

Bargaining at the MNC-Host Country Interface: A Mode of Entry Perspective

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Studies examining the expansion efforts of multinational corporations (MNCs) have focused primarily on one of four lines of inquiry. One line explains *why* firms are motivated to expand beyond domestic markets in terms of transaction cost economics (TCE) (Williamson, 1975, 1985); eclectic theory (Dunning, 1980; Woodcock, Beamish, & Makino, 1994); and knowledge transfer efficiencies (Anand & Kogut, 1997; Kogut & Zander, 1993). A second line explains the *how*, or mode that firms may use to enter foreign markets, including export/license agreements, joint ventures, and acquisitions (Chang, 1995; Kogut & Singh, 1988; Volkmar, 1997). A third line examines *where*, or into which countries firms will expand. This line suggests that given the firm's specific characteristics (e.g., resources, competitive advantage, technological capabilities) and those of the industry (e.g., number of competitors, growth rates, research & development concentration) firms will choose nations based on their characteristics (e.g., natural resources, skilled labor, political stability, minimal trade barriers, strong economy) (Buckley & Casson, 1976; Porter, 1986, 1990). A fourth line examines the pattern of MNCs' investments into particular countries (Anand & Kogut, 1997; Buckley & Casson, 1976; Porter, 1986, 1990). Implicit in this research is an understanding that firms develop a strategy for how they time or pace their international expansion investments. However, this literature does not explicitly treat MNCs' timing-of-entry as an outcome variable.

Research on MNC expansion activities can be further developed in at least two ways. Existing studies are limited in that they have not examined more than two of the above lines of inquiry in any one study. However, it is the thesis of this paper that firms do not make decisions regarding why, how, when, or where to expand internationally, independently.

Hence, a model that synthesizes more than two of the lines of inquiry would greatly contribute to our understanding of the complexity involved in expansion decisions. The second way in which the literature can be developed is to add a temporal element to the research by making the determinants of MNCs' timing-of-entry decisions explicit.

There are at least two reasons why the synthesis of the four lines of inquiry has not already been made: 1) level of analysis constraints; and 2) static data collection. It has not been since Hymer's (1960) dissertation that management researchers have taken a country level of analysis (Boddewyn & Brewer, 1994; Buckley & Casson, 1976; Hennart, 1982). Researchers have instead preferred taking a firm or industry level of analysis when studying MNC expansion behavior (Buckley & Casson, 1976; Hennart, 1982; Porter, 1986, 1990). However, to truly synthesize all four lines of inquiry and to mirror the reality in which MNCs make expansion decisions, firm-specific, industry-specific, and country factors must be considered simultaneously. The second reason is that most of the research is not longitudinal, rendering static models. Therefore, the fourth line of inquiry which should address the timing of MNCs' expansions, or *when*, has not been fully developed. It is in this area that a second contribution can be made to the literature by developing a temporal model that predicts MNCs' timing-of-entry decisions.

The purpose of this paper is three-fold. The first is to aggregate the firm-specific, industry-specific and country factors that have separately been proven empirically to be important independent variables in prior research into *one* decision-making model. The second is to illustrate how these same variables can be aggregated and used to predict an MNC's timing-of-entry choices which adds a temporal element above and beyond that provided by previous models. The third is to introduce a new category of variables the author terms inter-country variables, that better capture the global context in which an MNC makes mode-of-entry and timing-of-entry decisions. These variables reflect the interactions that occur between countries, independent of an MNC's activities in these countries. As

recommended by Boddewyn and Brewer (1994), the international political economics (IPE) literature was consulted to identify these variables. This paper illustrates how three of these variables (country trading preferences, country trading alternatives, and country capital needs) are also predictors of an MNC's mode-of-entry and timing-of-entry decisions.

Using option theory as the lens, this paper takes the perspective of an MNC contemplating entry into a set of countries¹ which requires two decision outcomes, or dependent variables. The MNC must decide how to enter this set of countries, or its mode-of-entry, and when it will enter each country in the set, or its timing-of-entry. To make either of these decisions, firm-specific, industry-specific, intra-country and inter-country factors must be considered simultaneously. Using a decision-level of analysis, each of these factors is considered as a decision criterion in a functional equation that assesses the value of entering a set of countries in a particular way and at a particular time. Option theory is appropriate for developing this model because it treats variables traditionally studied at different levels of analysis as independent factors to be weighted in a single decision equation.

First, the two decision outcomes (mode-of-entry and timing-of-entry) are defined. Next, is a discussion of several prominent theories that explain why MNCs expand, and the advantages and limitations of these theories are illustrated. The discussion ends with a detailed description of option theory and its applicability as the theoretical lens for this model. In the section that follows, three inter-country variables (trading preferences, trading alternatives, and capital needs) which have been examined in the international political economics literature are introduced and defined. Interwoven into this discussion is how these particular variables provide the *global* element needed to make this model unique and

¹ It should be noted that an MNC's contemplation of entry into a *set* of countries was chosen as the domain for the model for two reasons: (1) Implicit in the definition of an MNC is the fact that it has operations in multiple countries and, as already acknowledged by Chen and Stucker (1997), MNCs survey the entire globe before making decisions. (2) Research by Porter (1986, 1990) and Sundaram and Black (1992) has shown that MNCs actually formulate strategy for entry into multiple countries instead of approaching entry into countries as independent decisions.

complete. In the second major portion of the paper, the proposed model is presented and a number of testable propositions are provided. Finally, a discussion of the limitations of the model, the implications for further research, and a conclusion are provided.

