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TOWARD A CONTINGENCY MODEL OF INCREMENTAL INTERNATIONAL EXPANSION: THE IMPACT OF FIRM, INDUSTRY AND HOST COUNTRY CHARACTERISTICS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

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ABSTRACT

As firms have responded to the increasing pressure to compete on a global basis, the process of incremental expansion has received considerable attention. The incremental approach to international expansion contends that firms build up their operations gradually to reduce uncertainty that stems from their operating in unfamiliar foreign countries. It has intuitive appeal, but empirical tests of the model have yielded mixed results. This dissertation sets out to better understand the process of international expansion by addressing two important questions: (1) Does the level of foreign market uncertainty firms face affect the extent to which they follow the incremental expansion process? And (2) why do firms that face similar foreign market uncertainty vary in their extent of incremental expansion?

This study's data set consists of sixty-one Korean firms and covers the forty-three year period from 1954 to 1996. Unlike previous studies, which assumed a relationship between foreign market uncertainty and incremental expansion, this study provides empirical confirmation of the long-standing assumption that foreign market uncertainty increases the extent to which firms undertake incremental international expansion. By taking a contingency approach toward international expansion, this study also finds that firm, industry
and host country characteristics moderate the relationship between foreign market uncertainty and incremental expansion. Specifically, when cultural distance is used as a measure of foreign market uncertainty, the results of this dissertation indicate that the effect of foreign market uncertainty on incremental expansion is weaker for firms that 1) have higher levels of organizational slack, 2) are operating in industries in which invested resources are more recoverable, or 3) are operating in foreign countries that offer greater labor-cost advantages. For the second and the third conditions, these results also hold true when firm inexperience is used as a measure of foreign market uncertainty.

As a whole, this dissertation provides theory and empirical evidence that help us understand how foreign market uncertainty affects incremental expansion, and when foreign market uncertainty is more or less likely to influence the pattern of incremental expansion. It thus furnishes a more complete view of international expansion than previous work has offered.
Dedicated to

my mother who shows me the power of endless love and

my late father who taught me the essence of strong will
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CHAPTER 1

INTRODUCTION

A firm’s corporate viability and prosperity depend upon its comprehensive awareness of a borderless business environment (Sera, 1992). Increasing pressure to compete on a global basis has driven firms to expand their operations internationally. However, firms expanding internationally face serious challenges in establishing themselves in unfamiliar foreign markets, challenges which can significantly impact the organization’s ability to survive and grow. Firms must develop strategies to deal with these challenges.

The incremental approach to international expansion (Johanson & Vahlne, 1977) suggests that firms build up their foreign operations gradually to reduce the uncertainty that stems from operating in unfamiliar environments. Incremental international expansion allows firms to take advantage of the information they acquire early on to further reduce market uncertainty in later stages.
The objective of this dissertation is to advance understanding of international expansion by investigating factors that affect the process of incremental international expansion. To accomplish this, this dissertation develops a contingency model of incremental international expansion based on existing knowledge about the incremental model. Its hypotheses address the following primary research questions: (1) Does the level of foreign market uncertainty firms face affect the extent to which they follow the incremental expansion process? And (2) why do firms that face similar foreign market uncertainty vary in their extent of incremental expansion? Unlike previous studies, this dissertation provides an answer to the first question based upon empirical tests. By answering the second question, this dissertation seeks to explain why previous studies have failed to find consistent evidence supporting the incremental model.

Results from this dissertation are expected to contribute to the firm internationalization literature. By providing empirical confirmation of the long-standing assumption that incremental expansion is affected by foreign market uncertainty, this dissertation provides the basis for further research. If the confirmed relationship between foreign market uncertainty and incremental expansion is affected by some variables at firm, industry, and host country levels, as this study argues, it will highlight the importance of taking a contingency approach toward firm internationalization to have a better understanding of the international expansion process.
Taken together, the findings of this dissertation are expected to explain the process of firm internationalization in a more systematic way than previous studies by providing a theory for, and empirical evidence of, the pattern of international expansion that varies across firms depending on firm, industry, and host country characteristics.

Overview

This dissertation comprises eight chapters. The contents of the chapters are as follows.

Chapter 2 classifies diverse issues of international expansion into two categories, and reviews the process models that investigate the means by which firms internationalize. It argues that the strategies by which firms attempt to make themselves viable in unfamiliar foreign markets should be explored in greater detail.

Chapter 3 introduces the major arguments of the incremental model, and reviews conceptual and empirical studies of the incremental model.

Chapter 4 introduces the conceptual framework of this dissertation, suggests an expanded model of incremental international expansion, and develops the hypotheses.

Chapter 5 explains the research design for this study. Measures for study variables are described in detail. The methodology for selecting the sample and the technique for data analysis are also described.
Chapter 6 reports the results of data analysis. The results for each of the hypotheses tested in this dissertation are reported, and overall findings are summarized.

Chapter 7 summarizes the findings of this dissertation, and explains its implications and limitations. It then suggests directions for further research.

Chapter 8 concludes this dissertation.
CHAPTER 2

INTERNATIONAL EXPANSION

This chapter classifies diverse international expansion issues into two categories: the motivation and the process aspects of international expansion. Following the argument that more attention should be given to the means of implementing international expansion, this dissertation classifies and introduces the models for the process aspect of international expansion.

International expansion can be discussed at industry level. For example, Bartlett & Ghoshal (1991) classify industries into international, multinational, global and transnational, and suggest different strategies for firms operating in different industries. The main issue of internationalization at industry level is to understand and search for the dominant strategic requirements of each industry. In this dissertation, international expansion is discussed at firm level, and thus the terms international expansion and firm internationalization are used interchangeably.
International expansion has received considerable attention. Andersen (1993) argues that the internationalization process models represent substantial research in the field of international business. In a similar vein, Melin (1992) views international expansion as a major dimension of the ongoing strategic process of most business firms. Cheng (1991) also identifies the internationalization process of firms and its organizational implications as a promising research area. Studies about international expansion can be categorized into two groups based upon their orientation toward international expansion: 'motivation-oriented' literature and 'process-oriented' literature.

Motivation-oriented Literature

Studies in this category define internationalization as "receiving revenues from abroad from international business activities" or "resource exchange across national boundaries" (Brush, 1995). Studies in the motivation-oriented category identify factors that motivate firms to internationalize. To operate successfully in international business, firms must have firm-specific advantages. The various explanations for the possession of firm-specific advantages all derive from the existence of less than perfect goods and factor markets. Imperfections in factor markets lead to differences in access to capital markets and technology. Imperfections in goods markets, including product differentiation and brand names, are also a source of firm-specific advantages. Superior technology
(McDougall, 1989; Robock & Simmonds, 1983; Tesar, 1977) and product characteristics (Baird, Lyles & Orris, 1994; Gripsrud, 1989; Lecraw, 1989) thus have been noted as determining factors in international expansion.

Industry-level factors also motivate firms to internationalize. For example, imperfect competition may lead to an oligopolistic market structure, making it possible to exploit economies of scale (Buckley, 1983; Caves, 1982; Dunning, 1979).

The environmental conditions of a host country such as cultural closeness (Welch & Weidersheim-Paul, 1980), geographical proximity (Malezadeh & Nahavandi, 1985), and market opportunities (Clegg, 1990; Cooper & Kleinschmidt, 1985) have also been noted as motivators for international expansion.

Other factors that motivate firms to internationalize include management characteristics such as a favorable attitude on the part of the owner/founder toward internationalization (Bilkey, 1978; Reid, 1981), commitment to expansion and growth (Aaby & Slater, 1989; Cavusgil, 1984a, 1984b), and perceived opportunities (Galbraith, DeNoble & Estavillo, 1990; Roy & Simpson, 1981).

The motivation-oriented literature focuses on the role that static choices play in a firm's decision to internationalize.
Process-oriented Literature

As Mitchell, Shaver and Yeung (1994) argue, international expansion generates not only opportunities but challenges. International expansion is not a risk-free phenomenon. An internationalizing firm confronts risks not present in purely domestic operations, and thus internationalization alone does not lead to increased profitability (Horst, 1973; McDougall & Oviatt, 1996; Siddharthan & Lall, 1982). What is important is not why or whether firms internationalize, but how.

The second category of research addresses the problem of how firms should internationalize. Unlike the motivation-oriented literature, the process-oriented literature goes beyond the issue of what motivates firms to internationalize. Taking a dynamic approach, studies in this category focus on how firms undertake international expansion over time. Firm internationalization for this group is defined as "the process of increasing involvement in international operations" (Welch & Luostarinen, 1988) or "a process consisting of a series of small steps, whereby firms gradually increase their international involvement" (Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977).

The means by which firms internationalize can be further classified into two subsidiary processes: (1) how to select foreign countries, and (2) how to change operational forms.

How to select foreign countries. In the process of international expansion, firms make a decision based on their desired target markets. As argued by Welch & Luostarinen (1988), there is a tendency for firms in the early stage of
internationalization to approach markets that appear familiar. O'Grady & Lane (1996), for example, found that Canadian retail firms start their internationalization in the United States not just because it is the closest market but because it is the most familiar. By selecting foreign countries with the lowest perceived market uncertainty as an initial target market, firms can reduce risks stemming from international expansion. As they gain experience in international expansion, firms enter new markets that are less familiar.

**How to change operational forms.** When expanding internationally, firms also consider how to change their operational forms over time. The focus of this dissertation is on international expansion, and thus an operational form in the context of this dissertation is defined as a means of conducting international business (Daniels & Radebaugh, 1994). Even though firms can engage in international business through various means, three operational forms: licensing, exporting, and foreign direct investment, have been identified as major options for serving foreign markets (Rugman, 1980). Licensing is defined as an agreement whereby one company, the licensor, gives rights to another, the licensee, for the use, usually for a fee, of such assets as trademarks, patents, copyrights, or other know-how (Daniels & Radebaugh, 1994). The licensee may find that the cost of the agreement is less than if the development were accomplished internally. From the licensor's point of view, the use of a licensing agreement might be a feasible option because risks associated with operating facilities and holding inventories can be reduced. However, the licensor may face fundamental problems and certain risks. By transferring rights to the licensee, the
licensor undoubtedly loses a measure of control over the asset. The licensor also risks developing a future competitor after the licensing agreement expires. Even before an agreement is terminated, the licensor may have to compete with the licensee because the licensee has made improvements on the licensed technology that make the original patents obsolete. Viewing their technologies and trademarks as integral parts of their asset bases, therefore, firms are likely to be skeptical about transferring the use of those technologies and trademarks to other firms (Daniels & Radebaugh, 1994). Rugman (1980) argues that in practice, licensing is not really a viable option for international expansion process.¹

Most of the literature regarding international expansion focuses on the other two options, export and foreign direct investment, to explain how firms change their operational forms over time. The following sections thus focus on existing models that investigate how firms change their exporting or foreign direct investment operations over time.

Export Development Models

Exporting is defined as “the sale and delivery of tangible goods to another country” (Czinkota, Ronkainen, Moffett & Moynihan, 1998). Exporting is the most

¹ Rugman (1980) argues that “the conditions for successful licensing, namely that foreign markets are fully segmented, and that dissipation can be avoided, are unlikely to be realized in practice, so this is not really a viable option” (p.28).
typical type of international business in which firms engage (Brush, 1995). Because exporting involves minimal business risks and low resource commitment, it is usually the first type of foreign operation firms undertake (Acs, Morck, Shaver & Yeung, 1997; Cavusgil, 1984b; Daniels & Radebaugh, 1994; Johanson & Vahlne, 1977; Young, Hamill, Wheeler & Davies, 1989).

A substantial amount of research investigating firm internationalization has focused on the exporting activity of firms. According to the literature review of Leonidou & Katsikeas (1996), there are several export development models. For example, the model of Bilkey & Tesar (1977) has six stages, ranging from stage 1, 'no interest in exporting' to stage 6, 'exporting to additional countries psychologically more distant.' More recently, Crick (1995) proposed a model composed of six stages, ranging from stage 1 where ‘firms are completely uninterested in export’ to stage 6 where ‘firms become experienced larger exporters.’ Meanwhile, similar models with slightly different export stages have been proposed by several other researchers (e.g., Barrett & Wilkinson, 1985; Cavusgil, 1982; Czinkota, 1982; Lim, Sharkey & Kim, 1991; Moon & Lee, 1990; Rao & Naidu, 1992; Wortzel & Wortzel, 1981).

The exporting development models explain how firms change their exporting operations over time. When engaged in exporting, firms may face uncertainty due to lack of information on foreign markets and operations. Such uncertainty is greater for firms at initial export stages when firms usually have limited knowledge about not only exporting itself but also foreign market characteristics (Cavusgil & Nevin, 1981). Firms at initial export stages thus enter
foreign markets via indirect export methods, such as export merchants, trading companies, resident buyers, or export agents. As firms gain more experience and knowledge, their level of uncertainty about the export market gradually diminishes. Firms at advanced stages thus come to use direct export methods, such as agents, distributors, and sales branches.

The models identify major facilitators and inhibitors in the export development process. The pattern of firm behaviors in the export development process depends largely on the type and amount of organizational resources available for export expansion (Leonidou & Katsikeas, 1996). Firms in more advanced stages need to commit more organizational resources to their expansion efforts. Organizational resources thus either facilitate or inhibit export expansion. Foreign market experience also facilitates or inhibits foreign expansion because it determines the level of uncertainty firms face.

Viewing a firm's involvement in export operations as a sequential process, the export development models provide a substantial amount of knowledge about how a firm's export activities change over time. However, the models that refer exclusively to the establishment and development of export operations constitute a major shortcoming in explaining the whole process of international expansion (Leonidou & Katsikeas, 1996). It should be noted that exporting is not an exclusive expansion activity but the first type of foreign operation for most firms. Many exporting firms are also later involved in foreign production (Cavusgil, 1984a). The single-activity orientation of the models, however, gives no attention
to other operational forms. Consequently, the issue of continuous aspects of international expansion beyond export activities still remains unexplored in the export development models.

**Foreign Direct Investment Development Models**

Foreign direct investment (FDI) is defined as an investment that involves ownership (in part or whole) and management of a foreign operation (Hood & Young, 1979). Depending on the ownership structure, a FDI can be either a joint venture or a wholly-owned operation. One of the key features of a FDI is that it requires a high commitment of capital, personnel, and technology. In fact, a FDI is the highest commitment that firms can make in international business because it usually involves not only the infusion of capital but also the transfer of personnel and technology (Daniels & Radebaugh, 1994).

Welch & Luostarinen (1988) argue that much of the early research in the field of international business took the multinational, or at least the FDI, as a starting point in the analysis of international operations. Increased attention to the issue of FDI activities reflects the increasing importance of FDI globally. Classical international economic theory tends to explain the behavior of multinational enterprises. In some cases, the terms internationalization and FDI are used interchangeably (e.g., Martin, 1996; Silverman, 1996), and thus the degree of internationalization is operationalized as the number of foreign subsidiaries.
(Stopford & Wells, 1972), foreign subsidiaries’ sales as a percentage of total sales (Geringer, Beamish & daCosta, 1989; Stopford & Dunning, 1983), and foreign assets as a percentage of total assets (Daniels & Bracker, 1989).

