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DETERMINANTS OF FOREIGN MARKET ENTRY MODES OF INTERNATIONAL FRANCHISERS: A KNOWLEDGE BASED FRAMEWORK

By Yong Suhk Pak

A dissertation submitted to the

Graduate School-Newark

Rutgers, The State University of New Jersey

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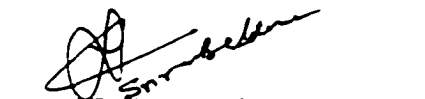
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Newark, New Jersey
May, 2000

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ABSTRACT OF THE THESIS

Determinants of Foreign Market Entry Modes of

International Franchisers: A Knowledge-based Framework

By Yong Suhk Pak

Thesis director: Professor John H. Dunning

The purpose of this thesis is to develop and test a theoretical framework of the determinants of the foreign market entry modes of international franchisers. An extensive list of variables is examined in relation to the three types (levels of resource commitment) of entry modes.

The determinants of international market entry modes are developed from the industrial, firm-specific, and locational perspectives. Managerial perceptions are used to measure the degree of influence of each determinant on the entry mode choices. Hypotheses of the relationship between the entry modes and the determinants are constructed mainly based on knowledge/resource-based theory. A knowledge-based perspective that views foreign markets as a source of knowledge and international expansion as a creative process of organizational learning is emphasized in the analysis. Then, transaction-cost economics and internationalization theory complemented the resource-based viewpoint.

Twenty-eight UK and one hundred sixty US international franchisers qualified as the population of this research. Survey questionnaires were mailed to directors of international franchisers, and seventy-two firms responded (a 38.3% response ratio).

Oneway ANOVA recognized nine variables that showed statistical significance in terms of group (entry mode types) means. Degree of internationalization of the industry and business types (retail vs. wholesale) among the industry determinants; competitive global strategy, start-up investment costs, domestic ownership, and nationality among the firm-specific determinants; and legal differences, recognition of foreign markets as a source of learning, and active foreign applicants among the locational determinants showed statistical significance.

Then, the aggregated variables are tested using multiple discriminant analysis and multiple ordinal logistic regression. These models identified such variables as strategic motivation of global competitiveness and recognition of foreign markets as a source of learning differentiated firms with the different type of entry modes. Therefore, we can conclude that there are *de facto* but not *de jure* international franchisers that internalize their cross border markets not only to exploit existing competitive advantages but also to gain new ones.

PREFACE

GOD IS GRACIOUS

But by the grace of God I am what I am,
and His grace toward me has not been in vain.
I Corinthians 15:10

I dedicate this piece to my parents who have given everything for me. I am so grateful to them and do not know how to ever repay all their supports, prayers, and love. I wish I could return a very small portion of their love by presenting this thesis to them. At this moment, I really long for my best friend, my hero, my father Dr. Ki Hyuk Pak. He is not here with us anymore to celebrate his youngest child getting his Ph.D. But, I know he is up there in Heaven watching over me who is making a baby step trying to follow his father's big footsteps. I promise Dad that I will take a good care of his beloved wife, my mother.

Having a chance to learn from and work with Professor John H. Dunning has been a blessing experience as a student of international business study. Especially, I was very lucky to work with him as his research assistant during my last year at Rutgers. I have learned a lot from his brilliant intelligence, in-depth knowledge, and accurate insight about the whole realm of international business field. Without his support and guidance, I could never have reached here. He is a true English gentleman with warm hearts. I will never forget the lunch he treated us after my dissertation defense.

I have been also indebted to my other committee members. Professor Farok Contractor has endorsed and encouraged me to research on the franchising sector, which

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has not received much attention by main stream IB scholars. Professor Sam Beldona has advised me designing and conducting the mail survey and arranged all the materials necessary for the survey. I have appreciated and enjoyed his companionship since my dissertation defense. Professor Jean-Francois Hennart, the external panel invited by Professor Dunning, participated in my defense via a teleconference from the Netherlands and made valuable recommendations on my dissertation. His comments on my understanding of internalization theory and statistical methodology gave me the last opportunity to improve the quality of my thesis.

This piece is an outcome of a caring teamwork. I know my sister's family have prayed for my family everyday in their family prayer time. My best buddy, my brother Paul and his family have been always supportive, and especially in 1998 when Korea went through economic crisis, he willingly took the financial burden of my family. I know many others, parents-in-law, my wife's sisters, uncles, Glavan's family, etc. have prayed for me. Then, Mr. Kim, Jung-il, one of many good friends I met here in Rutgers, supported me by providing the key references and advice for the empirical tests.