MODE-OF-ENTRY AND TIMING-OF-ENTRY AS MNC DECISION OUTCOMES

Mode-of-entry. Mode-of-entry by an MNC can take a number of forms depending on the firm's resource commitment. At the lower end of commitment is a firm's choice to export to a country or to license its product in another country. At the more intermediate level, firms may share the risk of operating in a foreign market by establishing a joint venture. The most significant investment is required when an MNC opens a start-up operation abroad or acquires an existing firm in another country.

Timing-of-entry. Timing is important in the consideration of MNC expansion decision-making. Well-planned but ill-timed projects can adversely affect performance. There is special uncertainty involved in multiple country expansion decisions. The environmental variables that MNCs consider prior to expansion are subject to change: e.g., the political stability within and between the countries; or the comparative advantages of one of the countries or the entire set of countries. Therefore, in addition to managing the risk associated with particular environmental variables, MNCs must attempt to optimize or match their timing of expansion with the opportunities presented. However, timing-of-entry has not been identified as an outcome variable in management literature.

A distinction is made in this paper between the mode in which an MNC enters a country and its timing-of-entry. Chang (1995) noted that firms have traditionally been thought to enter a country first by exporting, then by establishing a joint venture, and then by acquisition. Thus, a firm can be viewed as sequentially increasing its presence within a country. However, a firm's intent to increase its investment and control over its assets within that country represents a mode-of-entry, not specifically an intent of timing. The pace at which a firm enters a country adds a temporal element. A firm has the option to enter

multiple countries at the same time (herein referred to as simultaneous entry). The firm also has the option to enter these same countries one at a time, over a period of years (herein referred to as sequential entry). Or the firm can enter a set of countries informally, indicating that the actual timing of entry was not part of the initial strategy; for example, a firm may employ a general strategy to enter a particular set of countries within a ten year period - two countries in the first year, another country in year five, and the remainder at other (unspecified) times in the ten year period.

THEORIES FOR MULTINATIONAL CORPORATION EXPANSION

Many theories have been proposed over the years to explain the reasons for MNC expansion. Each has advantages for studying certain questions regarding MNC expansion behavior. Each one also has limitations due to the level of analysis it requires. A brief summary of three well-known theories is provided. Each of these theories is often tested employing the firm or industry level of analysis. However, MNCs intending to invest in multiple countries face a myriad of choices regarding countries, modes-of-entry, and timing-of-entry; additionally, these choices are influenced by available resources, competition, changes within country environments, changes in inter-country relations, and changes in the global economy.

Last, option theory is explained, with a discussion of how it can be used to aggregate some of the benefits of previously established theories. The purpose of using option theory as the lens for viewing MNCs' decision-making process as it relates to mode-of-entry and timing-of-entry choices is evaluated. For the purpose of this paper, the decision is the level of analysis chosen. Option theory captures the essence of decision-making by methodically assigning a value to the opportunity associated with MNCs' expansion into a targeted set of countries. This value subsequently predicts mode-of-entry and timing-of-entry choices. The result shows that some choices are better than others, and some provide the firm with more flexibility than others as more information becomes available.

Transaction cost economics view of MNC expansion. The transaction cost economics (TCE) theory suggests that MNCs exist as a result of market failures (Jenkins, 1987). Market failures “arise when the market does not bring about an optimum allocation of resources” (Trebing, 1987:1716). Market failures can take one of three forms: monopolies; externalities; or information asymmetry (Dahlman, 1979; Mahoney & Pandran, 1992; Trebing, 1987; Yao, 1980).

Information asymmetry occurs when information available to one party is not available to another (Williamson, 1975, 1985). When one party is able to obtain information unilaterally, the disadvantaged participant is faced with the high cost of trying to protect itself against opportunism. Williamson (1975, 1985) and Teece (1982) suggest that it is more efficient for firms to minimize such costs by internalizing transactions than by utilizing the market. Hence, MNCs can alleviate some of the problems of information asymmetry by operating their own facilities in foreign markets rather than making exporting or licensing agreements with other corporations.

TCE has recently been extended to apply to joint ventures, thereby allowing firms operating efficiently between markets and hierarchies (Borys & Jemison, 1989). In these instances, it is more costly to acquire or start an operation in a foreign market than it is to partner with another firm. TCE assumes that the contract existing between the two firms is protection against opportunistic behavior. However, Pearce (1997) suggests that joint venture contracts are not comprehensive. Thus, it is only after some time has elapsed and the uncertainty of conducting business in the new market subsides that the true value of the contract is realized (Chi & McGuire, 1996; Folta & Leiblein, 1994). Generally at this point, the party that stands to benefit most by having an operation in this market then purchases the partner’s share (Chi & McGuire, 1996; Folta & Ferrier, 1997; Kogut, 1991), resulting in a firm’s internalization of transactions.

