

Second, we assessed the effects of the entry mode variables in discriminating among the distinct modes of entry. Our main aim here was to evaluate the relative importance of global strategic variables vis-à-vis the other entry

TABLE 2
Means, Standard Deviations, and Pearson Product-Moment Correlations

Variables	Means	S.D.	GC	GS	GSM	CR	LU	DU	CI	VFK	TNK
Global Concentration (GC)	14.76	2.44	1.000								
Global Synergies (GS)	33.53	11.30	0.067	1.000							
Global Strategic Motivations (GSM)	12.61	2.84	-0.004	0.223*	1.000						
Country Risk (CR)	22.34	14.96	-0.156	-0.188	0.023	1.000					
Location Unfamiliarity (LU)	13.62	4.14	0.073	-0.040	-0.035	0.114	1.000				
Demand Uncertainty (DU)	9.50	3.43	0.018	-0.200	-0.085	0.016	0.130	1.000			
Competition Intensity (CI)	18.40	3.66	-0.009	-0.003	-0.042	0.103	0.186	0.075	1.000		
Value of Firm-Specific Know-How (VFK)	22.24	6.10	0.207*	0.181	0.193	-0.101	-0.009	0.086	-0.060	1.000	
Tacit Nature of Know-How (TNK)	16.92	4.63	0.094	0.294**	0.084	-0.225*	-0.201*	-0.023	-0.039	0.238*	1.000

*$p<.05$
**$p<.005$

determinants in discriminating among our three entry modes. We first conducted Multiple Discriminant Analysis (MDA) with the entry mode as the grouping variable and the nine constructs as the predictor variables. Here a discriminant territorial map and a two-group breakdown analysis were also developed. Note that MANOVA tested for an overall difference in the profiles of the three distinct entry modes of licensing, joint venturing, and wholly owned subsidiaries whereas MDA provided information on the relative importance of each profile variable in discriminating among the three entry modes.

While MDA provides a macro picture of the importance and effectiveness of the entry variables in discriminating among the three entry modes, it does not provide statistical tests for the significance of the individual coefficients of our predictor variables. Hence, in addition to MDA, we conducted Multinomial Logit (MNL) analysis to provide such tests.

We specified an MNL model to assess the impact of the independent variables on the probability that each of the three entry modes would be chosen. In our logit model, the dependent variables were the logarithms of the odds that a particular entry mode would be chosen; the independent variables were the nine global strategic, environmental, and transaction specific-variables. In particular, given that there are three institutional mode choices, the model was specified as follows [Schmidt and Strauss 1975]:

$$\log_e\left(\frac{P_{ij}}{P_{i1}}\right) = X_i\beta_j$$

where

P_{ij} = the probability that the entry i is of the institutional mode j where $j \in (2,3)$,

P_{i1} = the probability that the entry i is of the institutional mode 1 where 1 is the base of reference mode,

X_i = a vector (1×9) of the independent variables for the ith entry observation,

b_j = a vector (9×1) of parameters of the independent variables for the jth institutional mode.

In the light of the fact that licensing agreements can be characterized by the lowest level of control and resource commitments among our three entry mode choices, we used licensing agreements as the base of reference mode here. Hence, our parameters are interpretable in reference to licensing agreements; note from the above equation that its left-hand side is the logarithm of the ratio of the probabilities with the denominator here being associated with licensing agreements. The model was estimated subject to the condition that the sum of the probability for choosing each of our three entry modes is equal to 1.