Kogut (1983) argues that decisions regarding a FDI are not discrete but part of a series of decisions a firm makes over time. In fact, Dunning (1994) pointed out that as much as 90 percent of the FDI in the 1980s and 1990s is subsequent rather than initial investment. To explain the process of a firm’s FDI decisions, option theory has been used by FDI development models. An option is a financial statement that gives the holder the right - but not the obligation - to sell (put) or buy (call) another financial instrument at a set price and expiration date. From a strategic point of view, the call option represents further strategic choices to invest or expand the portfolio whereas the put option represents choices to divest or contract (Hurry, 1993).

Using the option theory, Chang (1995) explained the pattern of Japanese firms’ sequential FDI investment processes in the U.S. Hurry, Miller & Bowman (1992) revealed that Japanese high-technology venture capital investment acted as a basis for further investment in product development, manufacturing, and distribution. Based on the ‘wait and see’ nature of the option approach, Rivoli & Salorio (1996) presented a model to explain how a firm engages in a FDI over time. In the context of these studies, a firm exercises a series of call options over a long period of time, learning from experience and subsequent investment in order to capture the best opportunities that emerge along the way.
Most FDI development models that are based upon the option approach focus on a firm's initial phase of FDI, or on the effect of a previous FDI on subsequent investments. In contrast, the relationship of FDI with other forms including export has not been explicitly discussed. As Daniels & Radebaugh (1994) argue, FDI usually comes after firms have acquired experience in exporting. As the FDI development models take FDI as a starting point in the analysis of international expansion, the development process that preceded this stage remains unexplored.

Process Model across Different Operational Forms

In the process of international expansion, firms usually begin with exporting and then come to directly manage foreign operations through FDI. Investigating international expansion within a specific operational form only, both the export development models and the FDI development models fail to view export or FDI as part of a firm's overall choices among diverse operational forms. Given the limitations of the export development models and the FDI development models, attention must be paid to the whole process of internationalization that a firm may implement over time, and in particular to the incremental model suggested by Johanson & Vahlne (1977). The major arguments and literature review regarding the incremental model will be presented in Chapter 3.
CHAPTER 3

LITERATURE REVIEW OF THE INCREMENTAL MODEL

The literature review for this study has been divided into three sections. The first section reviews the major arguments of the incremental model of firm internationalization. The second section identifies how the model can be compared with the previous literature in terms of conceptual approaches. Finally, the last section reviews the previous empirical studies which have tested the model.

The Incremental Model

The incremental model of firm internationalization (Johanson & Vahlne, 1977) argues that international expansion is inherently risky because firms lack sufficient knowledge about how to operate in foreign countries. In order to reduce uncertainty stemming from lack of foreign market knowledge, firms take an incremental approach to international expansion. The incremental model
describes international expansion as a process consisting of a series of small steps, whereby firms gradually increase their international involvement.

The incremental model predicts that firms will expand gradually along two dimensions: country selection and operational form selection. The country selection dimension of incremental international expansion involves the successive establishment of operations in new countries. To explain a firm's internationalization through country selection, the model emphasizes the importance of 'psychic distance.' Psychic distance involves factors that prevent or disturb the flow of information between firm and market (Johanson & Wiedersheim-Paul, 1975). Such factors include differences in the language, culture, political systems, level of education and level of industrial developments in the firm's and the host countries. Psychic distance refers to the effect of cultural distance on a firm's international expansion process (Langhoff, 1997) because cultural distance is viewed as a synonym for psychic distance in many studies (Kogut & Singh, 1988; Nordström, 1991; O’Grady & Lane, 1996). Thus, the incremental model predicts international expansion through country selection as follows:

**Proposition 1:** A firm will start its international operations in countries that are culturally similar before moving on to countries that are culturally dissimilar.

Incremental international expansion along the dimension of operational form selection describes how firms change their operations within a given foreign country over time. The incremental model introduces the concept of an
'establishment chain,' which specifies three different operational forms: (1) exporting to a country through an agent; (2) establishing a sales subsidiary in the country; and (3) establishing a manufacturing subsidiary to produce in the country. These operational forms require successively larger commitments of resources. To minimize risks stemming from an unfamiliarity with a foreign market, firms begin with exporting, which requires the least resource commitment, and then move to an operational form that requires greater resource commitment. Thus, the incremental model predicts international expansion on operational form selection as follows:

Proposition 2: A firm will develop its international operations in incremental steps, starting with exporting to a particular country via an agent, later establishing a sales subsidiary, and eventually establishing production in the country.

To review the literature on the incremental model, I conducted a keyword search ("internationalization," "international expansion" and "foreign direct investment") on ABI/Inform, an electronic database which contains over 550,000 citations with abstracts to articles appearing in approximately 1,000 international periodicals. My search located over 100 articles, but most of them did not focus on the process of international expansion. Only thirty-eight articles were directly related to the incremental model. Of these articles, twelve represent conceptual work and twenty-six empirical work.
Conceptual Work

The twelve conceptual papers on the incremental model of international expansion can be divided into two categories. The first category compares the incremental model with other theoretical ideas about international expansion. For example, Reid (1983; 1987) and Rugman (1980) investigate differences between the incremental model and the internalization model, and Johanson & Vahlne (1990) compare the incremental model with Dunning's (1988) eclectic model.

According to internalization theory, a firm will internalize a transaction wherever the cost of using spot markets or contractual agreements is higher than that of organizing it within the firm (Buckley & Casson 1976; Hennart, 1989; Rugman, 1980). Thus, this theory recognizes the existence of transaction costs and market failure. Since the market for certain key intermediate products (such as knowledge, marketing, managerial expertise, and human capital) is imperfect, the linking of interdependent activities through these markets may involve considerable time lags and transaction costs. Typically, firms seek to avoid such costs by replacing the external imperfect markets with their own internal markets. To internalize such markets across frontiers, firms will choose foreign direct investment (FDI).

Given the fact that any ownership-advantage should be internalized to be effective, no substantial difference exists between Dunning's eclectic theory (1988) and internalization theory. Within the transaction cost framework, the eclectic theory explains the decision to transfer or internalize ownership
advantages (Schroath, Hu, & Chen, 1993). As its name implies, the eclectic model attempts to bring together the best of a number of different theories of foreign direct investment behavior. It predicts that the international activities of a firm are determined by the configuration of three sets of advantages: (1) ownership, (2) internalization, and (3) location. When a firm possesses net ownership advantages in serving a particular foreign market, all three options (export, license, FDI) are possible for the firm. When it is more beneficial for the firm to use its ownership advantages itself rather than sell the rights to use them to a foreign firm, the firm will choose the export option or the FDI option. When it is profitable for the firm to combine its ownership advantages with factor endowments located in foreign countries, the firm will choose the FDI option.

The incremental model differs from the transaction cost-based models (i.e., internalization and eclectic) in many ways. The models based on transaction cost arguments assume that the decision-makers who have access to perfect information are well-informed from the beginning of the international expansion process. In contrast, the incremental model places uncertainty at the center of the decision-making process, and emphasizes the effect of experience or learning on the international expansion process.

The models based on transaction cost arguments assume the rational ability of the firm to assess the costs and benefits of each transaction. Variables that have a potentially significant impact on the costs and benefits of each transaction are constantly changing. As Chi & McGuirre (1996) argue, however, extant theoretical analyses based on the transaction cost framework have rarely
examined how the potential changes in the uncertain variables might affect the process of operational form selection. This may explain why many studies based on the transaction cost logic exclusively deal with a discrete “entry mode choice” rather than continuous aspects of the decision-making process along diverse “operational forms” (e.g., Anderson & Gatignon, 1986; Buckley & Casson, 1976; Hennart, 1989; Hill, Hwang & Kim, 1990; Rugman, 1981; Shane, 1994; Teece, 1983). The approaches based on transaction cost arguments are thus basically static in nature whereas the incremental model is dynamic and pays explicit consideration to changes in the process of international expansion (Hill & Kim, 1988; Johanson & Vahlne, 1990).

In the second category of conceptual work, researchers explore how to improve the explanatory value of the incremental model. Viewing the international expansion process as a form of pioneering research in the field of international business, Andersen (1993) analyzed the incremental model based on the principles of theory evaluation. From a falsifiability point of view, Andersen emphasized the need for more precise statements of the boundary assumptions of the incremental model. In terms of empirical design, Andersen identified longitudinal analysis as a proper approach to test the predictions of the incremental model, arguing that “a cross-sectional design can neither document that firms proceed in stages, nor determine the factors that influence a firm’s move from one stage to the next by using a cross-sectional design.” Andersen thus argued that longitudinal analysis should at least be tried for small-sample
studies. To better understand the process of internationalization, O'Grady & Lane (1996) proposed investigating the concept of cultural or psychic distance not only at the national level but also at the firm level. Measuring distance at only the national level may hide important variations that are related to firm-level experiences. Petersen & Pedersen (1997) explicitly mention that researchers should replace the aggregated psychic distance indices with firm-specific information. O'Grady & Lane also raise the need to incorporate business factors such as competitive environments into the conceptualization of distance in the internationalization process.

It has been suggested that one way to advance the explanatory power of the incremental model would be to overcome its deterministic nature. For example, Engwall & Wallenstål (1988) suggest that firms with different tasks in different environments may behave in different ways. Melin (1992) and Reid (1983) argue that the incremental model downplays the possibility of firms making voluntary strategic choices and suggest the need to consider the variations and the differences inherent in the international expansion process.

**Empirical Work**

International expansion is a dynamic process in which the outcome of one series of events determines what will happen next. A longitudinal methodological approach allows us to describe the internationalization process in a way that
deepens our understanding of the dynamism of international expansion (Andersen, 1993; Benito & Welch, 1994; Cavusgil, 1984b; Cavusgil & Nevin, 1981; Langhoff, 1997; Melin, 1992; Reid, 1981).

As shown in Figure 1, empirical studies of the incremental model are first classified according to whether they employed a longitudinal design to consider the process aspect of international expansion. Those studies which employed a longitudinal design are further classified according to the dimension (country or operational form selection) they investigated. Finally, for each dimension, the empirical studies are reviewed to determine whether they support the incremental model of international expansion.

Of the twenty-six empirical studies, fifteen, or 58%, did not test the incremental model with a longitudinal design. Instead, they investigated firms' first internationalization decisions. Nine studies focused on country selection (Cavusgil, 1984a, 1984b; Cavusgil & Nevin, 1981; Denis & Depelteau, 1985; Sharma & Johanson, 1987; O'Grady & Lane, 1996; Sullivan & Bauerschmidt, 1990; Terpstra & Yu, 1988; Yu & Ito, 1988), five studies focused on operational form selection (Erramilli & Rao, 1990; Li, 1994; O'Farrell, Wood & Zheng, 1996; Tumbull, 1987; Yu, 1990), and one study focused on both country and operational form selection (Erramilli, 1991). Among the ten studies of country selection, two studies confirmed that a firm chose a culturally similar country for its initial international expansion (Erramilli, 1991; O'Grady & Lane, 1996) whereas eight studies did not (Cavusgil, 1984a, 1984b; Cavusgil & Nevin, 1981;
Denis & Depelteau, 1985; Sharma & Johanson, 1987; Sullivan & Bauerschmidt, 1990; Terpstra & Yu, 1988; Yu & Ito, 1988). Among the six studies of operational form selection, two confirmed that a firm’s first operational form of expansion was exporting (Erramilli & Rao, 1990; Li, 1994) whereas four did not (Erramilli, 1991; O’Farrell, Wood & Zheng, 1996; Turnbull, 1987; Yu, 1990). These studies provided considerable knowledge about a firm’s initial international expansion activity. However, since these studies did not investigate the issue of decision-making processes subsequent to the first decision, they are incomplete as empirical tests of the incremental model.

The remaining eleven of the twenty-six empirical studies (42%) tested the model with a process approach using a longitudinal design (Bell, 1995; Benito & Gripsrud, 1992; Davidson, 1980, 1983; Fina & Rugman, 1996; Haanes, Lorange & Lowendahl, 1996; Juul & Walters, 1987; Kwon & Hu, 1996; Millington & Bayliss, 1990; Nicholas, Maitland, Purcell, Merrett, Whitwell & Kimberley, 1996; Young, Haung & McDermott, 1996). Four of the eleven studies investigated internationalization through country selection (Benito & Gripsrud, 1992; Davidson, 1980, 1983; Haanes et al., 1996), six studies focused on operational form selection (Juul & Walters, 1987; Millington & Bayliss, 1990; Fina & Rugman, 1996; Kwon & Hu, 1996; Nicholas et al., 1996; Young et al., 1996), and one study focused on both country and operational form selection (Bell, 1995).
**Country selection**

Five studies focused on the process of country selection. Using a survey of the foreign operations of 180 large U.S. multinationals from their inception through 1975, Davidson (1980) analyzed the effect of host country characteristics on FDI (manufacturing) decisions. Davidson concludes that no investment was made in culturally and economically dissimilar countries (e.g. Taiwan) until 1945. In contrast, the FDI activities in Canada and the United Kingdom (UK) exceed any estimate that could be derived from analysis of market size and growth. Furthermore, geographic proximity encourages United States (US) firms to export to these countries in order to take advantage of relatively lower transport costs. However, FDI by US firms in Canada and the UK increased relative to other nations. In addition, the analysis of the conditional entry frequency matrices revealed that U.S. firms gave higher priority to India than they did to Canada and the UK, depending on the prior presence of US firms in host countries.

Another study by Davidson (1983) also presented results supporting the incremental model for the process of country selection, from countries of lesser cultural distance to those of greater cultural distance. With the foreign investment patterns, Davidson investigated the relationship between market similarity and preferences in market selection. A rank correlation test showed a highly significant relationship between “similarity to the United States” and “position in investment sequence,” which supported the argument that market similarity stimulates market selection. In addition, firms with extensive international experience were found to exhibit a reduced preference for culturally similar
markets. It therefore seems that a firm's international experience plays an important role in its international expansion.

However, in their 1992 study, Benito & Gripsrud contradict Davidson's findings. Benito & Gripsrud investigated the effect of cultural distance on FDI location, but found no general relationship between the cultural distance of the market and a firm's investment sequence. Benito & Gripsrud interpret this finding as evidence of a "discrete rational choice" on the part of a firm rather than evidence of a "cultural learning process." They argue that firms which choose FDI to take advantage of low labor costs might not regard culturally similar countries as viable alternatives.

Haanes et al. (1996) also found that the incremental model cannot be applied directly to the situation in which there is no time to continue the incremental learning process. General Motor's (GM's) entry into rapidly expanding economies, such as Poland after 1990, was not the outcome of a gradual learning process. Although it had little experience in Poland, GM tried to achieve a foothold in the market before its window of opportunity closed. It lacked the time to benefit from a slow learning process or a gradual increase in its involvement. Through their in-depth case study, Haanes et al. also reveal that Fiat Auto had to accelerate its learning process at a much faster pace in Poland than it did in other countries.

In contrast to the four studies which investigated manufacturing firms, Bell's 1995 study analyzes the internationalization process of small firms in a service industry. Bell found that cultural distance does not play a role in the
international expansion of service firms. His in-depth interviews reveal that the firms' initial and subsequent market selection decisions were strongly influenced by (1) client followership, (2) sectoral targeting, and (3) computer industry trends. Firms can enter a psychologically distant country when they are involved in international expansion, depending on the international strategies of their domestic clients. Many software firms chose to target psychologically or geographically distant markets that offered good prospects. As a result, the design, development, and production of both hardware and software have been concentrated in a few markets. Based on these observations, Bell concludes that the market selection decisions of small software firms are not necessarily influenced by psychic distance.