As evidenced by the discussion thus far, the use of TCE as the theoretical foundation

for understanding MNC expansion behavior is more favorable for using a firm or an industry level of analysis for two reasons. First, it is inherent in the notion of markets that firms competing within a market are in the same industry. Second, contracting or hierarchical controls are utilized to curb the opportunistic behavior of another party in the same industry. However, TCE does not account for the fact that trust can be established between two parties engaged in multiple interactions (Deeds & Hill, 1996; Florin, 1997; Gulati, 1995), which would alleviate the need for hierarchical controls and make joint ventures more attractive. Underlying Gulati's definition of trust is the assumption that parties form relationships. Similarly, Zaheer and Venhatraman (1997) suggest that TCE alone does not explain the nature of contracting and that sociological variables must be considered in order to capture the relational aspect of contracting. There is a temporal element to incorporating trust or the value of a relationship in a model of MNC expansion behavior, because relationships must be established over time and after multiple interactions. They do not occur instantaneously. While the model to be proposed in this paper does not fully capture the relational element of MNC expansion behavior either, it does capture the element of time.

Eclectic perspective of MNC expansion. The eclectic view of MNCs focuses on corporate ownership advantages (Dunning, 1980; Woodcock, Beamish & Makino, 1984). Thus, firm-specific characteristics are essential to the theory. The level of analysis generally employed to assess these advantages is the firm or industry. Dunning (1980) suggest that three factors determine the likelihood that a firm will engage in international investment: (1) the extent to which it possesses stronger assets than its competitors; (2) its interest in internalizing these assets rather than selling them; and (3) the exploitability of these asset-specific advantages in a foreign country. Eclectic theory differs from TCE in that the threat of opportunism is not implied; instead of engaging in reactive, protective behavior, the firm is simply capitalizing on its ownership advantages. Woodcock, Beamish and Makino (1994) and Rhoades and Rechner (1997) tested the eclectic theory and found that ownership control over resources as

determined by mode-of-entry choice, had a positive effect on the performance of a firm.

While ownership is important to consider in mode-of-entry decisions, it cannot be the sole decision-making criterion because it does not explain country-level behavior. This theory is also not very helpful in predicting timing-of-entry choices.

Knowledge transfer view of MNC expansion. Kogut and Zander (1993) suggest that MNCs arise through their superior use of organizations as vehicles for the international transfer of knowledge. Like TCE, which suggests organizations can benefit from internalizing market transactions, the knowledge transfer view suggests it is more efficient and less expensive for firms to internalize and exchange information rather than to acquire information from external sources. However, coordinating the flow of organizationally and environmentally relevant information in a trans-national organization is not without its challenges (Gupta & Govindarajan, 1991).

The knowledge transfer view employs a firm level of analysis in which the firm's efficiency determines the ultimate success of the knowledge transfer (Kogut, 1988), in contrast to the TCE perspective which emphasizes market failures and the fear of opportunism. Similar to eclectic theory, this view identifies important firm-specific variables that must be considered when making mode-of-entry decisions. However, it does not help explain country-level behavior or the timing of expansion activities.

Option theory perspective of MNC expansion. Option theory is a concept traditionally applied to finance. More recently, it has been used in management literature to explain how firms value collaborative venturing agreements (Chi & McGuire, 1996; Folta & Ferrier, 1997) and technology acquisition (Bowman & Hurry, 1993; Folta & Leiblein, 1994; Hurry, Miller & Bowman, 1992; McGrath, 1997). "Options represent the right to participate in future opportunities without the obligation to do so" (Malos & Champion, 1995:619; see also Sharp, 1991). Kogut (1991) saw joint ventures as an option to expand in response to future market conditions. He proposed that the option is *exercised* by acquiring the venture.

The application of option theory in management strategy differs from its use in finance in that “financial option models rely on several core assumptions to arrive at an option price” (McGrath, 1997:975). These assumptions include: (1) the underlying asset of the option has a known price; (2) it is liquid, or tradable; and (3) the more volatile the price of the underlying asset, the greater is its option value (McGrath, 1997). In management strategy these assumptions are relaxed, but the core is similar in that, given an uncertain future, people like to keep options open (Bowman & Hurry, 1993). Thus, an option simply represents an investment in an opportunity which can be capitalized upon or *exercised* as more information becomes available regarding the value of the investment.

The essence of option theory as it relates to MNCs can be illustrated using a well-known MNC, Coca-Cola. Coca-Cola has a presence in nearly every country in the world. Yet this did not preclude the company from further enhancing its position in several countries in 1996 with a start-up in China and two joint ventures, one in Venezuela and another in Germany.² While the actual decision-making process involved in developing and implementing this growth strategy was not made public, had option theory been the decision rule, certain inferences could be made. Option theory would infer that Coca-Cola assessed the value of entering several different countries in the same year, using the modes-of-entry it did, to be greater than the value of choosing a different combination of locations, timing, and entry-mode choices. Decision choices must be evaluated, with each one assigned a value based on the probability that other environmentally controlled events will or will not occur. Underlying its choices was the level of uncertainty Coca-Cola was willing to incur. The concept that a firm can capitalize on uncertainty if its management of risk is well-timed and well-coordinated is the very essence of option theory.