Specifically, the estimation of the model was performed by maximization of the likelihood function of the model. This maximization was done by

applying the nonlinear maximization program used in Schmidt and Strauss [1975]. Given the condition that the sum of the probability for choosing each of our three entry modes is equal to 1, the likelihood function of the model here was specified as:

$$L = \prod_{i \in \theta_1} P_{i1} \cdot \cdot \prod_{i \in \theta_j} P_{ij}$$

where $\theta_j = \{i | j\text{th institutional mode is observed; here } j \in (2,3)\}$

$$P_{i1} = \frac{1}{1 + \sum_{j=2}^{3} e^{X_i \beta_j}}$$

$$P_{ij} = \frac{e^{X_i \beta_j}}{1 + \sum_{j=2}^{3} e^{X_i \beta_j}}$$

Furthermore, the unique contribution of global strategic variables as a group in explaining the entry mode choice was examined by Rao's *Q*-statistic; the aim here was to complement MNL analysis by providing statistical tests for the significance of the variables of our interest as a group rather than individually. A *Q*-statistic originally proposed by Rao [1952] has been purported by others (e.g., Dillon and Goldstein [1984]) as an appropriate test statistic to deal with the model comparison in the case of categorical dependent variables. The full discriminant model containing all three groups or categories of variables shown in Figure 1 was compared with three restricted discriminant models each containing a different pair of these three groups of variables; the unique contribution of the group left out in each of the restricted models was then analyzed.

MANOVA Results. MANOVA results indicate that there are significant overall differences in the profiles of the three distinct entry modes with respect to the nine key constructs of the eclectic framework. Wilks' *lambda* was .3587 for the overall framework; $F(18,170)=6.3247$ which was significant at $p<0.001$. Thus, the null hypothesis of identical profiles is rejected. The profiles do vary with respect to the nine entry mode determinants of our eclectic framework and hence the central hypothesis is not rejected. To the extent that competitive firms' prevalent practices reflect, in a darwinian sense, successful strategic behavior (e.g., Bowman [1963]; Lilien [1979]), one may then conclude that the outlined eclectic framework provides managers with a reasonable way to organize the decision variables for the entry mode choice.

MDA Results. The discriminant analysis yielded two canonical discriminant functions. The results are shown in Table 3. The first function explained more variance than the second one (97.04% compared with 2.96%).

As shown in Table 3, while discriminant function 1 was significant ($p<.000$), function 2 was insignificant ($p<.821$). As a rule of thumb, it is suggested that structure coefficients > .30 be treated as significant [Pedhazur 1982]. Inspection of the coefficients of function 1 indicates that the significant coefficients are country risk, global synergies, the tacit nature of know-how, global concentration, and location unfamiliarity. Of these five, except for country risk and location unfamiliarity, all variables showed positive signs. This suggests that function 1 would produce high (low) discriminant scores for the firms with low (high) scores on country risk and location unfamiliarity and high (low) scores on global synergies, the tacit nature of know-how, and global concentration.

It is worth noting here that the constructs of the value of firm-specific know-how and global strategic motivations also approach the meaningful mark. This suggests that these constructs, though not of first and foremost consideration in the entry decision process, may be nonetheless said to influence multinational managers' entry mode choice. Interestingly, however, the results of MDA suggest that demand uncertainty and competition intensity play a minimal role in influencing the ultimate entry decision.

A visual representation of the MDA results is provided by a discriminant territorial map where the abscissa represents the first discriminant variate and the ordinate represents the second (see Figure 2). As can be seen in Figure 2, the centroids of the three distinctive entry modes were mainly separated by function 1 but hardly by function 2; this was so since discriminant function 2 was statistically insignificant.

As shown in Figure 2, wholly owned subsidiaries, joint venturing, and licensing agreements occupied a high, medium, and low centroid or discriminant score position, respectively. Given the results of Table 3, this suggests that firms with wholly owned subsidiaries (licensing) tend to have low (high) scores on country risk and location unfamiliarity and high (low) scores on global synergies, the tacit nature of know-how, and global concentration. While not deterministic, this provides some evidence in support of our hypothesized profiles of the different entry modes.