**Operational Form Selection**

Two out of the seven studies reported results supporting the incremental model. Juul & Walters (1987) posit that each firm's initial operational form was exporting, and that it took thirteen years on average before significant changes were made from the original entry mode. Nicholas et al. (1996) also reported evidence that firms passed through stages which progress from exporting to establishing a manufacturing subsidiary.

However, the remaining five studies fail to support the incremental model. Millington & Bayliss (1990) describe the evolution of the operational forms of fifty UK manufacturing firms in the European Community (EC), and failed to find results supporting the incremental hypothesis of international expansion. Ten of
the fifty firms rose from a “no previous experience in the foreign market” stage to
the formation of a manufacturing subsidiary in the market. Millington & Bayliss’s
results may not be as startling as they at first seem, however, since the EC
comprises culturally close nations. But Young et al.’s (1996) study also reveals
evidence of some leapfrogging stages in the internationalization process by
Chinese firms. Fina & Rugman’s (1996) case study of one pharmaceutical firm
found that the firm did not follow a progressive form of penetration in several
countries. Kwon & Hu (1996) also found a non-gradual internationalization in
twenty-two of sixty-eight cases. Bell’s (1995) study found that the incremental
model does not adequately reflect the underlying factors that influence the
process of firm internationalization of service firms. This result seems to reflect
the nature of invested resources. For manufacturing firms, the resources
invested in a foreign market are long-term commitments, as withdrawal of such
resources is difficult, and frequently costly. In this sense, the international
expansion process by manufacturing firms has a relatively “permanent” nature.
However, since the market specificity of the resources is relatively low for firms in
service industries, the international expansion process by service firms has a
relatively “temporary” nature. Thus, Bell’s (1995) study indicates the possibility
that industry type may affect the international expansion process.
Summary

Between 1977, the year in which the incremental model was introduced, and 1998, the year in which this study was designed, thirty-eight published articles have conceptually discussed or empirically tested its propositions. Of these studies, twelve are conceptual papers that focus on comparing the incremental model to other approaches and on improving its explanatory value.

The remaining twenty-six studies empirically tested the incremental model to investigate whether firms undertake their international expansion in incremental steps (see Table 1). A longitudinal approach has been identified as the most appropriate way to study a firm's international expansion (Andersen, 1993; Macharzina & Engelhard, 1991, McGaughey, Welch & Welch, 1997; Melin, 1992; Zaby, 1996). As this literature review indicates, only eleven out of the twenty-six empirical studies (42%) tested the model with a longitudinal design. Of these eleven studies, five investigated internationalization through country selection. Of these five studies, in turn, only two (40%) found results supporting the incremental model. Among the seven studies investigating the incremental model on operational form selection, only two studies (29%) found results supporting the incremental model.
CHAPTER 4

EXPANDED MODEL OF INCREMENTAL INTERNATIONAL EXPANSION

This chapter develops an expanded model of international expansion to facilitate an understanding of firm internationalization. It first suggests a conceptual framework based on the literature review, and posits hypotheses regarding incremental expansion that address the research questions of this dissertation.

A Conceptual Framework

Due to its intuitive logic and theoretical parsimony, the incremental model has been labeled as axiomatic, and is often presented as a recommended strategy for firm internationalization. As the literature review indicates, however, the empirical evidence from tests of the model is mixed. Despite the fact that many studies fail to find results supporting the incremental nature of international
expansion, there has been no systematic effort to resolve conflicting results. The overall lack of consistency in the findings of previous studies and the general absence of a unifying framework make it necessary to search for an expanded model of firm internationalization.

There are a number of ways in which a new model can be developed. First, it may be useful to clarify what is to be predicted. As discussed in the previous chapter, most of the literature on international expansion focuses on whether a firm's international expansion proves the theory of incremental internationalization. In other words, international expansion tends to be treated as a dichotomy: a firm either makes a series of sequential decisions, or makes one discrete decision. Pedersen & Petersen (1996) suggest that this artificial polarization of firm behavior ought to be resisted, and that we ought to think in terms of degrees of incrementalism. Thus, a new dependent variable is required to measure the extent to which firms take an incremental process of international expansion.

Second, the extent to which foreign market uncertainty affects incremental international expansion must be thoroughly investigated. The potential impact of foreign market uncertainty on incremental expansion has long been a subject of inquiry in the field.
As early as 1977, Johanson & Vahlne clearly stated:

That internationalization decisions have an incremental character is, we feel, largely due to this lack of market information and the uncertainty occasioned thereby (1977: 26).

However, as my review of the empirical literature shows, no study has yet explicitly investigated the direct relationship between foreign market uncertainty and incremental expansion. Most of the previous studies assume that foreign market uncertainty is a key determinant of incremental expansion. Thus, a new model must address the unresolved, but crucial issue: does the level of foreign market uncertainty firms face affect the extent to which they follow the incremental international expansion process?

Third, there is a need to take a contingency approach toward international expansion. In proposing the incremental model, Johanson & Vahlne acknowledge its limitations:

Because we, for the time being, disregard the decision style of the decision-maker himself, and, to a certain extent, the specific properties of the various decision situations, our model has only limited predictive value. We believe, however, that all the decisions ... have some common characteristics...Our model focuses on these common traits (1977: 23; emphasis added).

Melin (1992) argues that the international expansion process is characterized by a high degree of variability and heterogeneity. Johanson & Wiedersheim-Paul
(1975), who first introduced the concept of internationalization, identified the need for developing a conditional model of internationalization. It has been suggested that a contingency view of firm internationalization increases the predictive value of the model (Melin, 1992; Reid, 1983). A contingency view has also been identified as a promising approach through which to investigate research topics that have previously received conflicting results (see, for example, Cheng & McKinley, 1983). In this dissertation, I adopt a contingency approach in order to identify the boundary conditions of the incremental model and to explain why the previous studies found conflicting results. As the literature review in this dissertation indicates, when tested, the process of operational form selection yields more conflicting results than the process of foreign country selection did. Welch & Luostarinen (1988) argue that we need to pay more attention to the process of operational form selection. This dissertation thus expands the incremental model by focusing on the process of operational form selection.

Hypotheses

Foreign Market Uncertainty and Incremental Expansion

When expanding internationally, firms usually face new political, legal, social and cultural environments. Consequently, foreign operations have many characteristics that are distinct from domestic operations. Facing a new
environment in a foreign country, a firm may feel an uncertainty that may negatively affect its operations in that country, and, to reduce the uncertainty that stems from its foreign operations, may act cautiously in its international expansion process. As noted above, the incremental model also argues that firms develop their international operations gradually over time because firms lack sufficient knowledge about foreign market conditions (Johanson & Vahlne, 1977), and international expansion may require a time-consuming accumulation of foreign market knowledge (Petersen & Pedersen, 1997). All these arguments suggest that foreign market uncertainty plays a key role in a firm’s incremental international expansion. Thus:

**Hypothesis 1**: Foreign market uncertainty will increase the extent to which firms undertake incremental international expansion.

**Contingency Approach**

The effect of foreign market uncertainty on incremental expansion is expected to vary from firm to firm, moderated by variables at the firm, industry, and host country levels.

**Firm Level Contingency Variables**

Johanson & Vahlne (1977) argue that the amount of resources available to a firm may affect its international expansion process. They also argue that firms strive to minimize the risks. As other researchers maintain, variations in
international expansion can be explained, to a significant extent, by organizational and management characteristics (e.g., Cavusgil, 1984a, 1984b; Ursic & Czinkota, 1984). Thus, variation in firm resources and risk-taking orientation may affect a firm’s propensity to undertake incremental international expansion.

Organizational slack. As noted above, the incremental model predicts that firms will develop their international operations in incremental steps, starting with exporting to a particular country via an agent, later establishing a sales subsidiary, and eventually beginning production in the country. These operational forms require a successively larger commitment of resources. According to resource-based theory, the ability of a firm to respond to a strategic issue is a function of resources that are not distributed uniformly across firms (Barney, 1986, 1991). Organizational slack, defined as a cushion of excess resources available in an organization (Bourgeois, 1981), can affect the extent to which a firm engages in incremental international expansion.

International expansion requires and consumes resources, and firms with lower levels of organizational slack may assign a higher opportunity cost to resources required and consumed in international expansion. Consequently, firms with lower levels of organizational slack may be more cautious in their international expansion, and more likely to take an incremental international expansion to keep uncertainty and risks at low levels. In contrast, firms with higher levels of slack will have less incentive to undertake incremental
international expansion. The presence of higher levels of slack enables firms to interact with the environment more aggressively. In addition, firms with higher levels of slack can afford to experiment with new strategies because the legitimacy of their experimentation is less likely to be questioned (Bourgeois, 1981; Hambrick & Snow, 1977; Singh, 1986). The presence of higher levels of slack buffers organizations from downside risk. As such, foreign market uncertainty as a key determinant of incremental expansion might have less impact for firms that have higher levels of organizational slack. Thus:

Hypothesis 2: The effect of foreign market uncertainty on incremental international expansion will be weaker for firms with higher levels of organizational slack.

Risk-taking orientation. A level of risk exists for any decision that involves uncertain outcomes and incomplete information (Baird & Thomas, 1985). Given a certain level of foreign market uncertainty, firms may follow an incremental process in order to reduce risks in their international expansion. One of the key assumptions of the incremental model is that firms will strive to reduce their risk. However, the literature regarding relationships between risky situations and risk-taking behavior reveals that risk-taking orientation cannot be generalized from firm to firm (e.g., Baird & Thomas, 1985; Bromiley, 1991; Jegers, 1991; MacCrimmon & Wehrung, 1990).

In addition, the level of risk-taking orientation, which varies across firms, can moderate the effect of foreign market uncertainty on incremental
international expansion. According to MacCrimmon & Wehrung (1986), firms react differently to perceived levels of risk. Firms with lower levels of risk-taking tend to overrate the risks inherent in an expansion situation and require a familiar environment within which to operate. Therefore, even though such firms face lower levels of foreign market uncertainty, they will engage in higher levels of incremental expansion in order to keep the risks inherent in the international expansion process at a lower level. In contrast, under the same level of foreign market uncertainty, firms with higher levels of risk-taking orientation will choose riskier alternatives because they tend to underestimate risk in situations they face. They will also accept a more unfamiliar environment because they are frequently involved in risky situations. Consequently, foreign market uncertainty as a key determinant of incremental expansion might have less impact for firms that have higher levels of risk-taking orientation. Thus:

Hypothesis 3: The effect of foreign market uncertainty on incremental international expansion will be weaker for firms with higher levels of risk-taking orientation.

Industry Level Contingency Variable

Turnbull (1987) argues that the pattern of international expansion cannot be generalized across industries as international expansion is necessarily linked to the environment in which firms are operating. Firms with different tasks in different environments may show different patterns of international expansion. In fact, the results of several studies indicate the possibility that firm
internationalization can be affected by the characteristics of the industry in which they are competing. For example, Sharma & Johanson's (1987) study reports that the internationalization process of technical consultancy firms does not have the cumulative nature often implied in the concept of internationalization. Sharma & Johanson attribute this result to the very different nature of resource commitment that technical consultancy firms make compared to manufacturing firms. Bell's (1995) study also found very little support for the notion that small software firms progress incrementally from exporting to other operational modes. Bell concluded that the incremental model does not seem to adequately reflect the internationalization process in light of industry-specific considerations.

**Resource recoverability.** The risks inherent in international expansion can vary depending on how easily committed resources can be used for other purposes. If invested resources are characterized by a high degree of recoverability (cf. Rivoli & Salorio, 1996), a firm faces lower "sunk" costs. Investments in highly specific assets with few uses are less recoverable because invested resources are either traded in less developed secondary markets or perhaps not traded at all. Firms operating in industries in which invested resources are less recoverable can minimize sunk costs by producing a stream of benefits over a long horizon. On the other hand, investments that have many uses or investments which are traded in efficient secondary markets are more recoverable. Firms operating in industries where investments are more recoverable may feel less risk since they are in a better position to fully recover from the previously invested resources.
whenever necessary. Therefore, foreign market uncertainty as a key determinant of incremental expansion might have less impact for firms in industries characterized by higher levels of resource recoverability. Thus:

Hypothesis 4: The effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in industries in which invested resources are more recoverable.

Host Country Level Contingency Variables

The incremental model argues that firms should avoid risk resulting from foreign market uncertainty by following incremental expansion. This supports the contention that firms act on the basis of the risks they perceive to be inherent in international expansion. Eriksson, Johanson, Majkgard & Sharma (1997) argue that “the behavior models of the internationalization process stress the role of perceived problems and opportunities in the internationalization of a firm.” The incremental model gives little attention to opportunities, whereas it emphasizes risks of operating in foreign countries. It has consequently been suggested that the risks resulting from foreign market uncertainty play an exclusive role in deciding incremental expansion. However, the relationship between risks and incremental expansion can be moderated by the forgotten half of the incremental model – the opportunities available in a foreign country. In fact, many studies found that international expansion can be influenced by host country characteristics (Benito & Gripsrud, 1992; Brewer, 1992; Guisinger, 1985; Haanes
et al., 1996). The eclectic theory also emphasizes location-specific advantages as an important factor in understanding international expansion process (Dunning, 1988).

First-mover advantages. Sometimes a firm may gain what are referred to as “first-mover advantages,” from being among the first to take a particular action (Porter, 1985). In the context of this study, firms may want to be among the early local manufacturers to enjoy first-mover advantages available in a host country.

According to Lieberman & Montgomery (1988), one of the primary sources of first-mover advantages is preemption of strategically valuable assets. These assets may be physical resources or other process inputs. Firms may enjoy first-mover advantages in a host country when they move to tie up strategically valuable assets before the full value of the assets is widely understood (Barney, 1997).

Alternatively, firms may enjoy first-mover advantages through the strategies of spatial preemption. As Lieberman & Montgomery (1988) argue, preemptable “space” can include not only geographical space but also shelf space and “product characteristics space” (i.e., niches for product differentiation). In many countries, there is “room” for only a limited number of local manufacturers; first movers can often select the most attractive spaces and may be able to take strategic actions that limit the amount of space available for subsequent entrants (Lieberman & Montgomery, 1988). Preemptive investment in attractive site space can simply force followers to adopt less desirable ones.
Another way in which firms can enjoy first-mover advantages is through preemptive investment in plant and equipment. The enlarged capacity of first movers may lead them to maintain greater output following entry, which can successfully deter new entry. In a similar vein, first movers are in a better position to hire key personnel, who are available in limited supply.

First-mover advantages must be balanced against the risks associated with moving first into a foreign country. Entry into an unfamiliar foreign market involves a high degree of risk. However, firms cannot wait in a “winner take all (most)” competitive situation (Rivoli & Salorio, 1996). Rather, they have to be aggressive in order to benefit from first-mover advantages available in the host country. As a result, foreign market uncertainty as a key determinant of incremental expansion might have less impact for firms which operate in foreign countries with higher levels of first-mover advantages. Thus:

**Hypothesis 5**: The effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in foreign countries in which first-mover advantages are more prevalent.

**Labor-cost advantages.** The typical examples of opportunities in a foreign country include per capita income and market growth. Potentially even more important are market opportunities stemming from location-specific factors, such as relative costs of production (Grosse, & Behram, 1992). Imperfections in international markets for labor, such as immigration controls which reduce labor
mobility between countries, may lead to differences in real wage costs (Hood & Young, 1979). By establishing a manufacturing subsidiary to do offshore assembly, for example, firms can gain access to labor that is cheaper per efficiency unit than the home country can supply. Then, foreign market uncertainty as a key determinant of incremental expansion in a foreign country might have less impact for firms that can exploit labor-cost advantages in the country. Thus:

**Hypothesis 6**: The effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in foreign countries that offer greater labor-cost advantages.