Considering that environmental uncertainty is at the core of option theory, it is

important to identify the factors that must be assessed when assigning values used to predict mode-of-entry and timing-of-entry choices. As evidenced by the previously established theories, firm-specific and industry-specific characteristics are important. *Intra-country* variables have also been used to interpret the multiple political, regulatory, cultural, economic, and resource endowment factors that may impact the ability of MNCs to operate and outperform competitors in particular countries (Anand & Kogut, 1997; Ghoshal & Bartlett, 1990; Lecraw, 1984; Porter, 1980, 1981, 1986, 1990). However, *inter-country* factors are often overlooked in management strategy research.

The international political economics (IPE) literature has elaborated upon research on inter-country factors (Boddewyn & Brewer, 1994). While the IPE literature has identified many such factors, the author has chosen three in particular: trading preferences; trading alternatives; and capital needs. These three factors encompass the complexity of the global market in which MNCs make decisions and highlight the possible interactions between countries (independent of MNCs) that may affect MNCs' mode-of-entry and timing-of-entry choices.

Examples of MNCs that failed to consider these inter-country factors can be found in Uhlenbruck's (1997) research on MNCs' acquisition of existing companies in Central Eastern European (CEE) countries. This study found that the acquired firms' sales to clients in other CEE countries were lower than pre-acquisition levels. Uhlenbruck (1997:207) speculated that MNCs acquired these firms with the hope of selling to firms in other CEE countries, but the trade arrangements between these countries were now defunct due to political instability, and "the acquired firms likely have lost their links to other countries in CEE."

DESCRIPTIONS OF INTER-COUNTRY VARIABLES

Trading preferences. Countries' preferences for trading partners depend upon politics, economics, and convenience. As Wells (1983:137) noted, "Sri Lanka, Mauritius, and Papua,

² Coca-Cola's 1996 Annual Report

New Guinea, have all recruited investors from Hong Kong, largely for economic advantages. The policies of the Egyptian government have favored Arab investors over other foreign investors, principally to further Arab unity. On paper at least, the members of the Andean Common Market in Latin America prefer investors from other Latin American countries partly as a counterweight to the powerful economic and political position held by the United States.”

The trading preferences of a country are an important consideration to an MNC contemplating multiple country expansion projects. If the MNC’s objective is to coordinate its expansion activities, within a set of countries, it must know whether or not these countries have trading preferences for each other. This fact could facilitate or hinder an MNC’s exports (e.g., unfinished goods or raw materials) to its other facilities or to the consumer markets of the other countries in the set. If its objective is to use its operations in this set of countries as a springboard for gaining access into country markets outside of the set, then knowing this set of countries’ trading preferences for countries *outside* of the set is important. Therefore, when making mode-of-entry and timing-of-entry choices, an MNC must assess the value of the trading preferences of a set of countries and the stability of these choices over time.

Trading alternatives. There are numerous trading alliances in which countries can participate, and developed countries have access to more than one. These alliances provide many benefits to the participants, one of the most important being a favorable trading status relative to other countries. The largest of these alliances is the General Agreement on Tariffs and Trade (GATT), which had 103 member countries in 1992. Another is the North America Free Trade Agreement (NAFTA), shared among the United States, Canada, and Mexico. In Europe, there is the European Free Trade Association (EFTA), and the European Community (EC). The EC “has always divided the rest of the world into groups in the design of its trade policy: its own members, the EFTA; the Mediterranean; the former colonies in Africa, the Caribbean, and the Pacific” (Griffith-Jones, 1993:33). Considering the pending unification of

the EC, these preferences are not likely to change any time soon.

The distinction between a country's trading preferences and its trading alliances is one of formality and politics. Membership in a trading alliance is much more formal in that it carries conditions and terms of trade, not just preferences. Membership in a trading alliance also has political implications in that politics often impacts the terms of trade. Thus, an MNC's choice to expand into a set of countries which all belong to the same trading alliance ensures some stability in the trading patterns of these countries. In addition, political favors may be exchanged among these countries, thereby turning previously *intra*-country issues into *inter*-country issues. An MNC that chooses a set of countries that are not in the same trading alliances may face trading impediments when trying to export *inter*-country within the set.

Capital needs. The influence of the World Bank and the International Monetary Fund (IMF) increased in the 1980s as many developing countries experienced debt crises. Loans provided by these two institutions often carried strict conditions which impacted borrowing countries' trade policies (Girling, 1985; Tussie & Glover, 1993). The debt crises have also caused many developing countries to face intense competition for capital - either in the form of government aid, bank credit, foreign direct investment, or portfolio investment - because traditional forms of capital are decreasing or carry undesirable conditions (Stopford, Strange, & Henley, 1991).