The classification accuracy of the resulting discriminant functions performed better than would a chance model. Table 4 provides the classification accuracy of the discriminant functions for the three distinct entry modes. As shown in Table 4, the overall hit ratio was 76.0%; 68.8% of the wholly owned subsidiary group, 81.6% of the joint venturing group, and 76.9% of the licensing group were correctly classified. All three individual group hit ratios met the criterion that a rough estimate of the acceptable level of predictive accuracy should be at least 25% greater than by chance

TABLE 3
Discriminant Analysis Results for the Eclectic Model

	Structure Coefficients	
Variables	Function 1	Function 2
Global Concentration	0.3093	-0.7001
Global Synergies	0.3746	0.0820
Global Strategic Motivations	0.2518	0.5047
Country Risk	-0.4084	-0.0157
Location Unfamiliarity	-0.3016	-0.2814
Demand Uncertainty	-0.1250	0.2610
Competition Intensity	-0.1155	0.1980
Value of Firm-Specific Know-How	0.2727	-0.1650
Tacit Nature of Know-How	0.3403	0.2778
Eigenvalue	1.6540	0.0505
Wilks' *lambda*	0.3584	0.9520
% of variance	97.04	2.96
Canonical correlation	0.7894	0.2192
Chi square	91.247	4.382
Degree of freedom	18	8
Significance, *P*<	0.0000	0.8211

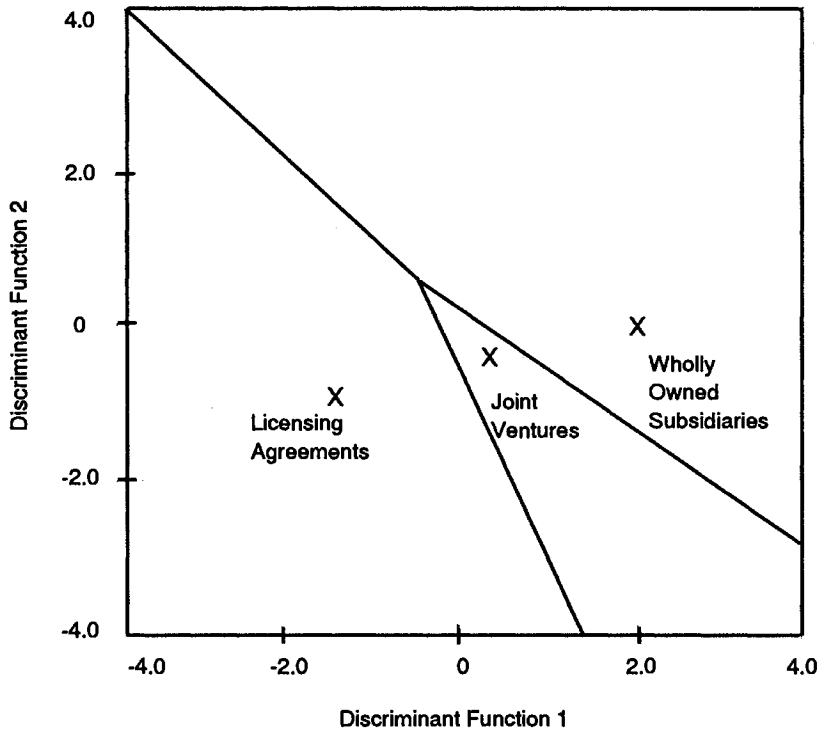
(i.e., 33.3%, 39.6%, and 27.1%, for wholly owned subsidiaries, joint venturing, and licensing, respectively) [Pedhazur 1982]. The results suggest, therefore, that the discriminant functions performed well in classifying the three distinct entry modes.

Moreover, a two-group breakdown analysis was conducted to examine the performance of the discriminant functions in differentiating the three entry modes [Stevens 1972]. Mahalanobis' D^2 was calculated to examine the distance of each pair of groups on the discrimination map. Mahalanobis' D^2 represents the squared distance between the centroids corresponding to the groups along the discriminant axes. The larger the D^2, the more heterogeneous the groups. In addition, two other multivariate statistics were also reported for each pair of groups: Hotelling's T^2 and Fisher's R^2. These results are reported in Table 5. As shown in Table 5, the discriminant functions proved to be significant ($p<.001$) across all pairwise comparisons.