Figure 2 summarizes the framework of this dissertation and its hypotheses. The next chapter will discuss the methodology through which the hypotheses will be investigated.
CHAPTER 5

RESEARCH METHODOLOGY

This chapter describes the research methodology used to test the hypotheses developed in this dissertation. It first identifies the sample for this dissertation and explains the study design. It then describes the measures of the study variables and specifies the data analysis techniques used.

Sample

The objective of this dissertation is to investigate the process of international expansion rather than internationalization decisions at discrete points in time. To understand how firms change their operational forms over time, one needs to trace the entire process of international expansion. Firms from industrialized countries started their international expansion so early that it is almost impossible to accurately trace their history. In contrast, firms from newly
Industrialized countries (NICs) started international expansion much later. This dissertation uses manufacturing firms from Korea, a NIC, as the sample for this study in order to study the process of international expansion from its inception.

**Study Design**

This study consisted of two different phases. In the first phase of the study, I conducted a pilot test in which I collected data from three companies: YooHwa (a clothing manufacturer), Anam Electronics (a manufacturer of electronics), and Samyang (a textile producer). I conducted open-ended interviews with managing directors who were charged with international expansion activities. The interviews lasted approximately one hour. The major purpose of the first phase was to develop the framework and data-collection procedures for this dissertation. This first phase indicated that organizational records such as a firm's international expansion history and its annual reports should be used as a primary source of data and personal or telephone interviews as a supplement to data collected from organizational records.

In the second phase, I collected data for a large sample analysis, drawing upon the forty-three year period between January 1954 and December 1996. The first year in which international expansion by firms in this study was undertaken was 1954, and 1996 was the most recent year for which data was available for this study.
Two annual publications, *The Directory of Korean Firms Investing Abroad* (The Bank of Korea) and *Korea Company Handbook* (Asia-Pacific Infoserv), provide a listing of Korean firms involved in foreign direct investment. Information on each firm listed on the Korea Stock Exchange identified a total of 146 firms as a population group for this study. I contacted each company by telephone to enlist its cooperation. If a firm (1) could not cooperate due to data unavailability, or (2) had merged or had been merged into another firm, I deleted it from the population sample.

For the remaining sixty-one firms, I searched the *Annual Report of Korean Companies* (Korean Investors Service Inc.) and the *Annual Report of Listed Companies* (Korean Listed Companies Association), and when necessary contacted managers at the Department of Public Relations or Business Planning by telephone to ask for company records that were not available from the secondary source. Industry-level data was obtained from the *Financial Statement Analysis* (The Bank of Korea). The sources of country-level data were the *International Financial Statistics Yearbook* (IMF), the *Statistical Yearbook for Asian and the Pacific* (United Nations), the *Yearbook of Labor Statistics* (International Labor Office), the *International Marketing Data and Statistics*, and the *European marketing data and statistics* (Euromonitor International Inc.).

Table 2 indicates the sample profile in terms of the years in which the companies were established, the annual sales of the sample firms, the names of the industries in which the firms were operating, and the names of the host
countries in which the firms established their first manufacturing subsidiaries abroad. The number of host countries represented by the sample firms was nineteen. Those countries and the number of cases in which they were involved were: Belgium (1), China (26), the Dominican Republic (1), France (1), Guatemala (1), Honduras (2), India (1), Indonesia (10), Ireland (2), Malaysia (1), Mexico (2), Myanmar (1), the Philippines (3), Portugal (1), Singapore (1), Thailand (1), the USA (2), the UK (2), and Vietnam (2).

Measures

Dependent variable

Extent of incremental international expansion. The extent to which a firm has followed the incremental process was measured by two indicators: (1) the number of operational forms that a firm had in the country before establishing its first overseas manufacturing facility, and (2) the number of years of international experience that a firm had with the country before establishing its first overseas manufacturing facility.

For the purposes of this study, a firm is deemed to have taken an operational form in international expansion if it: (1) exports to the country; (2) exports to the country via agents; (3) establishes a sales subsidiary; or (4) establishes a manufacturing subsidiary. To establish a means of measuring the extent to which a firm undertakes incremental international expansion, I assigned
a number to each firm based on the number of operational forms it took before establishing a manufacturing subsidiary. If, for example, a firm had taken all operational forms before establishing a manufacturing subsidiary, I assigned it the number 3. If it used only two operational forms before establishing a manufacturing subsidiary, I assigned it the number 2, and if only one form, the number 1. If a firm skipped the three preliminary operational forms and established a manufacturing subsidiary in the country as its first operational form, it was assigned the number 0. The higher the number assigned to the firm, the greater the extent of the firm's incremental international expansion. Out of the sixty-one firms, one firm (1.6%) was assigned the number 3, three firms (4.9%) the number 2, twenty firms (32.8%) the number 1, and thirty-seven (60.7%) the number 0.

I calculated the number of international experience years by the differential between the year in which a firm established its first manufacturing facility in the foreign country and the year in which a firm first expanded into the country using any operational form. For example, both firm A and firm B established their first overseas manufacturing facilities in China in 1990. Before establishing its manufacturing facility, firm A served the Chinese market by exporting to China in 1985 whereas firm B did so by establishing a sales subsidiary in China in 1988. In this case, I assigned the values of 5 and 2 to firm A and firm B, respectively.

In order to arrive at a single measure for the extent to which a firm has followed the incremental process, this study constructed an index composed of
both indicators. Due to the different scales of the indicators, standardized scores (mean = 0, standard deviation = 1) were used. The variable was thus equal to \((Z_{mi} + Z_{yi})/2\), where \(Z_{mi}\) denotes the standardized indicator of the number of the operational forms in the country and \(Z_{yi}\) denotes the standardized indicator of the number of the years in the country. The inter-item correlation between \(Z_{mi}\) and \(Z_{yi}\) was \(0.768^{**}\).

**Independent variable**

**Foreign market uncertainty.** This study measured foreign market uncertainty at both the country and the firm level. Foreign market uncertainty at the country level was measured by cultural distance. The management literature regards Hofstede's (1980) study as the standard reference of cultural distance (Moore & IsHak, 1989). Hofstede found that comparisons between the different cultures can be plotted across four dimensions which are largely independent of each other. They are: (1) individualism defined as the tendency of people to look after themselves, (2) power distance, the extent to which individuals are comfortable with inequality in relationships, (3) uncertainty avoidance, the degree to which the members of a society feel threatened by ambiguity and are reluctant to take risks, and (4) masculinity, the degree to which the dominant values in a society emphasize assertiveness and status.

Using Hofstede's four indices and the methodology developed by Kogut and Singh (1988), this study measured cultural distance as a composite index showing the overall cultural distance of each host country from Korea. A
The composite index was formed based on the deviation along each of the four cultural dimensions of each country from Korea. The deviations were corrected for differences in the variances of each dimension and then arithmetically averaged. Algebraically, cultural distance between Korea and a host country was measured by:

\[
CD_j = \sum_{i=1}^{4} \left( \frac{(I_{ij} - I_{iH})^2}{V_i} \right)/4,
\]

where \( I_{ij} \) stands for the index for the \( i \)th cultural dimension and \( j \)th country, \( V_i \) is the variance of the index of the \( j \)th dimension, \( H \) indicates Korea, and \( CD_j \) is the cultural difference of the \( j \)th country from Korea.

Hofstede's study did not, however, provide cultural index scores for five of the countries that were to be included in this study, namely China, the Dominican Republic, Honduras, Myanmar and Vietnam. As a result, this study could use only twenty-nine cases in its analysis of foreign market uncertainty as measured by cultural distance.

At the firm level, firm inexperience was used as another measure of foreign market uncertainty. I measured the level of firm experience by two different indicators: (1) the number of international operational forms a firm had prior to its entry into a foreign country in which it established its first overseas manufacturing subsidiary, and (2) the number of years of international experience a firm had prior to its entry into a foreign country where it established its first overseas manufacturing subsidiary.
In order to arrive at a single measure of firm experience, this study constructed an index composed of both indicators. Due to the different scales of the indicators, this study used standardized scores (mean = 0, standard deviation = 1). The variable was thus equal to \((Z_{mp} + Z_{yp})/2\), where \(Z_{mp}\) denotes the standardized indicator of the number of international operational forms prior to entry into the country, and \(Z_{yp}\) denotes the standardized indicator of the number of years of international experience prior to entry into the country. The inter-item correlation between \(Z_{mp}\) and \(Z_{yp}\) was .386**. To avoid the confusion of dealing with opposite changes, the variable was reversed by multiplying it by -1 to create the degree of firm inexperience.

**Moderating variables**

**Organizational Slack.** Following Bourgeois & Singh's (1983) study, this study classified organizational slack in three ways: as available slack, recoverable slack, and potential slack. Available slack was measured as the ratio of current assets to current liabilities, recoverable slack as the ratio of general and administrative expense to sales, and potential slack as the ratio of equity to capital. Since it inevitably takes time to make important decisions and firms tend to consider the most recent periods of activity when making important decisions such as formulating environmental responses (Koberg, 1987; Zammuto, 1983), this dissertation followed the lead established by Cheng & Kesner in their 1997 study and selected a three-year period through which to consider the effect of study variables on a firm's decisions. As a result, the ratios for a three-year
average, prior to the year in which a firm established its first overseas manufacturing subsidiary, were calculated. For example, if a firm established its first overseas manufacturing subsidiary in 1980 \((t = 0)\), the ratios regarding slack at 1977 \((t-3)\), 1978 \((t-2)\) and 1979 \((t-1)\) were gathered and averaged.

In order to arrive at a single measure of organizational slack, this study constructed an index composed of the three indicators of organizational slack. Since the three indicators employ different scales, the study used standardized scores \((\text{mean} = 0, \text{standard deviation} = 1)\). Organizational slack was thus measured by \((Z_a + Z_r + Z_p )/3\), where \(Z_a\) denotes the standardized indicator of the available slack, \(Z_r\) the standardized indicator of the recoverable slack and \(Z_p\) the standardized indicator of the potential slack. The inter-item correlation was -.107 between \(Z_a\) and \(Z_r\); -.158 between \(Z_r\) and \(Z_p\); and -.126 between \(Z_p\) and \(Z_a\).

**Risk-taking orientation.** Miller & Bromiley (1990) used research and development (R&D) intensity as a measure of a firm’s risk-taking orientation because when engaged in R&D, firms face both technological and market uncertainty. Benito & Larimo (1996) describe investments in R&D as a “double edged sword” because (1) industries that are R&D intensive constitute rapidly changing competitive environments, (2) advantages gained at any point may disappear fairly rapidly, and (3) further investments in R&D to retain a competitive edge may increase the risk of subsequent failure due to the high risks involved in R&D projects. Thus, a firm’s R&D intensity (the ratio of R&D
expenditures to sales) can be used to measure its risk-taking orientation.

However, due to the sensitive nature of R&D decisions, it is difficult to obtain information about firm-level R&D expenditures. As a result, this study used the average R&D intensity of an industry as a proxy for the risk-taking orientation of firms operating in the industry. The industry-level R&D intensity for Korean firms was not reported until 1993, producing only three usable cases: two firms established their first manufacturing subsidiary in 1996, and one firm in 1997. Consequently, this study could not test its hypothesis about risk-taking orientation.

Resource recoverability. Miller & Cardinal (1994) argue that firms in capital-intensive industries possess capital assets, such as plant and equipment that are expensive relative to the annual output values of the firm. They further argue that “these assets tend (1) to require long periods of consistent use to produce an adequate return on investment, (2) to be difficult to adapt to uses for which they were not originally designed, and (3) to require long lead times for the accomplishment of moving from intent to acquire through acquisition to full uses,” whereas “changing the composition or size of the labor force in most labor-intensive firms tends to be easier than changing plant and equipment in the typical capital-intensive firm” (pp. 1651-1652). Thus, the average value of property, plants and equipment per capita in a specific industry was used to measure the difficulty of resource recoverability that firms operating in the industry have to face. To avoid the confusion of dealing with opposite changes,
the ratio for a three-year average, prior to the year in which a firm established its first overseas manufacturing subsidiary, was reversed by multiplying it by -1 to create the degree of recoverability of resources.

**First-mover advantages.** First-mover advantages in a country are most apparent when the country has market attractiveness that has not been fully exploited. As a result, firms compete with each other to enter. As more new firms enter the country, the window of opportunity starts to close (Lilien & Yoon, 1990). This study measured the level of first-mover advantages as the ratio between market attractiveness and entry density. Market attractiveness in a host country was measured according to a three-year average growth rate of the GDP per capita prior to the year in which a firm established its first overseas manufacturing subsidiary in the country. Entry density in a host country was measured according to a three-year average growth rate of investment as a percentage of the GDP prior to the year in which a firm established its first overseas manufacturing subsidiary in the country.

However, the ratio measuring first-mover advantages created confusion in some instances. First, countries that had negative values for both market attractiveness and entry density had a positive value for their first-mover advantage. Second, two countries had the same value for their first-mover advantage even though they had very different values for market attractiveness and entry density. For example, Country A might have a value of -2 for its first-mover advantage even though its market attractiveness and entry density values
are 2 and -1 respectively. Country B might have the same first-mover advantage, -2, even though its market attractiveness and entry density values are -1 and 2 respectively. To avoid the resulting confusion, only cases that had a positive value for both market attractiveness and entry density were used to measure the level of first-mover advantages. Another problem with the measure for first-mover advantages was that it was a rough proxy which represented the general market situation in a foreign country and not the market situation of the particular industry per se.

**Labor-cost advantages.** Inexpensive labor costs often signal favorable investment conditions (Caves, 1982; Young, 1987). In order to measure the level of labor-cost advantages in the country, this study chose to calculate the difference in the labor costs in the manufacturing industry between Korea and a host country (i.e., labor cost in Korea - labor cost in a host country) according to a three-year average. To compare labor costs across countries, all labor costs expressed in a currency other than the US dollar were converted into US dollars. The exchange rates used for the conversion were the average market rates published in *International Financial Statistics Yearbook* by the International Monetary Fund (IMF).

**Control Variables**

This study included firm size as a control variable. Previous research has suggested that internationalization may be influenced by firm size. For example,
Acs, Morck, Shaver & Yeung (1997) and Fujita (1995) argue that small firms may well be less likely to move into foreign markets than larger firms because (1) barriers to entry are systematically higher for smaller firms than for larger firms, and (2) many foreign markets offer poor protection for property rights. Other studies also reported positive relationships between a firm's size and internationalization (e.g., Calof, 1993; Czinkota & Johnston, 1983). The literature measures a firm's size in three ways: according to its (1) sales volume, (2) its net assets, and (3) its number of employees. The use of any one of these can be justified because they are highly correlated (e.g., Singh, 1986). In this dissertation, firm size was measured through a natural logarithm of net assets for the three-year average prior to the year in which a firm established its first overseas manufacturing subsidiary in the country.