At first glance, the capital needs of a country might be seen as impacting only its national economy. However, loans from the IMF or the World Bank may have imposed trade restrictions. Thus, there can be a connection between a country's capital needs and its alternatives and preferences. To the extent that other countries lend financial support, even without strict conditions, the borrowing country may then owe political or trade favors. In any case, the capital needs of a country may ultimately impact its trade relations, and further help or hinder an MNC's expansion strategies regarding mode-of-entry and timing-of-entry decisions.

MODEL DEVELOPMENT AND PROPOSITIONS

[INSERT FIGURE 1 AND FIGURE 2]

As evidenced in the previous discussion of the literature, three theories- TCE, eclectic theory, and knowledge transfer efficiency theory- have provided the theoretical framework for testing the relationship between firm-specific and industry-specific variables (as constrained by intra-country variables) and MNCs' mode-of-entry choices (Chang, 1995; Hennart, 1982; Kogut & Singh, 1988; Woodcock, Beamish & Makino, 1994). Firm-specific and industry-specific variables have served as separate independent variables, with intra-country variables as moderators, and mode-of-entry as the dependent variable. Instead, the model proposed in this paper assimilates the firm-specific, industry-specific, and intra-country variables into one functional equation which becomes a single independent variable. The resulting equation assigns an option value to the opportunity associated with an MNC's target set of countries. This value is used to predict mode-of-entry decisions. Thus, the level of analysis is the decision. To fill a gap in previous literature, the three inter-country variables (trading preferences, trading alternatives, and capital needs) are added to the option value equation to ensure that the information assessed in making mode-of-entry decisions is truly global. The dependent variable, mode-of-entry, is treated as a categorical variable in which the values can either be license/export agreement, joint venture, or acquisition. The independent variable, option value is continuous, but for the purpose of this paper is given one of three levels: high, moderate, or low.

The same firm, industry, intra-country, and inter-country information can be used to assign an option value to the stability of an MNC's target set of countries. This value is used to predict timing-of-entry decision. The option value becomes the independent variable that directly influences the dependent variable, timing-of-entry. While time is a continuous variable, here it is considered to be categorical, taking on one of the following values: simultaneous, sequential, or informal. Thus, an MNC entering a set of countries at the same time (defined as within the same calendar year) is considered a simultaneous entry. An MNC

entering a set of countries over a period of years as part of its initial strategy (wherein having a planned strategy to enter each country at specific intervals of time was established when the initial decision was made) is considered a sequential entry (Mintzberg & Waters, 1985).

Finally, an MNC that enters a set of countries over a period of years (i.e., without a strategy for the timing-of-entry, but merely a generic goal to enter a set of countries eventually) is considered an informal entry (Mintzberg & Waters, 1985). It should be noted that the nature of this relationship differs from that between option value and mode-of-entry choices in that changes in the decision criteria are emphasized over the criteria themselves. The specificity of each of the relationships in the model is explained in the following sections.

Mode-of-entry. The fact that certain firm-specific variables (e.g., asset size, degree of diversification, country experience, multinational experience) and industry-specific variables (e.g., industry concentration, average research & development expenditures, advertising expenditures) were previously tested and found to influence MNCs' mode-of-entry choices (Kogut & Singh, 1988) means that they cannot be discounted. Yet, they need to be considered simultaneously when making mode-of-entry decisions. Kogut and Singh (1988) developed a functional equation that aggregated this information into an option value. However, the emphasis of their research was on the variance national culture explained in mode-of-entry decision. To isolate the cultural variance, they controlled for firm-specific and industry-specific variables. They found that the effects of culture were significant. This paper acknowledges culture, but only as a component of intra-country factors (e.g., average level of education of labor force, unemployment rates, economic growth rates). Hence, option value is seen as a function of the following (see Figure 1):

$$\text{Option value} = f(\text{firm-specific variables}[X_1], \text{industry-specific variables}[X_2], \text{intra-country variables}[X_3])$$

However, these variables do not provide a complete picture of the environment in

which MNCs' expansion decisions need to be made. Implicit in Kogut and Singh's (1988) model is that an MNC expands into one country at a time; hence, a mode-of-entry decision is made independently each time an MNC expands. However, this is not entirely realistic since MNCs do develop strategies for entry into a set of countries (Coca-Cola 1996 Annual Report; Meredith, 1/21/98- *The New York Times*). When such entry is to be made, an MNC must additionally consider the interactions among these countries that are independent of the MNC's affiliations with each country. Therefore, it is necessary to consider the three inter-country variables (see Figure 1).

Option value = $f(\text{trading preferences}[X_4], \text{trading alternatives}[X_5], \text{and capital needs}[X_6])$

Overall, the higher the number of trading preferences and alliances which the targeted countries have in common, the higher the option value assigned to the decision to invest in this particular set of countries. The higher the aggregate amount of loans outstanding by the countries in the set to the World Bank or the IMF, the lower the option value assigned to investing in this particular set of countries. However, the higher the aggregate amount of loans outstanding by the countries in the set to *other countries in the set*, the higher the option value assigned to the decision to invest in this particular set of countries.

Considering that the emphasis here is on multi-country expansion decisions and the value that inter-country variables add to such decisions, it is expected that inter-country variables will explain more variance in entry-mode selection than any of the other variables would alone.