MNL Results. Table 6 provides the MNL results. As can be seen in Table 6, all three global strategic variables showed a significant impact on the entry mode choice, but to various degrees. Specifically, while firms showed a greater likehood to choose wholly owned subsidiaries over licensing when they ranked global concentration highly, firms tended to avoid licensing and rather to pursue a higher control mode, either wholly owned subsidiaries or joint venturing, as they scored global strategic motivations or global synergies highly.

As shown in Table 6, while the two environmental variables, demand uncertainty and competition intensity, did not significantly affect firms' entry mode

FIGURE 2
Discriminant Territorial Map



choice, the other two environmental variables, country risk and location unfamiliarity, carried a considerable impact on the entry mode choice. Specifically, firms with high host country risk or location unfamiliarity tended to avoid wholly owned subsidiaries or joint venturing in pursuit of the lower resource commitment mode of licensing.

Lastly, the two transaction-specific variables yielded mixed results. While the value of firm-specific know-how was not found to affect firms' entry mode decision, the tacit nature of know-how did affect the odds of firms' choice of entry mode. Specifically, the higher the tacit component of know-how, the greater the likelihood for firms to choose either wholly owned subsidiaries or joint venturing over licensing agreements.

The fit of the model was tested based on the likelihood ratio shown in Pindyck and Rubinfeld [1981]. The fit statistic used was $-2 \log \lambda$, where λ is the likelihood ratio; this statistic follows a *chi*-square distribution. Here λ was defined as L_0/L_{max}, where L_{max} is the likelihood function of the model in question and L_0 is the likelihood function of the null model; the null model is the model where all slope coefficients are zero. Given the results that $\log L_0$ was -105.467 and $\log L_{max}$ was -44.941 as reported in the bottom of Table 6, the fit statistic of $-2 \log \lambda$ was 121.052 and hence significant at $p<0.01$.

TABLE 4
Classification Accuracy[a]

		Predicted Group Membership		
Actual Group	No. of Cases	WO	JV	LA
WO[b]	32	68.8%	31.3%	00.0%
JV	38	10.5%	81.6%	07.9%
LA	26	00.0%	23.1%	76.9%

[a]The overall hit ratio was 76.0%
[b]Groups defined: WO=Wholly Owned; JV=Joint Venturing; LA=Licensing Agreements

TABLE 5
A Two-Group Breakdown Analysis[a]

Groups Compared	Mahalanobis' D^2	Hotelling's T^2	Fisher's R^2
WO & JV	1.5405	19.7184	0.2248
JV & LA	1.8577	28.6782	0.3163
WO & LA	3.2745	46.9721	0.4567

[a]All of the statistics were significant at $p<.001$.

Altogether, the MNL results suggest that of the six variables found to influence the entry mode choice, three were strategic (global concentration, global synergies, global strategic motivations), two environmental (country risk, location unfamiliarity), and one transaction-specific (tacit nature of know-how). This provides evidence in support of the basic contention of this paper: that researchers would do well to treat the entry mode decision not only as a function of environmental and transaction-specific considerations but also as a function of the strategic relationship an MNC envisages between its operations across borders. This evidence appears to be consistent with that provided by MDA. Considering these two analyses are applicable to similar research settings, the comparable results are not surprising (see also Anderson and Coughlan [1987]).

Q-Statistic Test Results. As can be seen in Table 7, the unique influence of global strategic variables as a group was found to be statistically significant ($p<.05$) only on the choice between wholly owned subsidiaries and licensing agreements. A review of the Q-values suggests, however, that while statistically insignificant the group also carried some unique impact (Q-values>1) on the other two choices: wholly owned subsidiaries versus joint venturing and joint venturing versus licensing agreements. Although not of the focal interest of this test and accordingly, for purposes of brevity, not presented in Table 7, it is worth noting that the groups of environmental and transaction-specific variables played their unique role also in choosing between wholly owned subsidiaries and licensing; they were significant at $p<.05$ and $p<.10$,

TABLE 6
Multinomial Logit Model Estimates[a]