I really thank to my wife, Seung-Gap Park, and two daughters, Christine and Jennifer. All these years, they have persevered, sacrificed, and carried on. By watching them I realize how much God loves me. God gave me the best of the best. From the bottom of my heart I thank to my wife. She is the most delightful, humorous, wise, patient, joyful, and beautiful person that I've ever known, and I've enjoyed every moment that we've shared together during our ten years of marriage. I love you, Rose.

Most of all, I know that God has worked out for me. He took every burden that I had to take. Without him, I'm nothing. I thank YOU for everything that I've mentioned.

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I. INTRODUCTION

Foreign market entry mode is the cornerstone of a firm's international strategy. Once a foreign market is targeted, the expanding firm has to design an organizational form that will function successfully in a new business environment. This dynamic process of selecting a suitable entry mode draws attention of many international business (IB) scholars. Researchers have endeavored to rationalize and develop a theory of entry modes of foreign markets. Four streams of the major theoretical approach are identified.

The first group regards firm as an organizational hierarchy and provides an economic analysis of international firms' cross border activities based on transaction cost economics that leads to a theory of market failure (Teece, 1981, 1986; Caves, 1982; Casson, 1982; Buckley, 1988). The economic rationale of transaction costs has been explored extensively by many scholars to analyze the entry mode decision of multinational firms (Anderson & Gatignon, 1986; Gatignon & Anderson 1988; Hennart 1991, Eramilli & Rao 1993). Recent studies (Pratten, 1997; Roberts, 1997; Rindfleisch, 1997) of transaction cost economics from a marketing perspective have added another dimension to the understanding of organizational designs.

Dunning's (1977, 1988, 1993, 1995) eclectic paradigm provides an integrative framework of the determinants of foreign entry modes. Three independent constructs of eclectic paradigm such as ownership, internalization, and locational advantages juxtapose a comprehensive list of factors that determines the selection of a foreign market entry mode. The eclectic paradigm has also been operationalized and empirically tested by many scholars (Davidson and McFetridge, 1985; Agarwal and Ramaswami, 1992; Brouthers *et al.*, 1996).

The third school of entry mode analysts is mainly composed of Scandinavian scholars (Johanson & Vahlne, 1977, 1990; Wiedersheim-Paul, 1975). They see internationalization as a process in which firms increase their level of financial investments as they gather more information and knowledge about the foreign markets. Then, internationalization theory has been combined with organizational learning (Barkema et al., 1996; Benito & Welch 1994) and internalization theory (Fina & Rugman, 1996).

Lastly, many have tried to find out key determinants of the foreign market entry mode. Hill et al. (1990) and Kim & Hwang (1992) examined the impact of strategic variables on the entry mode. The role of national culture in determining the entry mode was also tested (Kogut & Singh 1988; Padmanabhan & Cho, 1996; Pedersen & Thomsen 1997). Then, Sarkar & Cavusgil (1996) reviewed the studies of international market entry mode and summarized the factors that affected the choices of a firm's foreign market entry mode.

The subjects of these studies have been focused mainly on manufacturing multinational companies. Then, scholars started to apply these theories to non-manufacturing firms. Brouthers et al. (1996) and Eramilli & Rao (1993) studied small and service firms' international entry modes, respectively. Weinstein (1977) and Terpstra & Yu (1988) also studied the determinants of international investment activities of the US advertising agents.

It would be also interesting to see to what extent the major theories of the IB study are able to explain international activities of non-MNCs. Therefore, this research

has paid its attention to the cross-border expansion modes of international franchisers whose number has been steadily increasing over the last three decades.

Main stream IB scholars have somewhat ignored the international entry modes of international franchisers until recently mainly due to their insignificant operational size compared to that of MNCs. The distinctive design of franchising format, whose organizational structure matches well with non-manufacturing, retail- and service-oriented sectors, has been another reason of being unable to attract main stream IB students. In addition, the intrinsic nature of franchising business, which does not offer many alternative modes of entry, has projected an image of stable, undynamic, and fixed option of foreign market entry strategies.

However, in line with increasing international activities of the US franchisers, more rigorous study of the foreign market entry modes of international franchisers is demanded than ever before. Then, it is also inevitable to test whether the above mentioned major theories of IB have an explanatory and predictive power regarding to various choices of international franchisers' foreign market entry mode.