This study also includes firm age as a control variable. According to organization theory literature (e.g., Amburgey & Barnett, 1993; Hannan & Freeman, 1984), structural inertia within a firm increases with its age, making older firms slower in responding to changes than younger firms. International expansion is an important change to which firms need to respond. To control for the possible effect of a firm's age on its international expansion process, this study used the differential between 1997 and the year in which a firm was established in its analysis.
Analysis Procedures

Hypothesis 1 regarding the effect of foreign market uncertainty on the extent to which firms undertake incremental international expansion was tested by regression analysis controlling for firm size and firm age. Following Cheng & McKinley (1983), the remaining hypotheses (Hypothesis 2 through Hypothesis 6) were tested through two analytic procedures: (1) subgroup analysis, and (2) moderated regression analysis. Subgroup analysis was used to obtain information about the relationship between foreign market uncertainty and incremental international expansion at different levels (high, medium, low) for each of the contingency variables. The cut-off points for the high, medium and low groups were determined by the top one-third and bottom one-third of the values for each contingency variable. Where necessary, adjustments were made to this rule in order to make sure that cases with the same values around the cut-off points were classified into the same group. Moderated regression analysis was used to test for an interaction effect between foreign market uncertainty and the contingency variable on incremental international expansion.

In the subgroup analysis, the unstandardized coefficients (b's) were compared across different subgroups for each of the contingency variables to test for conformity to the hypothesized trend.
In the moderated regression analysis, the extent to which a firm has undertaken incremental international expansion was regressed on a set of five predictor variables: (1) firm size, (2) firm age, (3) foreign market uncertainty, (4) the contingency variable, and (5) a cross-product term between foreign market uncertainty and the contingency variable. The sign of the regression coefficient for the cross-product term indicates the direction (positive or negative) of the change in the relationship between foreign market uncertainty and incremental expansion as the contingency variables increase in value.

The hypotheses (Hypothesis 2 through Hypothesis 6) would be supported if (1) the subgroup analysis results show the predicted change in the magnitude of the relationship between foreign market uncertainty and incremental international expansion over the range of the contingency variable, and (2) moderated regression results show the predicted sign for the cross-product term between foreign market uncertainty and contingency variable. It should be noted that because of the small sample size (N = 61), particularly for analysis involving the cultural distance variable which had only twenty-nine valid cases, the probability of finding a statistically significant interaction effect is relatively low. Accordingly, this dissertation will focus more on the sign (positive or negative) of the interaction effect than on its significance level as a basis for evaluating the hypotheses. For both subgroup and moderated regression analyses, one-tailed tests were used for hypothesized relationships, and two-tailed tests for non-hypothesized relationships.
CHAPTER 6

RESULTS

Table 3 presents the descriptive statistics and correlations among the study variables. It indicates that the two measures of foreign market uncertainty, cultural distance and firm inexperience, were highly correlated \((r = .73^{**})\). Since this presented multicollinearity problems, cultural distance and firm inexperience were not included in the same regression equation, but were included separately in Model 1 and Model 2, respectively.

Hypothesis 1

Hypothesis 1 predicted that foreign market uncertainty will increase the extent to which firms undertake incremental international expansion.

Model 1. Table 3 indicates a positive relationship between cultural distance, as a measure of foreign market uncertainty, and the extent to which firms undertake incremental international expansion \((r = .48, p \leq 0.10)\). A regression analysis was used as a more rigorous test of the relationship. Model 1 in Table 4 also shows a
positive main effect of cultural distance on incremental international expansion after controlling for firm size and firm age \((b = .439, p \leq 0.05)\). These two sets of results thus provide support for Hypothesis 1, which predicted that foreign market uncertainty, when measured by cultural distance, will be positively related to incremental international expansion.

**Model 2.** Firm inexperience, another measure of foreign market uncertainty, also had a positive relationship with incremental international expansion \((r = .47, p \leq 0.10)\), as shown in Table 3. Model 2 in Table 4 also shows a positive main effect of firm inexperience on incremental international expansion \((b = .594, p \leq 0.001)\). Hypothesis 1, which predicted that foreign market uncertainty will increase the extent to which firms undertake incremental expansion, was supported when firm inexperience was used as a measure of foreign market uncertainty.

**Hypothesis 2**

Hypothesis 2 predicted that the effect of foreign market uncertainty on incremental international expansion will be weaker for firms with higher levels of organizational slack.

**Model 1.** Table 5 presents the subgroup analysis results that investigate how the effect of cultural distance on incremental international expansion changes across different levels of organizational slack. Model 1 in Table 5 indicates that cultural distance is positively related to the incremental international expansion of firms that have low levels of organizational slack \((b = .557)\). This relationship declined substantially for firms with medium levels of organizational slack \((b = .334)\), and
for firms with high levels of organizational slack \((b = .268)\). These results thus show the expected pattern: the positive effect of cultural distance on incremental international expansion decreases as the level of organizational slack increases.

A moderated regression analysis was used to see whether the cross-product term between foreign market uncertainty and organizational slack showed the predicted negative sign. The results of the moderated regression analysis are presented in Model 1 in Table 6. The sign of the regression coefficient for the cross-product term \((b = -.225)\) indicates the predicted interaction effect. These results provide support for Hypothesis 2, the effect of foreign market uncertainty on incremental international expansion, as measured by cultural distance, is weaker for firms with higher levels of organizational slack.

**Model 2.** Firm inexperience was used as another measure of foreign market uncertainty. The subgroup analysis results in Table 5 indicate that the positive effect of firm inexperience on incremental international expansion for low levels of organizational slack \((b = .808)\) decreased for medium levels of organizational slack \((b = .527)\), and then increased for high levels of organizational slack \((b = .690)\), which shows a curvilinear relationship. However, as the sign of the regression coefficient for the cross-product term \((b = -.308)\) in Table 6 indicates, firm inexperience and organizational slack had a predicted negative interaction effect on incremental international expansion. Viewed collectively, these results showed a mixed support for Hypothesis 2 when firm inexperience was used as a measure of foreign market uncertainty.
**Hypothesis 4**

Hypothesis 4 predicted that the effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in industries in which invested resources are more recoverable.

**Model 1.** Table 7 shows that, for firms operating in industries in which invested resources were characterized by low levels of recoverability, cultural distance had a positive relationship to the extent to which firms engaged in incremental international expansion ($b = .539$). This relationship was weaker for firms in industries which had medium levels of resource recoverability ($b = .409$) and declined substantially for firms operating in industries in which invested resources were highly recoverable ($b = .087$).

The results of the moderated regression analysis in Table 8 provide further support for the pattern observed in the subgroup analysis. The sign of the regression coefficient for the cross-product term ($b = -4.057$) indicates a negative direction of the interaction effect. Both of these findings thus suggest support for Hypothesis 4: the effect of foreign market uncertainty on incremental international expansion, as measured by cultural distance, is weaker for firms operating in industries in which invested resources are more recoverable.

**Model 2.** The positive effect of firm inexperience on incremental international expansion declined substantially as levels of resource recoverability changed from low ($b = .599$) to medium ($b = .497$) to high ($b = .315$), as shown in Model 2 in Table 7. These results thus demonstrate the expected pattern.
The results of the moderated regression analysis in Table 8 also confirm the pattern observed in the subgroup analysis. The sign of the regression coefficient for the cross-product term \( b = -1.580 \) indicates that the interaction effect was in a negative direction. Taken together, these findings provide support for Hypothesis 4, which predicted that the effect of foreign market uncertainty on incremental international expansion, as measured by firm inexperience, is weaker for firms operating in industries in which invested resources were more recoverable.

Hypothesis 5

Hypothesis 5 predicted that the effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in foreign countries in which first-mover advantages are more prevalent.

Model 1. Model 1 in Table 9 reports the subgroup analysis results where cultural distance was used as a measure of foreign market uncertainty. Contrary to this study’s prediction, cultural distance was negatively related to the extent to which firms operating in foreign countries where low levels of first-mover advantages existed undertake incremental international expansion \( b = -0.049 \). This negative relationship strengthened for firms operating in foreign countries with medium levels of first-mover advantages \( b = -2.383 \), and became positive for firms in foreign countries with high levels of first-mover advantages \( b = .771 \). The results of the moderated regression analysis in Model 2 in Table 10 shows that the cross-product term had a positive sign \( b = .158 \), contrary to Hypothesis 5.
Model 2. A similar pattern was found when firm inexperience was used as another measure of foreign market uncertainty. As Model 2 in Table 9 shows, the negative impact of firm inexperience on incremental international expansion for low levels of first-mover advantages \( (b = -0.071) \) increased to positive for medium levels of first-mover advantages \( (b = 0.494) \), and then decreased slightly for high levels of first-mover advantages \( (b = 0.435) \). Results from Model 2 in Table 10 show, however, the predicted negative sign for the interaction term \( (b = -0.004) \).

Hypothesis 6

Hypothesis 6 predicted that the effect of foreign market uncertainty on incremental international expansion will be weaker for firms operating in foreign countries that offer greater labor-cost advantages.

Model 1. As the results of Model 1 in Table 11 indicate, cultural distance was positively related to the extent to which firms operating in foreign countries where levels of labor-cost advantages existed engaged in incremental international expansion \( (b = 0.578) \). This relationship became negative for firms operating in foreign countries with medium levels of labor-cost advantages \( (b = -0.091) \), and became even more negative for firms operating in foreign countries where high levels of labor-cost advantages existed \( (b = -0.208) \). The results of the subgroup analysis thus show the expected pattern that the positive impact of cultural distance on incremental international expansion decreases for firms operating in foreign countries that offer greater labor-cost advantages.

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The results of the moderated regression analysis confirmed the observations based on the subgroup analysis. The sign of the regression coefficient for the cross-product term ($b = -0.067$) indicates that the interaction effect was in a negative direction. Taken together, these findings provide support for Hypothesis 6: the effect of foreign market uncertainty on incremental international expansion, as measured by cultural distance, is weaker for firms operating in foreign countries that offer greater labor-cost advantages.

**Model 2.** The subgroup analysis results are reported in Model 2 in Table 11 when firm inexperience was used as a measure of foreign market uncertainty. As hypothesized, the positive impact of firm inexperience on incremental international expansion declined substantially as levels of labor-cost advantages changed from low ($b = 0.967$) to medium ($b = 0.367$) to high ($b = 0.297$). As the results of the moderated regression analysis in Model 1 in Table 12 indicate, the cross-product term ($b = -0.086$) had a predicted negative interaction effect on incremental international expansion. Both of these findings thus suggest support for Hypothesis 6, which predicted that the effect of foreign market uncertainty on incremental international expansion, as measured by firm inexperience, is weaker for firms operating in foreign countries that offer greater labor-cost advantages.
Summary

The results for the five hypotheses tested in this dissertation can be summarized as follows.

When cultural distance was used as a measure of foreign market uncertainty, the results supported Hypothesis 1 that foreign market uncertainty will affect the extent to which firms undertake incremental international expansion. The remaining four hypotheses proposed that the effect of foreign market uncertainty on incremental international expansion can be affected by the contingency variables. For three (Hypothesis 2, Hypothesis 4, and Hypothesis 6) out of the four hypotheses, the results of the subgroup analysis showed the predicted pattern of changes in the magnitude of foreign market uncertainty on incremental expansion across the three subgroups. For these hypotheses, the results of the moderated regression analysis confirmed the results of the subgroup analysis by showing a predicted negative sign for the regression coefficients for the cross-product terms. This dissertation thus found a clear pattern of results to support its argument: the effect of foreign market uncertainty on incremental expansion is weaker for firms that (1) have higher levels of organizational slack (Hypothesis 2), (2) are operating in industries in which invested resources are more recoverable (Hypothesis 4), or (3) are operating in foreign countries that offer greater labor-cost advantages (Hypothesis 6).

When firm inexperience was used as a measure of foreign market uncertainty, the results were very similar. The effect of foreign market uncertainty
on incremental international expansion (Hypothesis 1) was supported. Out of the four hypotheses, two (Hypothesis 4 and Hypothesis 6) had expected results in the subgroup analysis whereas one (Hypothesis 2) had a mixed result. For the two hypotheses, the moderated regression analysis confirmed the results of the subgroup analysis by showing a predicted negative sign of the regression coefficients for the cross-product terms.

Viewed collectively, this dissertation found that foreign market uncertainty will increase the extent to which firms undertake incremental international expansion. It also found that firm, industry and host country characteristics moderate the relationship between foreign market uncertainty and incremental expansion. Specifically, when cultural distance is used as a measure of foreign market uncertainty, the results of this dissertation indicate that the effect of foreign market uncertainty on incremental expansion is weaker for firms that 1) have higher levels of organizational slack, 2) are operating in industries in which invested resources are more recoverable, or 3) are operating in foreign countries that offer greater labor-cost advantages. For the second and the third conditions, these results also hold true when firm inexperience is used as a measure of foreign market uncertainty.
CHAPTER 7

DISCUSSION

This chapter summarizes the findings of this dissertation, and explains its implications and limitations. It then suggests directions for further research.

This dissertation was motivated by two important questions. First, does the level of foreign market uncertainty firms face affect the extent to which they follow the incremental international expansion process? Second, why do firms that face similar foreign market uncertainty vary in their extent of incremental expansion? To answer the first question, this dissertation hypothesized that foreign market uncertainty would increase the extent to which firms undertake incremental international expansion. To answer the second question, it hypothesized that that firm, industry, and host country characteristics would moderate the relationship between foreign market uncertainty and incremental expansion.
Summary of Findings

Foreign market uncertainty and incremental expansion

The expanded model developed in this dissertation posits that foreign market uncertainty is a determining factor in the pattern of incremental expansion. The dissertation's results offer support for this prediction by demonstrating that foreign market uncertainty is positively related to incremental expansion. The regression analysis results also indicated that, after controlling for the effects of firm size and firm age, foreign market uncertainty has a statistically significant effect on incremental expansion. These two sets of results were the same for Model 1 and Model 2 when foreign market uncertainty was measured by cultural distance and firm inexperience, respectively. Taken together, the evidence thus supports Hypothesis 1, that foreign market uncertainty will increase the extent to which firms undertake incremental international expansion.

Moderating effects

This dissertation also investigated whether firm, industry, and host-country characteristics affect the relationship between foreign market uncertainty and incremental expansion, and tested its hypotheses through subgroup analysis and moderated regression analysis.

Organizational slack. The results of the subgroup analysis showed the predicted change in the magnitude of the relationship between foreign market uncertainty (as measured by cultural distance) and incremental expansion: the
impact of foreign market uncertainty on incremental international expansion decreases as levels of organizational slack increase. The results of the moderated regression analysis also confirmed the pattern observed in the subgroup analysis. The sign of the regression coefficient for the cross-product term between foreign market uncertainty and organizational slack indicates that the interaction effect was in a negative direction. However, the result of the subgroup analysis was mixed when foreign market uncertainty was measured by firm inexperience. Viewed collectively, the evidence thus supports Hypothesis 2, that the effect of foreign market uncertainty (as measured by cultural distance) on incremental expansion is weaker for firms that have higher levels of organizational slack.