	Intercept	Global Concentration	Global Synergies	Global Strategic Motivations	Country Risk	Location Unfamiliarity	Demand Uncertainty	Competition Intensity	Value of Firm-Specific Know-How	Tacit Nature of Know-How
log(JV/LA)[b]	-7.022	0.360	0.119	0.530	-0.229	-0.720	0.122	0.090	0.102	0.211
	(-1.502)	(1.700)	(2.040)*	(2.181)*	(-2.762)**	(-3.318)**	(0.841)	(0.671)	(0.924)	(1.986)*
log(WO/LA)	-13.907	1.031	0.163	0.648	-0.410	-0.936	-0.026	-0.072	0.178	0.311
	(-2.187)*	(3.374)**	(2.398)*	(2.382)*	(-4.163)**	(-3.799)**	(-0.154)	(-0.419)	(1.422)	(2.625)**

[a]Log likelihood=-44.941; asymptotic *t*-statistics are in parentheses.
[b]Licensing option serves as the base of reference.
*$p<0.05$
**$p<0.01$

TABLE 7
Unique Contribution of the Group of Global Strategic Variables

Groups Compared	Q-Statistic	Degrees of Freedom	Significance Level
WO & JV	1.494	3,60	n.s.[a]
JV & LA	1.758	3,54	n.s.
WO & LA	3.014	3,48	$p<.05$

[a]n.s.=not significant

respectively. Overall, the results provide evidence that beyond environmental and transaction-specific factors, the group of global strategic considerations plays an important role in making multinationals' entry mode choice.

CONCLUSION

This paper argues that beyond the environmental and transaction-specific factors established in the literature to affect the entry mode decision, we should also consider a multinational's global strategic posture in reaching this decision. Support for this view was found in all levels of our empirical analysis, viz., MANOVA, MDA, MNL and *Q*-statistic test. The MANOVA results indicate that there are overall differences in the profiles of the three distinct entry modes of licensing, joint venturing, and wholly owned subsidiaries with respect to the nine entry mode determinants of our eclectic framework. This suggests that the eclectic framework presents a reasonable way to explain a multinationals' entry mode decision behavior.

When assessing the effects of the entry mode determinants in discriminating among the distinct modes of entry, our MDA, MNL and *Q*-test results consistently suggest that firms' final entry mode choice is significantly influenced by global strategic variables as well as by environmental and transaction-specific factors. These findings further support our assertion that the decision framework for multinationals' entry mode choice should expand beyond the narrow confines of the individual entrant to encompass the strategic relationship a firm envisages between its operations across borders.

This study provides some contribution to management. First, this research helps to reinforce in executives'mindsets the importance of expanding the decision framework beyond the narrow confines of each entry decision in isolation to encompass the global strategy their firm pursues or aims to pursue. Second, managers can be provided with a better understanding of the importance of each variable in influencing the entry mode decision; hence they can better prioritize the relevant variables in evaluating their entry mode alternatives. This appears valuable because it will allow managers, who often confront time and resource constraints, to focus on the variables most relevant to their entry mode decision without going through an exhaustive entry mode analysis.

This work is not without limitations. One limitation stems from the manufacturing emphasis of this study. The investigation of other sectors (e.g., service sectors) remains to be undertaken to test the generalizability of our findings. A further limitation arises from the fact that the entry decisions were studied post hoc rather than during the decision process; this might result in the responses being partially based on retrospective rationalizations. However, given that the entry modes evaluated by respondents were recently undertaken and that managers most likely did not know the results of their decisions at the time of questionnaire completion, it appears unlikely that their responses were seriously exposed to such risks.

Notwithstanding these limitations, compared with the existing international entry mode works, this study enjoys a unique advantage in its use of data. Lack of good data on foreign operations especially at the firm level is a notorious problem in international business research. Hence, little empirical research on the choice of international entry modes is known; the topic currently remains largely untested and in a conceptual state. This study is the first to use firms' direct responses rather than secondary data as input in conducting a relatively large-scale empirical investigation of this topic.

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