This thesis will proceed in the following manner. First of all, an overall analysis of the theoretical framework is presented after a brief review of the related studies of international franchising. Efforts were given to facilitate the conceptual understanding of the key notions such as organizational mode, knowledge, and learning. Resource-based theory[1] that views firms not as a bundle of transactions or contracts but as a bundle of knowledge and capabilities (Madhok, 1996) is used as an underlying theoretical

construct of this thesis. Transaction cost economics and internationalization process perspective are also used to complement the knowledge-based viewpoint. Second, the benefits and disadvantages of the various entry modes are examined. Third, the key determinants of the entry modes from the industry, firm-specific, and location perspectives are identified. At the same time, the influence of these determinants on the final selection of entry mode is hypothesized in terms of knowledge-based, transaction cost, and internationalization theory. Fourth, an empirical test of the suggested framework is analyzed based on the data gathered by the mail survey. Then, the multiple discriminant analysis (MDA) is used to test whether three types of entry mode can be discriminated according to various independent variables. Due to the rigorous multinormality assumption of MDA, multiple ordinal logistic regression is also used to test the relationship between dependent and explanatory variables. Fifth, descriptive statistics of the samples and the actual and hypothesized relationship between the entry modes and twenty-six hypotheses are compared and analyzed. Lastly, conclusion and discussion wrap up the research.

I.1. Unit of the Analysis

The unit of an alysis is the *major* foreign market entry mode selected by an international franchiser. This unit of analysis differs from most studies of international franchisers, which usually take the number of foreign outlets with certain type of entry modes as their unit of analysis. However, the unit of analysis in this study is the *major*

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[1] Despite the separate analysis of resource-based and knowledge-based theories in the later section of the theory review, these two are regarded as sharing the same root about

foreign market entry mode for a firm since most international franchisers were found by the previous pilot survey and interviews to have only one major foreign market entry mode. The reasoning will be explained in detail in the methodology section.

I. 2. Objectives of the Thesis

One of main objectives of this thesis is to construct a systematic model to analyze and understand the foreign market entry modes of the international franchisers. It is to relate a major entry mode with an extensive list of industry, firm, and location factors. If a US franchiser enters into foreign markets, there are firm-specific, foreign-market-specific, and industry-specific determinants, which all combined to result in a major foreign market entry mode. From these determinants, key variables that differentiate different types of entry mode with statistical significance will be recognized. Then, building a statistical model that incorporates these key variables to analyze the selection of entry modes by international franchisers is the second goal of this thesis. Multiple discriminant analysis and multiple ordinal logistic regression are two statistical tools that will identify key independent variables that have significant impacts on the choice of entry modes.

Then, testing and analyzing how firms perceive the international expansion in terms of learning new knowledge is the major goal of this thesis. Naturally, a knowledge-based approach that views foreign markets as a source of learning and international expansions as a creative process of gaining organizational knowledge is emphasized in the analysis. Therefore, a deliberate effort was given to review and

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the theory of firm, hence used interchangeably.

compare the knowledge-based view and the transaction cost economics. Variables that are related to the knowledge-based attributes of firm-specific determinants and strategic importance of foreign markets as a source of knowledge gaining will be identified, tested, and analyzed. The ease of codifying and transferring knowledge about franchise operations will be also examined according to the different modes of the foreign market entry.

I.3. Scope of the Thesis

In the US, there are two types of franchising i.e., product and trade name (P&T) franchising and business format franchising. P&T franchising began in the US as an independent sales relationship between supplier and dealer (US Department of Commerce, 1988). This type of franchising has evolved from suppliers making sales contracts with dealers to buy and sell certain products to product lines (Justis and Judd, 1989). Typical of this type are automobile and truck dealers, gasoline service stations, and soft drink bottlers. Together they dominate the franchise field, accounting for an estimated 70 percent of all franchise sales in 1988 (US Department of Commerce, 1988).

The scope of this study, however, is the international entry mode of the business format franchisers of all sectors. Business format franchising has been responsible for much of the growth of franchising business in the US since 1950 (ibid.). US Department of Commerce defines business format franchising as an ongoing business relationship between a franchiser and a franchisee that includes not only the product, service, and trademark, but the entire business concept itself. Restaurant, non-food retailing, personal and business services, rental services, real estate service, and other service businesses fall

into the category of the business format franchising. The extensive lists of a business

format franchise package that can be offered to franchisees are as following (Smith,

1990): (i) assistance in finding and evaluating a potential site and/or area, (ii) assistance

with lease negotiation or sub-leasing, (iii) corporate identity package, (iv) interior layout

and design schemes, (v) advice and assistance on opening and publicity, (vi) staff

training, (vii) managerial accounting and administrative training, (viii) operational

manuals, (vx) a field liaison support team, (x) ongoing marketing, (xi) research and

development on new product or services, (xii) financial arrangements, (xiii) supply of

products, and (xiv) technical and legal backing.