Resource recoverability. The results of the subgroup analysis demonstrated the expected pattern: the impact of foreign market uncertainty on incremental expansion decreases as levels of resource recoverability increase. The results of the moderated regression analysis support the pattern of relationships shown in the results of the subgroup analysis. The sign of the regression coefficient for the cross-product term between foreign market uncertainty and resource recoverability indicates that the interaction effect was in a negative direction. These two sets of results were the same for Model 1 and Model 2 when foreign market uncertainty was measured by cultural distance and firm inexperience, respectively. Viewed collectively, the evidence thus supports Hypothesis 4, that the effect of foreign market uncertainty on incremental expansion is weaker for firms operating in industries in which invested resources are more recoverable.
effect of foreign market uncertainty on incremental expansion became stronger as levels of first-mover advantages increased. At least two explanations are possible for this unexpected result. First, the unexpected result might be due to the poor measure of first-mover advantages. In this study, the level of first-mover advantages was measured as the ratio between market attractiveness (measured as the ratio between the average growth rate of GDP per capita) and entry density (measured as the average growth rate of investment as a percent of GDP). As mentioned earlier, this measure has a limitation because it captures first-mover advantages in the host country as a whole, rather than the first-mover advantages of a particular industry. As a result, the magnitude of first-mover advantages was the same for all firms regardless of the type of industry in which they were operating as long as they invested in the same year in the same country. The unexpected result may also be related to a firm's motivation for international expansion. According to the study's results, firms were more cautious in their international expansion in host countries in which first-mover advantages were more prevalent. This may indicate another boundary condition of the incremental model, which will be discussed in detail later.

**Labor-cost advantages.** The results of the subgroup analysis showed the predicted change in the magnitude of the relationship between foreign market uncertainty and incremental expansion: the impact of foreign market uncertainty on incremental international expansion decreases for firms operating in foreign countries that offer greater labor-cost advantages. The results of the moderated regression analysis support the pattern of relationships shown in the results of
the subgroup analysis. The sign of the regression coefficient for the cross-product term between foreign market uncertainty and labor-cost advantages indicates that the interaction effect was in a negative direction. These two sets of results were the same for Model 1 and Model 2 when foreign market uncertainty was measured by cultural distance and firm inexperience, respectively. Viewed collectively, the evidence thus supports Hypothesis 6, that the effect of foreign market uncertainty on incremental expansion is weaker for firms operating in foreign countries that offer greater labor-cost advantages.

Discussion of Findings

Although previous research assumed that a firm would take an incremental process due to foreign market uncertainty, no previous study had provided empirical evidence that supported this assumption. One reason why previous studies may have failed to provide empirical support for the claim that foreign market uncertainty affects incremental expansion is the short-term cross-sectional nature of their approaches. This dissertation investigated the process of international expansion from its inception in order that its findings might clearly reveal the relationship between foreign market uncertainty and incremental expansion.
This dissertation supplies the first empirical evidence for the argument that foreign market uncertainty increases the extent to which firms undertake incremental international expansion. Its findings thus provide strong support for the international expansion theory that describes firm internationalization as a process of incremental commitment.

This dissertation significantly improves upon previous studies of international expansion. Many studies have focused exclusively on the factors that lead to international expansion itself, and have paid little attention to the factors that may lead to different patterns of international expansion. Their approaches reflected their assumption that firms possess perfect information about foreign markets from the beginning, which gave foreign market uncertainty no room to explain why the pattern of international expansion varies across firms. In reality, however, firms rarely have complete information regarding a foreign market when making international expansion decisions (Aharoni, 1966; Kobrin, 1988; Li, 1995). Accordingly, this dissertation assumed that firms do not have perfect information from the beginning of the international expansion process. By providing evidence that the level of foreign market uncertainty affects the pattern of incremental international expansion, this dissertation provides an answer to the question of why the pattern of international expansion varies across firms.

The findings of this study are consistent with Kogut’s (1983) argument that first-time investors and firms with considerable previous experience may differ in their implementation of international expansion strategies. In fact, one of the main criticisms of the incremental model is that its significance is limited to the early
stage of internationalization when lack of foreign market knowledge is a constraining factor (Forsgren, 1989). However, Johanson & Vahlne (1990:14) clearly state that “this critique concerns the range of validity of the model and should be shared with the direct investment theory in which a basic assumption is the disadvantage a foreign firm has compared with domestic firms.” This dissertation found that firms with higher levels of foreign market uncertainty are more likely to take an incremental process, as predicted by the internationalization theory. Expanding into a culturally similar country or accumulating knowledge from previous operations, firms can incrementally reduce their level of foreign market uncertainty, which explains why certain firms take lower levels of incremental expansion while others do not. Consistent with previous research which assumed the relationship, this dissertation thus found that the extent to which firms follow incremental expansion process is determined by the level of foreign market uncertainty which they face.

The findings of this dissertation also indicate that the pattern of firm internationalization can be explained in the context of behavioral theory. This theory argues that the major problem a firm faces, environmental uncertainty, can be resolved incrementally as a firm gains experience (Cyert & March, 1963). As Sutcliffe & Zaheer (1998) conclude, uncertainty has long been an important construct in a number of fields including organization theory (e.g., Burns & Stalker, 1961; March & Simon, 1958; Pfeffer & Salancik, 1978; Thompson, 1967), marketing (e.g., Heide & John, 1990; John & Weitz, 1988), and strategic management (e.g., Porter, 1980; Walker & Weber, 1987; Williamson, 1975). In
fact, it is quite possible that uncertainty has been one of the most important variables in the field of international business. Literature in the field of international business is consistent in arguing that a firm should have some advantages through which it can overcome the costs that result from uncertainty in operating abroad (Buckley & Casson, 1982; Caves, 1982; Dunning, 1979; Hennart, 1982; Hymer, 1976; Kindleberger, 1969). However, most of the previous studies are content with explaining that such advantages influence a firm's propensity to expand operations into an unfamiliar market. This dissertation goes beyond existing research on uncertainty in the context of international business by showing the effect of foreign market uncertainty on the dynamic nature of the international expansion process.

This dissertation also posed the question, Given the similar foreign market uncertainty, why do firms vary in their extent of incremental expansion? Although previous research raised the need to develop a conditional model of internationalization (e.g., Johanson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977; Melin, 1992), no previous study had explored the conditions under which a firm's foreign market uncertainty is more or less likely to be related to its pattern of incremental expansion. This dissertation is the first study that takes a contingency approach toward the international expansion process.

First, this dissertation found that organizational slack moderates the effect of foreign market uncertainty measured by cultural distance on incremental expansion. Ghoshal & Westney (1992) emphasized the need to bridge international
business and organization theory and called for greater interaction between the two in the future. Studies based on organizational theory have identified organizational slack as a determinant of organizational change (e.g., Bourgeois, 1981; Chatterjee, 1990; Cheng & Kesner, 1997; Hambrick & Snow, 1977; Singh, 1986; Koberg, 1987), and international expansion is one of several important organizational changes. By providing a contingency model that is based on foreign market uncertainty (a key construct from internationalization theory), and organizational slack (a key construct from organization theory), this dissertation suggests a better approach toward firm internationalization than each of the theories can explain alone. By providing empirical evidence regarding the interaction effect between organizational slack and foreign market uncertainty on incremental expansion, it also establishes the need to consider organizational slack in order to better understand the pattern of incremental expansion.²

Even though resource availability has not been a particular focus of much of international expansion research (Benito & Welch, 1994), its importance has been emphasized by many researchers. Welch & Luostarinen (1988), for example, argued that the ability to undertake international expansion process is clearly limited by resources available to a firm. Johanson & Vahlne (1977, 1990) also mentioned that firms with large resources may not take an incremental process in international expansion.

² Caution is warranted in interpreting the effect of organizational slack on incremental expansion due to the low inter-item correlations among the three indicators of organizational slack and due to the weak empirical results of the moderated regression analysis.
Given the findings of this dissertation, we need to pay more attention to the moderating effect of organizational slack on the relationship between foreign market uncertainty and incremental expansion. The ability of a firm to respond to a strategic issue is a function of resources that are not distributed uniformly across firms (Barney, 1986, 1991). Thus, considering the variation of organizational slack not only from firm to firm, but also within a firm over time, will advance our understanding of firm internationalization.

Second, this dissertation also found that resource recoverability moderates the relationship between foreign market uncertainty and incremental expansion. This dissertation incorporated perspectives from industrial organization (IO) economics into its framework for firm internationalization. Taking the industry rather than the firm or the individual as its unit of analysis, IO economics provides insights and contributions to the development of strategy for firms operating in a certain industry (Gilbert & Birnbaum-More, 1996). Each industry has its unique characteristics, and those characteristics have a significant impact on how firms in a certain industry operate (Karakaya & Stahl, 1989).

The findings of this dissertation are consistent with Tumbull’s (1987) argument that the process of international expansion that is linked to the environment in which firms operate cannot be generalized across industries. Boter & Holmquist (1996) also emphasize the impact of industry characteristics on the internationalization process. Investigating firm internationalization, however, most previous studies used aggregated data that were collected from
'diverse' manufacturing industries in terms of resource recoverability. As a result, it was impossible to investigate the moderating effect of industry characteristics on international expansion in those studies. The results of this dissertation thus reinforce the importance of considering industry characteristics in general and resource recoverability in particular for a better understanding of international expansion.

The findings of this dissertation can be extended to explain why firms in service industries or knowledge-intensive industries do not reveal the incremental process of international expansion. For example, Bell (1995) found that the incremental model does not adequately reflect the underlying factors that influence a service firm's international expansion. Sharma & Johanson (1987) posited that the international expansion pattern of service firms is not in accordance with that of manufacturing firms. Reich (1991) also observed that firms in knowledge-intensive industries are globalizing at a rapid pace. Using the logic developed in this dissertation, these industries can be categorized into those with higher levels of resource recoverability than manufacturing industries. Thus, it would not be surprising to find evidence that firms in service industries or knowledge-intensive industries are less likely to implement the incremental process in their international expansion.

Third, this dissertation investigated whether location-specific advantages (first-mover advantages and labor-cost advantages) can affect the relationship between foreign market uncertainty and incremental expansion. This dissertation
found the moderating effect of labor-cost advantages on the relationship. Studies based on perspectives from macroeconomics have emphasized the importance of country variables in understanding firm behaviors in international business (e.g., Burton, & Saelens, 1987; Tan & Vertinsky, 1996; Ulgado, 1991; Yoshida, 1987). By demonstrating the interaction effect between foreign market uncertainty and labor-cost advantages on incremental expansion, this dissertation raises a need to consider host-country characteristics for a better understanding of firm internationalization. Several researchers have suggested that conventional economic drivers should be incorporated into the framework of firm internationalization (e.g., Beinto, 1994; Petersen & Pedersen, 1997). However, no study had yet responded to this call. Given the fact that labor-cost advantages vary across host countries, and even within a host country over time, considering labor-cost advantages available in a certain host country for a certain period can be another way to resolve the conflicting results by previous studies. With other studies that found a positive relationship between labor-cost advantages and the inflow of foreign direct investment (e.g., Agarwal, 1980; Benito & Gripsrud, 1992; Kumar, 1994; Schneider & Frey, 1985; Ulgado, 1996; Wheeler & Mody, 1992; Yu, 1990), this dissertation recognizes labor-cost advantages as an important factor in understanding the relationship between foreign market uncertainty and incremental expansion.

On the other hand, this dissertation failed to find evidence for the moderating effect of first-mover advantages on the relationship between foreign
market uncertainty and incremental expansion. It found that firms are more cautious when they expand into a country in which first-mover advantages are more prevalent. Although this outcome was contrary to what was predicted, there are feasible explanations. As mentioned earlier, the unexpected result may be due to its inadequate way of measuring first-mover advantages. Otherwise, it may also be related to the nature of first-mover advantages in firm internationalization.

According to Lieberman & Montgomery (1990), a firm can achieve first-mover status by (1) producing a new product, (2) using a new process, or (3) entering a new market. In the context of this dissertation, which investigates the process of international expansion, we have to consider how a firm can keep such a first-mover status over time. To produce a new product, to use a new process or to enter a new market, a firm does not have to establish a manufacturing facility in a foreign country from the beginning. As suggested in product life cycle theory (Vernon, 1966, 1979), once a firm has set up its first production unit in its home country, any demand that may develop in a foreign market would ordinarily be served from the existing production unit. As Luo & Peng (1998) argue, there has been relatively little research on first-mover advantages in international markets (e.g., Buckley & Casson, 1981; Mascarenhas, 1992) whereas there has been a great deal of research on first-mover advantages in product market entry (e.g., Green, Baclay & Ryans, 1995; Lambkin, 1988; Mitchell, 1989). This dissertation is probably the first study that incorporates the concept of first-mover advantages in the context of international
expansion process. The results of this dissertation indicate the possibility that a firm keeps first-mover status and enjoys first-mover advantages by taking an incremental process in its internationalization process.

The unexpected result about first-mover advantages can also be interpreted in the context of firm internationalization motivation. A firm may be involved in international expansion to expand markets by selling abroad or to acquire foreign resources (Daniels & Radebaugh, 1994). In this dissertation, first-mover advantages were measured as the ratio between market attractiveness and entry density, and market attractiveness was calculated by a growth rate of the GDP per capita. As a result, first-mover advantages in this dissertation are closely related to the issue of how to expand sales in a foreign market. Establishing a manufacturing subsidiary in a foreign country might help increase sales in the country. As mentioned earlier, however, a firm can achieve the same goal by exporting to or by establishing a sales subsidiary in the country. The results of this dissertation are thus consistent with Young et al.'s (1996) argument that firms may be cautious about expanding into countries that provide market-seeking incentives.

The above rationale can also be applied to the findings for the moderating effect of labor-cost advantages in this dissertation. If a firm pursues international expansion to acquire foreign resources such as raw materials, production efficiency and knowledge, the firm must be located in a foreign country where such resources are available. This may explain why this dissertation found a strong moderating effect of labor-cost advantages.
One conclusion that might be drawn from the above explanation of those results is that the pattern of firm internationalization can be influenced by the motivation of international expansion. In this sense, the findings of this dissertation might contradict the argument of Johanson & Wiedersheim-Paul (1975), who expect a similar pattern of firm internationalization to take place on the purchasing side of a firm.

Taken together, the findings of this dissertation indicate that the resource-based view of the firm can explain the dynamic nature of firm internationalization. A basic assumption of the resource-based view of the firm is that firms are fundamentally heterogeneous in terms of their resources (Barney, 1991). Firm resources can include anything that might be thought of as a strength or weakness of a given firm (Wernerfelt, 1984). Several researchers have attempted to classify numerous possible firm resources into several categories (e.g., Barney, 1991; Grant, 1991; Miller & Shamsie, 1996). As long as resources are rare or hard to imitate, have no direct substitutes, and enable firms to pursue opportunities or avoid threats (Barney, 1991), they can be a source of sustained competitive advantages.

Knowledge-based resources are one of the important firm resources that are not distributed uniformly across firms. Miller & Shamsie (1996) argue that knowledge-based resources will be most useful in uncertain environments. The results of this dissertation identify foreign market uncertainty as a crucial factor in understanding the pattern of incremental expansion. For the firm operating
abroad, foreign market uncertainty and foreign market knowledge are in fact two sides of the same coin. Uncertainty about a foreign market can provide a firm with an incentive to learn about the market, and accumulated knowledge in turn affects the level of uncertainty about the market. In this dissertation, cultural distance and firm inexperience were used to measure foreign market uncertainty. Cultural distance and firm inexperience also represent a firm's level of knowledge about a foreign market on country and firm level, respectively. From conceptual and practical points of view, therefore, this dissertation's findings about foreign market uncertainty indicate that knowledge-based resources are important factors in determining the pattern of international expansion. This perspective provides an answer to the important question raised by the incremental model: why all firms do not show the same pattern in their international expansion process.