Proposition 1: The three inter-country variables- trading preferences, trading alternatives, and capital needs- will directly influence an MNC's mode-of-entry choice. Specifically, controlling for firm-specific, industry-specific, and intra-country variables, the three inter-country variables will still explain a significant portion of

variance in an MNC's mode-of-entry choice.³

Option value = $f(\text{inter-country variables: controlling for firm-specific, industry-specific, and intra-country variables})^4$

According to assertions of TCE, eclectic theory, and knowledge transfer theory, an acquisition is the most desired mode-of-entry because it allows for the most control over a firm's resources. Recently, however, option theory has been linked to some of these theories to illustrate how joint ventures may sometimes be more advantageous (Chi & McGuire, 1996; Folta & Ferrier, 1997). Option theory suggests that an acquisition, a joint venture, or a license/export agreement are equally desirable given an uncertain environment in which conditions regarding firm-specific factors, industry-specific factors, intra-country factors, and inter-country factors are constantly changing and require coordination.

If an MNC wants to enter a set of countries only to follow a competitor, the objective may be to simply enter with the least amount of resources committed until more information becomes available. Thus, the MNC may favor a license/export agreement instead of an acquisition, despite minimal transaction costs and knowledge transfer efficiencies associated with an acquisition. In this case, the option assigned to the decision to enter the country set is low because it is merely a reaction to the move of a competitor rather than a part of a long-

³ Each of the inter-country variables can be operationalized using secondary data sources. Trading preferences and trading alternatives can be assessed categorically or numerically. For instance, a pool of countries considered for expansion will have a trading preference toward a region or specific countries which can be categorized by name. The amount of overlap of the names which the countries in a set share in common captures the interconnectedness of the set. Instead of using names, a researcher could simply count the number of countries for which each country in the set has trading preferences. The same can be applied to trading alternatives. The trading alliances to which each country in a set belong can also be captured categorically or numerically. Last, capital needs of the countries can be operationalized by adding the total amount of loans each country in a set has outstanding to the World Bank or the IMF. Any other well-publicized capital infusions provided by other countries to assist the financial needs of a country (e.g., South Korea) can also be ascertained.

⁴ The relationship between the variables in this functional equation may be additive or multiplicative. Based on an MNC's strategy, some of the variables may be assigned more weight than others. These are issues that must be tested empirically. For simplicity, this paper assumes that the variables are given equal weight and are additive.

term strategy. Thus, an option value assimilates all of the information (firm, industry, intra-country, and inter-country), resulting in a value that is high, moderate, or low as it relates to mode-of-entry choice.

Proposition 2a: A high option value assigned to the decision to invest in a particular set of countries increases the probability that the MNC will choose an acquisition mode of entry into these countries.

Proposition 2b: A moderate option value assigned to the decision to invest in a particular set of countries increases the probability that an MNC will choose a joint venture mode of entry into these countries.

Proposition 2c: A low option value assigned to the decision to invest in a particular set of countries increases the probability that an MNC will choose a licensing or exporting mode of entry into these countries.⁵

Timing-of-entry. Harrigan (1986: 12) suggests that “timing is an important part of effective joint venture strategy formulation in situations where environments change rapidly because firms that move first often gain access to better partners, which in turn can give them a competitive advantage that late entrants can not capture as easily.” While her comment refers to joint ventures, it is highly probable that first mover advantages of any sort may provide a firm with opportunities unavailable to slower moving competitors. Thus, regardless of an MNC’s mode-of-entry choice, timing-of-entry is important. However, similar to mode-of-entry, there is a natural probability that an MNC will enter a group of countries in a set fashion based on the capital resources of the firm, and the competitive and risk strategy it employs. The traditional theories (TCE, eclectic theory, and knowledge transfer efficiency theory) do not provide explicit direction for testing how an MNC determines the timing of its

⁵ The entry mode choice of an MNC can be operationalized using secondary sources such *Mergers and Acquisitions*, and *Yearbook on Corporate Mergers, Joint Ventures, and Corporate Policy*. Publicly traded

expansion activities. Option theory, on the other hand, presumes that an MNC is concerned about both the uncertainty regarding the decision to enter a set of countries and the question of when is the optimal time to enter a set of countries. Thus, the assignment of a high, moderate, or low option value conveys the urgency with which an MNC associates the expansion. This value is then used to predict when an MNC will enter a set of countries.

Mintzberg and Waters (1985:259) proposed that in the case of a firm's planned strategy "leaders at the centre of authority formulate their intentions as precisely as possible and then strive for their implementation." On the other hand, they noted that patterns or consistencies may be realized "despite or in the absence of intentions" and that these patterns may be imposed by factors external to the firm (Mintzberg & Waters, 1985:258). An MNC can have a planned or emergent strategy as it relates to the timing of its expansion into a set of countries. An MNC interested in preempting a competitor's entry into a set of foreign markets (Chen, 1996; Chen & Stucker, 1997; Harrigan, 1986) may wish to enter a set of markets simultaneously. And an MNC that wants to allow itself room to learn and engage in trial and error in its international operations may have a sequential plan of entry (Chang, 1995). An MNC interested in following a competitor into each of the foreign markets in which the competitor has operations may wish to do so over a period of years. In other words, it can be surmised that MNCs must make timing-of-entry decisions which are similar in complexity to mode-of-entry decisions.