Then, by including all the sectors or industries of the business format franchising,

this research is ready to check the influence of industry determinants on the mode of

entry. Of course, most business format franchisers are in the service industry. However,

there are all sorts of service sectors such as fast-food, mailing, accounting, health,

education, automobile, rental, hotel and motels, staffing, etc. that are offered by business

format franchisers.

The home base or nationality of franchisers was also taken into account.

Therefore, letters were sent out to twenty-four national franchise associations across the

world to inquire international activities of each national franchiser. Many franchise

associations such as Argentina, Austrian, British, Denmark, European, French, German,

Greece, Irish, Italian, Japan, Netherlands, New Zealand, the UK, Singapore, Swedish, and

Swiss responded. But all of them, except the UK, had neither international franchisers

nor the list of them. Therefore, on the recommendation of Professor John H. Dunning, I

contacted Dr. David Kirby, Dean and Pro Vice-Chancellor of Middlesex University in

England and his associate Ms. Anna Watson who provided me a copy of 32 British

international franchisers. As a result, two national firms of the US and the UK became

the targets of this research. Despite the small population of the British international

franchisers, this list at least made it possible to contrast and compare between the US and

UK franchisers about their international activities and the role of determinants on the

choice of entry modes. The comparison is expected to add an international dimension to

this research and to the study of international franchising.

I.4. Internationalization of the US Franchisers

International expansion of the US business format franchising is enhanced by

globalization of the world economy. Emerging integration of economic, social, cultural,

technological, and business has influenced the traditional boundaries such as nations,

governments, cultures, time and space and made international expansion easier for firms

operating in global markets (Parker, 1996). Then, the twin forces of technological

innovation and globalization are narrowing international technology gaps and market

idiosyncrasies and bringing about a convergence of demand preference across the

industrial countries (Root, 1994).

Domestic market attributes such as the rising demand for consumer goods and

services, expanding urbanization, increasing mobility, rising disposable income, and

shifting of emphasis from manufacturing to services that all combined to foster the surge

of franchise business in the US are also shared by the international markets (US

Department of Commerce, 1988). As a result, the format of US franchise business is

easily transferable across national borders into favorable and familiar international

environments. The well-tested package of US franchise format, which has been built up

based on knowledge and service, and which do not require heavy resource and capital-

intensive investment, is another reason that has facilitated internationalization of the US

franchisers.

I.5. Researches on Foreign Market Entry Modes of the US franchisers

In line with the increasing number of US international franchisers, researchers

have observed the development of the US international franchise business and presented

their findings over the last three decades (Walker & Etzel, 1973; Hackett 1976; Welch,

1989; Aydin & Kacker 1990; Huszagh *et al.*, 1992; Preble, 1992; Kedia *et al.* 1994;

Julian & Castrogiovanni 1995; Shane, 1996b). Their main interests were motives of

international expansion and attributes of the US franchisers. They focused on *why* and

who of the US franchisers' international activities.

This thesis asks *what* determines the international expansion and eventually *how*

the international franchisers enter foreign markets. A few researchers have examined

about the same issues and the entry mode of US franchisers (McIntyre & Huszagh, 1995;

Fladmoe-Lindquist, 1996; Zietlow and Hennart, 1996; Contractor and Kundu, 1998).

Findings of these researchers, however, are not always consistent with each other mainly

due to the differences in the examined industries and the proposed alternative entry

modes. Therefore, this study targets to provide a general framework of the entry mode

strategies of international franchisers and has tried to include as many international

franchisers as possible without targeting specific industries.

II. THEORIES OF THE FIRM

In order to understand the franchising operation, which in general necessitates making contracts between franchisers and franchisees, one needs to know why a firm exists and makes contracts. A solid understanding of the theory of firm helps to understand why firms select a specific mode of ownership. Accordingly, general theories, rather than contextual theories, of the firm are reviewed in this chapter. In addition, the question of how a firm learns new knowledge and accumulates resources to expand and grow will be carefully thought about for the general understanding of longevity of firms.