The findings of this dissertation further indicate that the impact of knowledge-based intangible resources such as foreign market knowledge on incremental expansion can be moderated by physical and tangible resources. This dissertation found that organizational slack, resource recoverability, and labor-cost advantages have moderating effects. Labor-cost advantages are related to how firms reduce operating costs and thus save financial resources by investing in a certain country. Resource recoverability means how easily committed physical capital resources, such as plant and equipment, can be used for other purposes. Organizational slack is directly related to the amount of resource availability. The overall findings of this dissertation thus indicate that
firm resources have not only direct but also interaction effects on the pattern of firm internationalization.

The results of this dissertation have implications for both firm internationalization theory and the resource-based view of the firm. Even though many researchers basing their arguments on firm internationalization theory have suggested that firm resources may affect international expansion process (e.g., Benito & Welch, 1994; Johanson & Vahlne, 1977, 1990; Welch & Luostarinen, 1988), most of these arguments focus on a direct impact of resources on incremental expansion. Furthermore, no study had yet empirically tested the impact of resources on the pattern of international expansion process. The findings of this dissertation indicate that the resource-based view of the firm in general and the heterogeneity of firm resources in particular can help us understand the overall process of incremental expansion.

The results of this dissertation also have implications for existing research on the resource-based view of the firm. It is true that the resource-based view of the firm is often regarded as having momentous potential as a paradigm in the field of strategic management (Peteraf, 1993). However, there is a need to examine the conceptual claims of the resource-based scholars; there have been very few efforts to test empirically if, when, and how firm resources lead to organizational changes (cf. Miller & Shamsie, 1996). The findings of this dissertation may give an answer to those questions in the context of international expansion process.
Limitations

This dissertation has several limitations. First, it based its results on a relatively small sample size from a single country. Even though Korean firms provided a good setting for studying the whole process of international expansion, the present findings should not be generalized without further replication in the context of other countries.

Second, while this dissertation suggested that risk-taking orientation, which varies across firms, may influence the process of international expansion, its small number of valid cases prevented it from testing whether the effect of foreign market uncertainty on incremental expansion would be affected by a firm's risk-taking orientation (Hypothesis 3). Further research may rely on other measures of risk-taking orientation.

Third, since this dissertation could use only a small number of cases (N = 29) to analyze the effect of cultural distance on incremental international expansion, its interpretation of the impact of cultural distance on the process of firm internationalization is less reliable than the rest of its findings.

Finally, there is a need for improved measure of study variables, especially of first-mover advantages. To avoid confusion, this dissertation did not include any case that had negative values for first-mover advantages. This might have weakened or biased the impact of first-mover advantages.
Directions for Further Research

This dissertation suggests several possible directions for further research. One extension of this dissertation might be to examine whether the effect of foreign market uncertainty on incremental expansion can be moderated by other variables. This dissertation focused on only host-country characteristics to find country-level contingency variables. Future research might choose to investigate home-country characteristics as factors in the relationship between foreign market uncertainty and incremental expansion. Host-country image might be one of them. According to the literature regarding country-of-origin effects (e.g., Bilkey & Nes, 1982; Davis, Kern & Stemquist, 1990; Han & Terpstra, 1988; Johansson, Ronkainen & Czinkota, 1994; Schroath, Hu & Chen, 1993), consumer perceptions of product quality are affected by an image of the brand country. Firms from a country with an unfavorable image may wish to relocate their production to a country like the U.S. in order to achieve an improvement in the perceived quality of their product by emphasizing that is “Made in America.” If a firm is from a country that has an unfavorable image in the international marketplace, the firm may show a low level of incremental expansion even though it faces a high level of foreign market uncertainty.

The role of home-country governments also might be a factor in the relationship between foreign market uncertainty and incremental expansion. Incentive programs like financial assistance, insurance benefits and information services offered by home-country governments to promote firm internationalization may advance our understanding of firm internationalization (Aggarwal & Agmon, 85
They may offset some of the risk that stems from foreign market uncertainty and allow firms to reveal a different pattern of international expansion. Whereas many studies investigated the effect of incentive programs on the propensity of a firm's decision to invest (e.g., Aharoni, 1966; Guisinger, 1985; Lim, 1983; Rolfe, Ricks, Pointer & McCarthy, 1993; Rolfe & White, 1992; Usher, 1977), no study has yet investigated how incentive programs affect the relationship between foreign market uncertainty and incremental expansion.

Future research might also investigate the impact of competition within an industry on the pattern of international expansion. Firms might show a 'follow-the-leader' mentality in which it attempts to match a rival firm's FDI by replicating it (Knickerbocker, 1973). Similarly, international competition within a same industry may force firms to take a so-called 'exchange-of-threats' approach to international expansion within the competitor's home country (Graham, 1978). Whereas many studies have investigated the effect of oligopolistic behavior on FDI activities (e.g., Chang, 1995; Chang & Rosenzweig, 1996; Hennart & Park, 1994; Li, 1994; Rose & Ito, 1996; Terpstra & Yu, 1988; Yu & Ito, 1988), no study has yet focused on how strategic interactions between firms may affect the relationship between foreign market uncertainty and incremental expansion.

Future research might also take into account the ways in which firm motives for internationalization may affect the relationship between foreign market uncertainty and incremental expansion. Even though the motivation of firm internationalization has been assumed as an important factor in international expansion process (Juul & Walters, 1987; Young et al., 1996), no study has yet
investigated how motivation for firm internationalization can affect the relationship between foreign market uncertainty and incremental expansion. This dissertation’s findings about first-mover advantages indicate the possibility of such an impact. Future research might want to investigate the issue in a more systematic way.

Investigating the mechanism of learning within a firm would be another challenging, yet important direction for future research. This dissertation found that firms with lower levels of foreign market uncertainty are less likely to undertake incremental expansion. Even though it did not directly measure the mechanisms of organizational learning, one can infer from its findings that organizational learning may reduce the level of foreign market uncertainty for subsequent international activities. Some researchers recognize the importance of studying these mechanisms (e.g., Barkema, Bell & Pennings, 1996; Chang, 1995; Chi & McGuire, 1996; Melin, 1992; Nieminen & Tömröss, 1997; Zaheer, 1995), but no study has yet directly investigated them.

Future researchers might want to treat a firm’s product as yet another variable they might take into account when analyzing a firm’s pattern of international expansion. That pattern may vary, for example, depending on what stage of its life cycle the product is in when it is introduced into the host country, or how long a life cycle the product has (Bell, 199; Jacobs, Wills, Samli & Bullard, 1997). The pattern of international expansion might also depend upon the length of life cycles.

Finally, future research might also want to incorporate perspectives from the resource-based view of the firm into the framework of firm internationalization in a
more systematic way. The findings of this dissertation indicate that the pattern of firm internationalization can be explained by the resource-based view of the firm. However, this dissertation did not investigate whether different types of firm resources may have different impacts on firm internationalization. For example, it would be interesting to study under what conditions which types of firm resources are more important in deciding the pattern of international expansion.

Hopefully, this dissertation will help encourage additional work on these issues.
CHAPTER 8

CONCLUSION

This dissertation set out to better understand the pattern of international expansion by investigating two important questions: First, does the level of foreign market uncertainty firms face affect the extent to which they follow the incremental expansion process? Second, why do firms that face similar foreign market uncertainty vary in their extent of incremental expansion?

This dissertation provides empirical confirmation of the long-standing assumption that incremental expansion is affected by foreign market uncertainty. By measuring international expansion as a matter of incremental process and by tracing the whole history of international expansion for the sample firms, it provides the first empirical evidence for the argument that foreign market uncertainty increases the extent to which firms undertake incremental international expansion. It thus expands the field of firm internationalization by clarifying the relationship between foreign market uncertainty and incremental expansion.
This dissertation also provides empirical evidence for the interaction between foreign market uncertainty and the contingency variables developed here. For all its contingency and control variables, this dissertation used a three-year period (t-3, t-2, and t-1) so that it might consider the effect of the variables on a firm's international expansion over time. Its findings extend and elaborate research by others who have proposed to take a contingency approach for a better understanding of firm internationalization. The overall results of this dissertation indicate that firm, industry and host-country characteristics moderate the relationship between foreign market uncertainty and incremental expansion. Specifically, when cultural distance is used as a measure of foreign market uncertainty, the results of this dissertation indicate that the effect of foreign market uncertainty on incremental expansion is weaker for firms that 1) have higher levels of organizational slack, 2) are operating in industries in which invested resources are more recoverable, or 3) are operating in foreign countries that offer greater labor-cost advantages. For the second and the third conditions, these results also hold true when firm inexperience is used as a measure of foreign market uncertainty.

The findings of this dissertation contribute to the literature on firm internationalization by providing a theory for, and empirical evidence of, the interaction between foreign market uncertainty and the contingency variables developed here. They also highlight the importance of taking a contingency approach toward firm internationalization. More specifically, they suggest that
previous empirical studies ought to be revisited, especially those which failed to find
evidence supporting the incremental model, to see whether those conflicting results
can be resolved by the framework developed here.

Taken together, this dissertation provides theory and empirical evidence
that help us to understand: (1) how foreign market uncertainty affects incremental
expansion, and (2) when foreign market uncertainty is more or less likely to
influence the pattern of incremental expansion.

Research on the pattern of international expansion process offers a very
good opportunity for gathering knowledge about firm internationalization. This
dissertation has examined a previously unexplored topic -- the effect of foreign
market uncertainty on incremental expansion process and the conditions under
which the relationship can be moderated.

This dissertation takes a step towards a more integrated view of firm
internationalization. Sole reliance on a theory of firm internationalization would
have led this dissertation to predict the same pattern of incremental expansion
for firms which face the same level of foreign market uncertainty. By taking a
contingency approach based on other theoretical perspectives as well, this
dissertation furnishes a more complete view of international expansion than
previous work has offered.

Although its results should be seen as preliminary because of the limitations
mentioned earlier, this dissertation provides future researchers with some empirical
evidence supporting a promising new perspective with which to study the process
of international expansion. It also reinforces the call for and the potential fruitfulness of further investigation into the dynamic nature of the international expansion process.
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Appendix A

Figures
Figure 1: Empirical Literature Review Procedure
FOREIGN MARKET UNCERTAINTY

Firm level variables
- Organizational Slack
- Risk-taking Orientation

Industry level variable
- Resource Recoverability

EXTENT OF INCREMENTAL EXPANSION

Host country level variables
- First-mover Advantages
- Labor-cost Advantages

Figure 2: Framework of the Present Study
Appendix B

Tables
<table>
<thead>
<tr>
<th>STUDY</th>
<th>SAMPLE</th>
<th>FOCUS: SELECTION OF</th>
<th>INVESTIGATED IE AS A PROCESS?</th>
<th>FOUND IE WAS AN INCREMENTAL PROCESS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Davidson [1983]</td>
<td>954 manufacturing products first introduced in the U.S.</td>
<td>Country</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Cavusgil [1984a]</td>
<td>70 manufacturing firms in Wisconsin and Illinois</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Cavusgil [1984b]</td>
<td>175 manufacturing firms in Wisconsin</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Denis &amp; Depelteau [1985]</td>
<td>51 small and middle-sized manufacturing firms in Canada</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Juul &amp; Walters [1987]</td>
<td>12 Norwegian manufacturing firms</td>
<td>Operational form</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Sharma &amp; Johanson [1987]</td>
<td>40 Swedish technical consultancy firms</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Turnbull [1987]</td>
<td>24 U.K.-based manufacturing firms in France, Germany</td>
<td>Operational form</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Summary of Empirical Studies about International Expansion (IE)
<table>
<thead>
<tr>
<th>STUDY</th>
<th>SAMPLE</th>
<th>FOCUS: SELECTION OF</th>
<th>INVESTIGATED IE AS A PROCESS?</th>
<th>FOUND IE WAS AN INCREMENTAL PROCESS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terpstra &amp; Yu [1988]</td>
<td>1120 cases by the 20 largest U.S. advertising agencies</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Yu &amp; Ito [1988]</td>
<td>FDI activities in the U.S. tire (275 cases) and textile (240 cases) industry</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Erramilli &amp; Rao [1990]</td>
<td>175 U.S. service firms</td>
<td>Operational form</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Millington &amp; Bayliss [1990]</td>
<td>50 UK manufacturing firms</td>
<td>Operational form</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Sullivan &amp; Bauerschmidt [1990]</td>
<td>60 European manufacturing firms in the forest products industry</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Yu [1990]</td>
<td>100 U.S. manufacturing firms</td>
<td>Operational form</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Erramilli [1991]</td>
<td>151 U.S.-based service firms</td>
<td>Country</td>
<td>NO</td>
<td>NO</td>
</tr>
<tr>
<td>Li [1994]</td>
<td>180 large MNCs in 10 service industries</td>
<td>Operational form</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

continued
<table>
<thead>
<tr>
<th>STUDY</th>
<th>SAMPLE</th>
<th>FOCUS: SELECTION OF</th>
<th>INVESTIGATED IE AS A PROCESS?</th>
<th>FOUND IE WAS AN INCREMENTAL PROCESS?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bell [1995]</td>
<td>34 Finnish firm, 38 Irish firms, and 26 Norwegian firms in service industry</td>
<td>Country</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Fina &amp; Rugman [1996]</td>
<td>a large U.S.-owned pharmaceutical firm</td>
<td>Operational form</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Haanes, Lorange &amp; Lowendahl [1996]</td>
<td>two firms in auto industry</td>
<td>Country</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>O'Grady &amp; Lane [1998]</td>
<td>32 Canadian retail firms</td>
<td>Country</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Young, Huang &amp; McDermott [1996]</td>
<td>5 stated-owned manufacturing MNEs from China</td>
<td>Operational form</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Characteristics</td>
<td>Categories</td>
<td># Firms</td>
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<td></td>
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<tr>
<td>-------------------------</td>
<td>-------------------------------------------------</td>
<td>---------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year of establishment</td>
<td>Before 1960</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1960-1970</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>After 1970</td>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual sales</td>
<td>Less than $50 million</td>
<td>21</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$50 million - $500 million</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than $500 million</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry*</td>
<td>Radio, television, communication equipment &amp; apparatus</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Textiles</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chemicals &amp; chemical products</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Foods &amp; beverages</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wearing apparel &amp; fur articles</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Motor vehicles, trailers &amp; semi-trailers</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Electrical machinery &amp; apparatus</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rubber &amp; plastic products</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Host country</td>
<td>Asia</td>
<td>46</td>
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<tr>
<td></td>
<td>China</td>
<td>26</td>
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<td></td>
<td>Indonesia</td>
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<td></td>
<td>Philippines</td>
<td>3</td>
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<tr>
<td></td>
<td>Vietnam</td>
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<td></td>
<td>Others</td>
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<td></td>
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<td></td>
<td>Honduras</td>
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<td>USA</td>
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<td></td>
<td>Mexico</td>
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<tr>
<td></td>
<td>Others</td>
<td>2</td>
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<td></td>
<td>Europe</td>
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<td></td>
<td>Ireland</td>
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<td></td>
<td>UK</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Others</td>
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</tr>
</tbody>
</table>

*Based on Korea Standard Industry Classification (KSIC) at the two-digit level.