This paper suggests that the same firm-specific, industry-specific, and intra-country variables can be used as predictors of an MNC's timing-of-entry decision. Thus, these variables can be employed in a functional equation that assigns an option value to an MNC's timing-of-entry decision as it relates to international expansion. However, since the MNC is concentrating on timing, it is not the absolute values of these variables that matter. Since the MNC is trying to gauge the uncertainty and risk associated with any or all of these variables

corporations will also announce such decisions in national newspapers and press releases.

changing unexpectedly, it is the change in these variables that matter.

An MNC attempting to position itself to expand must be able to respond quickly to actual or anticipated changes in the environment for both competitive and self preservation reasons (Harrigan, 1986; Kogut, 1985; Nayyar & Bantel, 1994). One way to accomplish this is to formulate a plan of action based on past events. Thus, given a particular time frame (e.g., the past five, or ten years), an MNC can assess the changes in its firm-specific and industry-specific factors and the changes in the intra-country variables of each country it has targeted for expansion (see Figure 2).

Proposition 3: Changes in firm-specific, industry-specific, and intra-country variables (rather than absolute values) will directly influence an MNC's timing-of-entry decision.

The functional equation of option value is thus stated as follows:

$$\text{Option value} = f(\Delta \text{firm-specific variables}[X_1], \Delta \text{industry-specific variables}[X_2], \Delta \text{intra-country variables}[X_3])$$

However, once again, these variables do not provide a complete picture of the environment in which MNCs' expansion decisions must be made. When entry into a set of countries is to be made, an MNC must also consider the stability of the interactions among these countries (that are independent of the MNC's affiliations with each country). Consideration of the three inter-country variables (trading preferences, trading alternatives, and capital needs) is, thereby required. Of particular interest would be whether the countries in the set change trading alliances frequently, or if a specific event has occurred (Uhlenbruck, 1997) to permanently alter the trading relations. Additionally, the firm will want to consider any change in the financial health of any of the targeted countries that would cause its borrowing needs with the World Bank and IMF to increase (e.g., South Korea). Taking these consideration into account, an MNC may still decide to enter this set of countries; however, it

may choose to pace itself gradually until more information becomes available. This paper anticipates that changes in these inter-country variables can preempt any strategic plans surrounding a firm's core competencies or competitive position within an industry (see Figure 2).

Option value = $f(\Delta\text{trading preferences}[X_4], \Delta\text{trading alternatives}[X_5], \Delta\text{capital needs}[X_6])$

Proposition 4: Change in the three inter-country variables (trading preferences, trading alternatives, and capital needs) will directly influence an MNC's timing-of-entry choice. Specifically, controlling for firm-specific, industry-specific, and intra-country variables, the three inter-country variables will still explain a significant portion of variance in an MNC's timing-of-entry choice (see Figure 2).⁶

Option value = $f(\Delta\text{inter-country variables: controlling for changes in firm-specific, industry-specific, and intra-country variables})$

A significant amount of change in any of these variables could be beneficial or harmful to an MNC. If the change has been rapid but positively affects the opportunities available to an MNC, a high option value would result. In other words, a great deal of urgency would be associated with entry into a particular set of countries. However, if the change is rapid but negatively affects the opportunities available to an MNC, a low value would result. Despite a low option value associated with a set of countries, an MNC may still determine that some form of presence is required in order to match the moves of competitors. However, the MNC may choose to develop its strategy regarding the timing of its entry into these countries over time (i.e. emergent strategy) as more information becomes available.

⁶ The change in inter-country variables can be operationalized using secondary data sources by 1) choosing a particular time period to study and 2) measuring the changes in a set of countries trading preferences, trading

Thus, the following propositions regarding an MNC's timing-of-entry choices can be tested.

Proposition 5a: A high option value assigned to the decision to invest in a particular set of countries increases the probability that an MNC will choose a simultaneous entry pattern into these countries.

Proposition 5b: A moderate option value assigned to the decision to invest in a particular set of countries increases the probability that an MNC will choose a sequential pattern of entry into these countries.

Proposition 5c: A low option value assigned to the decision to invest in a particular set of countries increases the probability that an MNC will choose an idiosyncratic pattern of entry.

DISCUSSION

Limitations of the Model and Implications for Further Research

Management research generally tries to disaggregate variables to more finely study a particular phenomenon. While this paper, on the other hand, is attempting to aggregate a number of variables that were previously tested at different levels of analysis. Thus, it is possible that some information regarding an MNC's expansion behavior may be lost. For instance, the decision model proposed does not address the fine-grain details of a firm's decision-making process such as the role of interorganizational politics.

Another limitation to aggregating firm-specific, industry-specific, and intra-country variables into one functional equation is that these variables impact each other. To avoid multicollinearity in an empirical test, an attempt must be made to separate the causal effect of each of these variables on the others. The same holds for the three inter-country variables (trading preferences, trading alternatives, and capital needs) because they are inherently connected as well.