Table 2: Sample Profile
<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Extent of incrementalism</td>
<td>61</td>
<td>0.00</td>
<td>0.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cultural distance</td>
<td>29</td>
<td>1.61</td>
<td>1.16</td>
<td>0.48**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Firm inexperience</td>
<td>61</td>
<td>0.00</td>
<td>0.83</td>
<td>0.47**</td>
<td>0.73**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Organizational slack</td>
<td>61</td>
<td>-0.00</td>
<td>0.50</td>
<td>-0.05</td>
<td>-0.13</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Risk-taking orientation</td>
<td>61</td>
<td>1.31</td>
<td>1.57</td>
<td>0.32*</td>
<td>0.20</td>
<td>0.17</td>
<td>-0.09</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>6. Resource recoverability</td>
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<td>0.08</td>
<td>0.08</td>
<td>-0.30*</td>
<td>-0.23</td>
<td>-0.25</td>
<td>-0.17</td>
<td>-0.28*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. First-mover advantage</td>
<td>40</td>
<td>4.29</td>
<td>5.65</td>
<td>-0.27</td>
<td>-0.35</td>
<td>-0.26</td>
<td>-0.21</td>
<td>0.03</td>
<td>-0.09</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. Labor-cost advantage</td>
<td>55</td>
<td>2.35</td>
<td>3.53</td>
<td>-0.38**</td>
<td>-0.67**</td>
<td>-0.46**</td>
<td>0.10</td>
<td>-0.32*</td>
<td>-0.11</td>
<td>0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Firm size</td>
<td>61</td>
<td>25.36</td>
<td>1.52</td>
<td>0.26*</td>
<td>0.22</td>
<td>-0.12</td>
<td>-0.27*</td>
<td>-0.10</td>
<td>-0.28*</td>
<td>-0.09</td>
<td>-0.07</td>
<td></td>
</tr>
<tr>
<td>10. Firm age</td>
<td>61</td>
<td>31.13</td>
<td>10.24</td>
<td>0.05</td>
<td>-0.21</td>
<td>-0.28*</td>
<td>0.06</td>
<td>-0.18</td>
<td>-0.02</td>
<td>-0.03</td>
<td>0.15</td>
<td>0.38**</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 3: Descriptive Statistics and Correlations
Table 4: Regression Analysis Results for the Main Effect

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>0.084</td>
<td>0.181**</td>
</tr>
<tr>
<td></td>
<td>(0.129)</td>
<td>(0.073)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>0.004</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>(0.021)</td>
<td>(0.011)</td>
</tr>
<tr>
<td>Foreign market uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural distance (CD)</td>
<td>0.439**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td></td>
</tr>
<tr>
<td>Firm inexperience (FI)</td>
<td></td>
<td>0.594****</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.128)</td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>61</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.252*</td>
<td>0.326****</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses. 

- ****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (one-tailed tests for hypothesized relationships) 
- ****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (two-tailed tests for non-hypothesized relationships)
### Model 1

<table>
<thead>
<tr>
<th></th>
<th>Low (N = 10)</th>
<th>Medium (N = 10)</th>
<th>High (N = 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm size</strong></td>
<td>.020</td>
<td>.035</td>
<td>.216*</td>
</tr>
<tr>
<td></td>
<td>(.433)</td>
<td>(.222)</td>
<td>(.094)</td>
</tr>
<tr>
<td><strong>Firm age</strong></td>
<td>.013</td>
<td>-.010</td>
<td>-.004</td>
</tr>
<tr>
<td></td>
<td>(.067)</td>
<td>(.033)</td>
<td>(.020)</td>
</tr>
<tr>
<td><strong>Cultural distance</strong></td>
<td>.557</td>
<td>.334</td>
<td>.268*</td>
</tr>
<tr>
<td></td>
<td>(.508)</td>
<td>(.300)</td>
<td>(.138)</td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>21.0%</td>
<td>23.9%</td>
<td>78.1%</td>
</tr>
</tbody>
</table>

### Model 2

<table>
<thead>
<tr>
<th></th>
<th>Low (N = 20)</th>
<th>Medium (N = 20)</th>
<th>High (N = 21)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm size</strong></td>
<td>.123</td>
<td>.370*</td>
<td>.161</td>
</tr>
<tr>
<td></td>
<td>(.150)</td>
<td>(.192)</td>
<td>(.116)</td>
</tr>
<tr>
<td><strong>Firm age</strong></td>
<td>.022</td>
<td>-.034</td>
<td>.022</td>
</tr>
<tr>
<td></td>
<td>(.025)</td>
<td>(.027)</td>
<td>(.015)</td>
</tr>
<tr>
<td><strong>Firm inexperience</strong></td>
<td>.808***</td>
<td>.527***</td>
<td>.690**</td>
</tr>
<tr>
<td></td>
<td>(.272)</td>
<td>(.205)</td>
<td>(.280)</td>
</tr>
<tr>
<td><strong>R^2</strong></td>
<td>42.8%</td>
<td>32.8%</td>
<td>31.8%</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses.  

* ****p ≤ 0.001; ***p ≤ 0.01; **p ≤ 0.05; *p ≤ 0.10 (one-tailed tests for hypothesized relationships)  
  ** ****p ≤ 0.001; ***p ≤ 0.01; **p ≤ 0.05; *p ≤ 0.10 (two-tailed tests for non-hypothesized relationships)

Table 5: Subgroup Analysis Results by Organizational slack
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>.059*</td>
<td>.164**</td>
</tr>
<tr>
<td></td>
<td>(.144)</td>
<td>(.080)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>.002</td>
<td>.007</td>
</tr>
<tr>
<td></td>
<td>(.022)</td>
<td>(.012)</td>
</tr>
<tr>
<td>Foreign market uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural distance (CD)</td>
<td>.400**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.197)</td>
<td></td>
</tr>
<tr>
<td>Firm inexperience (FI)</td>
<td></td>
<td>.548****</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.138)</td>
</tr>
<tr>
<td>Organizational Slack</td>
<td>.209</td>
<td>-.002</td>
</tr>
<tr>
<td></td>
<td>(.655)</td>
<td>(.220)</td>
</tr>
<tr>
<td>CD × Organizational slack</td>
<td>-.225</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.404)</td>
<td></td>
</tr>
<tr>
<td>FI × Organizational slack</td>
<td></td>
<td>-.308</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.324)</td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>61</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.263</td>
<td>.337</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses.

$\cdots p \leq 0.001$; $\cdots p \leq 0.01$; $\cdots p \leq 0.05$; $^p \leq 0.10$ (one-tailed tests for hypothesized relationships)

$\cdots p \leq 0.001$; $\cdots p \leq 0.01$; $^p \leq 0.05$; $^p \leq 0.10$ (two-tailed tests for non-hypothesized relationships)

Table 6: Moderated Regression Analysis Results for Organizational Slack
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low (N = 10)</td>
<td>Medium (N = 20)</td>
</tr>
<tr>
<td>Firm size</td>
<td>.248 (±.220)</td>
<td>-.205 (±.229)</td>
</tr>
<tr>
<td></td>
<td>.100 (±.055)</td>
<td>-.001 (±.027)</td>
</tr>
<tr>
<td>Cultural distance</td>
<td>.539 (±.350)</td>
<td>.409* (±.263)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>58.1%</td>
<td>39.1%</td>
</tr>
<tr>
<td>Firm age</td>
<td>.100 (±.055)</td>
<td>-.001 (±.027)</td>
</tr>
<tr>
<td>Firm inexperience</td>
<td>.599** (±.248)</td>
<td>.497** (±.266)</td>
</tr>
<tr>
<td>$R^2$</td>
<td>40.6%</td>
<td>32.7%</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses. ****p ≤ 0.001; ***p ≤ 0.01; **p ≤ 0.05; *p ≤ 0.10 (one-tailed tests for hypothesized relationships) ****p ≤ 0.001; ***p ≤ 0.01; **p ≤ 0.05; *p ≤ 0.10 (two-tailed tests for non-hypothesized relationships)

Table 7: Subgroup Analysis Results by Resource Recoverability
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>.037</td>
<td>.150**</td>
</tr>
<tr>
<td></td>
<td>(.138)</td>
<td>(.078)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>.013</td>
<td>.008</td>
</tr>
<tr>
<td></td>
<td>(.023)</td>
<td>(.011)</td>
</tr>
<tr>
<td>Foreign market uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural distance (CD)</td>
<td>.688**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.302)</td>
<td></td>
</tr>
<tr>
<td>Firm inexperience (FI)</td>
<td></td>
<td>.649****</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.182)</td>
</tr>
<tr>
<td>Resource recoverability</td>
<td>2.340</td>
<td>-2.046*</td>
</tr>
<tr>
<td></td>
<td>(4.223)</td>
<td>(1.829)</td>
</tr>
<tr>
<td>CD × Resource recoverability</td>
<td>-4.057</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3.739)</td>
<td></td>
</tr>
<tr>
<td>FI × Resource recoverability</td>
<td></td>
<td>-1.580**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.223)</td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>61</td>
</tr>
<tr>
<td>R²</td>
<td>.302</td>
<td>.342</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses.

* **** p ≤ 0.001; *** p ≤ 0.01; ** p ≤ 0.05; * p ≤ 0.10 (one-tailed tests for hypothesized relationships)
* **** p ≤ 0.001; *** p ≤ 0.01; ** p ≤ 0.05; * p ≤ 0.10 (two-tailed tests for non-hypothesized relationships)

Table 8: Moderated Regression Analysis Results for Resource Recoverability
<table>
<thead>
<tr>
<th></th>
<th>Low (N = 7)</th>
<th>Medium (N = 6)</th>
<th>High (N = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm size</strong></td>
<td>.299 (\pm .170)</td>
<td>.261 (\pm .128)</td>
<td>-.359 (\pm .174)</td>
</tr>
<tr>
<td><strong>Firm age</strong></td>
<td>-.033** (\pm .024)</td>
<td>-.044 (\pm .031)</td>
<td>.023 (\pm .040)</td>
</tr>
<tr>
<td><strong>Cultural distance</strong></td>
<td>-.049 (\pm .340)</td>
<td>-2.383* (\pm .827)</td>
<td>.771** (\pm .217)</td>
</tr>
<tr>
<td>(R^2)</td>
<td>54.4%</td>
<td>87.5%</td>
<td>91.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Low (N = 13)</th>
<th>Medium (N = 13)</th>
<th>High (N = 14)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Firm size</strong></td>
<td>.392*** (\pm .113)</td>
<td>.291 (\pm .291)</td>
<td>.133 (\pm .078)</td>
</tr>
<tr>
<td><strong>Firm age</strong></td>
<td>-.039** (\pm .017)</td>
<td>-.002 (\pm .028)</td>
<td>.001 (\pm .019)</td>
</tr>
<tr>
<td><strong>Firm inexperience</strong></td>
<td>-.071 (\pm .291)</td>
<td>.494 (\pm .383)</td>
<td>.435* (\pm .259)</td>
</tr>
<tr>
<td>(R^2)</td>
<td>57.4%</td>
<td>18.1%</td>
<td>41.4%</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses. 
\(****p \leq 0.001; \***p \leq 0.01; **p \leq 0.05; *p \leq 0.10\) (one-tailed tests for hypothesized relationships) 
\(****p \leq 0.001; \***p \leq 0.01; **p \leq 0.05; *p \leq 0.10\) (two-tailed tests for non-hypothesized relationships) 

Table 9: Subgroup Analysis Results by First-mover Advantages
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>.112 (.136)</td>
<td>.244*** (.088)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>-.024 (.020)</td>
<td>-.016 (.012)</td>
</tr>
<tr>
<td>Foreign market uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural distance (CD)</td>
<td>-.041 (.333)</td>
<td></td>
</tr>
<tr>
<td>Firm inexperience (FI)</td>
<td></td>
<td>.319* (.205)</td>
</tr>
<tr>
<td>First-mover advantages</td>
<td>-.124 (.135)</td>
<td>-.026 (.026)</td>
</tr>
<tr>
<td>CD × First-mover advantages</td>
<td>.158 (.196)</td>
<td></td>
</tr>
<tr>
<td>FI × First-mover advantages</td>
<td></td>
<td>-.004 (.031)</td>
</tr>
<tr>
<td>N</td>
<td>19</td>
<td>40</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.367</td>
<td>.283</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses.

****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (one-tailed tests for hypothesized relationships)

****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (two-tailed tests for non-hypothesized relationships)

Table 10: Moderated Regression Analysis Results for First-Mover Advantages
### Model 1

<table>
<thead>
<tr>
<th></th>
<th>Low (N = 9)</th>
<th>Medium (N = 8)</th>
<th>High (N = 11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm size</td>
<td>-.273 (.277)</td>
<td>.369 (.218)</td>
<td>.073 (.068)</td>
</tr>
<tr>
<td>Firm age</td>
<td>.153* (.069)</td>
<td>-.072 (.041)</td>
<td>-.014 (.017)</td>
</tr>
<tr>
<td>Cultural distance</td>
<td>.578* (.347)</td>
<td>-.091 (.284)</td>
<td>-.208 (.227)</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>54.1%</td>
<td>57.7%</td>
<td>22.7%</td>
</tr>
</tbody>
</table>

### Model 2

<table>
<thead>
<tr>
<th></th>
<th>Low (N = 18)</th>
<th>Medium (N = 18)</th>
<th>High (N = 19)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm size</td>
<td>.102 (.153)</td>
<td>.113* (.055)</td>
<td>.264 (.158)</td>
</tr>
<tr>
<td>Firm age</td>
<td>.043 (.038)</td>
<td>.020* (.010)</td>
<td>-.009 (.019)</td>
</tr>
<tr>
<td>Firm inexperience</td>
<td>.967*** (.285)</td>
<td>.367** (.154)</td>
<td>.297 (.255)</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>49.7%</td>
<td>44.0%</td>
<td>19.1%</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses. 

\[ ****p \leq 0.001; ***p \leq 0.01; **p \leq 0.05; *p \leq 0.10 \text{ (one-tailed tests for hypothesized relationships)} \]

\[ ****p \leq 0.001; ***p \leq 0.01; **p \leq 0.05; *p \leq 0.10 \text{ (two-tailed tests for non-hypothesized relationships)} \]

**Table 11: Subgroup Analysis Results by Labor-cost Advantages**
<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Size</td>
<td>-.031</td>
<td>.150**</td>
</tr>
<tr>
<td></td>
<td>(.107)</td>
<td>(.072)</td>
</tr>
<tr>
<td>Firm Age</td>
<td>.007</td>
<td>.015</td>
</tr>
<tr>
<td></td>
<td>(.021)</td>
<td>(.012)</td>
</tr>
<tr>
<td>Foreign market uncertainty</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural distance (CD)</td>
<td>-.131</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.207)</td>
<td></td>
</tr>
<tr>
<td>Firm inexperience (FI)</td>
<td></td>
<td>.685****</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.159)</td>
</tr>
<tr>
<td>Labor-cost advantage</td>
<td>-.088</td>
<td>.020</td>
</tr>
<tr>
<td></td>
<td>(.108)</td>
<td>(.042)</td>
</tr>
<tr>
<td>CD X Labor-cost advantage</td>
<td>-.067*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(.046)</td>
<td></td>
</tr>
<tr>
<td>FI X Labor-cost advantage</td>
<td></td>
<td>-.086***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.035)</td>
</tr>
<tr>
<td>N</td>
<td>28</td>
<td>55</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.577</td>
<td>.450</td>
</tr>
</tbody>
</table>

Unstandardized regression coefficients are shown; standard errors are in parentheses.  
****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (one-tailed tests for hypothesized relationships)  
****$p \leq 0.001$; ***$p \leq 0.01$; **$p \leq 0.05$; *$p \leq 0.10$ (two-tailed tests for non-hypothesized relationships)  

Table 12: Moderated Regression Analysis Results for Labor-Cost Advantages