Aside from the fact that some of the variables within the option value equation may be

alternatives, and capital needs over that period.

highly correlated, the functional specification of the equation is unclear. For the sake of simplicity, this paper assumes the equation is linear and that the variables in the equation are equally weighted. However, the true nature of this functional equation must be tested empirically. By surveying an MNC, it may be ascertained that more weight is generally assigned to industry-specific factors rather than firm-specific, intra-country, or inter-country factors in calculating the option value assigned to a mode-of-entry or timing-of-entry decision. Thus, considering each of these factors as decision criterion with differential weighting, the true functional equation of the option value assigned to mode-of-entry decisions may be, for instance:

$$\text{Option value} = f(.20\text{firm-specific variables}), (.33\text{industry-specific variables}),$$

$$(.23\text{intra-country variables}), (.24\text{inter-country variables}))$$

The interaction between an MNC's mode-of-entry and timing-of-entry choices is not elaborated upon. In other words, under certain conditions (moderating variables) there may be varying combinations of an MNC's mode-of-entry choice and its timing-of-entry choices. For the purpose of this paper, this discussion was excluded to initially identify the individual pieces of information required to make such decisions. However, in reality, timing-of-entry and mode-of-entry decisions are not made independently. It is also likely that MNCs do not consider these decisions to have equal weight all of the time. In other words, depending on the situation, an MNC may consider it urgent to enter a set of countries immediately, regardless of mode. Hence, its timing-of-entry criteria is more heavily weighted in the decision making process. However, given a stable intra-country and inter-country environment, an MNC may not anticipate a great deal of change or uncertainty that might otherwise impact a timing-of-entry decision. Hence, the MNC would weight its mode-of-entry decision more heavily than its timing-of-entry decision. Further research is needed to learn how MNCs determine the relative importance of mode-of-entry and timing-of-entry

decisions.

There are methodological concerns of the model as well. The firm-specific, industry-specific, and intra-country variables used in this model have been tested empirically in other studies. However, the newly introduced inter-country variables which were adopted from the international political economics literature have not been previously tested in management strategy models. While a few of footnotes suggested how these variables might be captured empirically, it is very likely that it will be easier to gather this information from secondary data sources on developed countries. However, lesser developed countries and, possibly, emerging countries may have less formal trading agreements which are not as well documented in secondary data sources. Part of the reason these countries may have less formal trading preferences and arrangements may be due to their limited access to large trading alliances such as GATT, NAFTA, or EFTA (Tussie & Glover, 1993). This does not imply that trading preference and trading alternative information is any less important with regard to these countries when MNCs are contemplating mode-of-entry and timing-of-entry decisions, or that MNCs should exclude consideration of these countries for possible entry. It merely suggests that other methods may be required to capture this information in a functional equation of option value.

Using option value as the theoretical lens for this proposed model, the relationship between assigned option values and mode-of-entry and timing-of-entry decisions are treated as being domain-free. In other words, depending on an MNC's size, it would simply assign different weights to the different dimensions of decision criteria (i.e., firm-specific or industry-specific factors). Similarly, if the set of countries targeted for expansion were not developed countries, but were instead developing or emerging countries, an MNC would simply change the weights associated with intra-country and inter-country decision criterion. However, only through empirical testing with a diversified sample of MNCs and targeted countries could the existence of a particular domain emerge.

Conclusion

This paper has attempted to convey the complex decision-making process required of MNCs considering multiple country, multiple timing expansion decisions. It has also attempted to broaden the management strategy's scope of the environment in which MNCs make decisions by including the three inter-country variables: trading preferences, trading alternatives, and capital needs. The quantifiable nature of these variables was illustrated by their inclusion in the functional equation of option value. These variables are important to consider because the decision to enter multiple countries requires that an MNC face not only the specific environmental factors of each country, but also the interactions between these countries and the effects of such interactions upon its operations.

Underlying the proposed model is the assumption that MNCs face a more complex and uncertain environment than has been suggested in previous models. To better understand how MNCs make decisions in such an environment, option theory was used to evaluate how MNCs make mode-of-entry and timing-of-entry decisions. The decision was the level of analysis employed in the model. In particular, the option value an MNC assigns to the decision to invest in a particular set of countries was identified as being a function of the newly introduced inter-country variables and the previously identified firm, industry, and intra-country variables.

The quantifiable nature of this calculation of option value has managerial and empirical implications. On the one hand, it is accessible to managers because it allows them to quantify and prioritize their decisions to invest in a particular group of countries. On the other hand, it can be empirically tested using secondary data sources and a survey instrument. Thus, the propositions suggesting that low, moderate, or high option values will increase the probability of a particular mode-of-entry or timing-of-entry decision can be supported or refuted empirically.

Last, the model suggests that further research is needed to explain the trade-offs

associated with a firm's choice to concentrate either on mode-of-entry or timing-of-entry decisions. It might be interesting to once again use option theory to determine how MNCs decide which trade-off is likely to be more profitable.

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