Holmstrom & Tirole (1989, p65) asserted that a theory of firm must explain both why firms exist as well as why all transactions are not organized within a single firm. There are two alternative approaches that satisfy those requirements; a contractual (Coasian) perspective and a competence (evolutionary) perspective (Foss, 1993). Each theory tries to provide a parsimonious explanation of the firm. In particular, the competence perspective is categorized into a resource-based and a knowledge-based approach in this thesis to separate the static aspect of currently possessed resources and the dynamic component of competitive knowledge formation and learning.

Then, internationalization theory (IT) is also reviewed not as a theory of firm but as a theory of the international expansion of firms. IT is expected to provide a meaningful insight to the study of franchising because of its emphasis on the relationship between the ownership structure and the knowledge acquisition. Its expertise on small and medium firms also seems relevant to the franchising sector, in which many are often

regarded as entrepreneurs compared to MNCs. Therefore, these three theories will be the underlying theories to elucidate the international activities of franchisers.

There should be other theories that can explain the organizational mode of franchisers. Agency theory is one of frequently used theories to explain the choice of organizational forms of franchisers due to the contractual provision or clause of franchise business. Brickley (Brickley & Dark, 1987; Brickley *et al.*, 1991; Brickley, 1999) and others (Minkler, 1990; Contractor & Kundu, 1998) argued that the ownership choice of franchisers depended on the tradeoffs between the management costs of controlling outlets and the ability of franchisees to damage the reputation of trademarks. As a matter of fact, the earlier survey findings confirmed the propositions of the agency theory. The sample franchisers of the pilot survey, who predominantly used a contractual mode, did not seem to mind much about the costs caused by agents and were confident about their ability to control foreign franchisees. This conclusion is actually in line with the argument of agency theory, which expects franchisers will make contracts, if they can capitalize from protected trademarks or intangible assets (Caves & Murphy, 1976; Hennart, 1991a).

Agency theory, however, is excluded as one of the underpinning theories of this thesis, despite of its valid argument of explaining the organizational mode of franchisers. As a contextual theory, agency theory is not appropriate to provide every aspect of underlying relationships between various determinants and entry modes of international franchisers. For example, the relationship between entry modes and industry determinants and strategic motives of firms cannot be explained by the agency theory.

As a result, only three theories such as transaction cost economics, knowledge-based perspective, and internationalization theory will be reviewed in the following and used as underpinning theories to understand the relationship between the various determinants and selection of entry modes.

II.1. Transaction Cost Economics (TCE)

Coase (1937) raised and answered to the question of why firms exist when factors of production are governed by the price mechanism. He intended to make the assumptions of economic analysis clear and to provide an explanation of the *raison d'être* of firms. His view of firms was still based on the neoclassical point of view since he ignored the idiosyncratic production function of individual firms. He focused on the cost function of firms and suggested that a firm exists due primarily to the marketing costs. He was the first one who recognized that "there is a cost of using the price mechanism" (ibid., p390). He pointed out that "the distinguishing mark of the firm is the supersession of the price mechanism" (ibid., p389) due to costs resulted from uncertainty and lack of information in the market place. Costs related to discovering and negotiating the market price and concluding contracts for each transaction prevented firms from using the price mechanism. Coase's view that firms exist to escape from the costs of using the market's price mechanism has been the backbone of the transaction cost economics. Based on his idea, internalization theorists have extensively developed the notion of market failure.

II.1.1. Contribution of Oliver E. Williamson

Williamson (1975, p4) was not satisfied with Coase's discussion of why internal organization did not fully replace markets. He tried to present a more complete theory of firm in relation to markets than Coase did. The alternative economic entities examined are strictly firms and markets, just like Coase did. Williamson has presented a comprehensive rationale regarding to the *raison d'être* of the organizational firm and market mechanism. In the following section, the key concepts of his theory presented in his book, *Markets and Hierarchies: Analysis and Antitrust Implications* (1975), will be reviewed in detail to understand the principles of transaction cost theory.

Williamson traced the cause of transaction costs in contractual relations to the conditions of bounded rationality and opportunism (1975, p7: emphasis in original):

> "I emphasize that it is not uncertainty or small numbers, individually or together, that occasion market failure but it is rather the *joining* of these factors with bounded rationality on the one hand and opportunism on the other that gives rise to exchange difficulties".

Simon (1957, 1972) provided the notion of bounded rationality prior to Williamson. Simon (1972) explained the limits of rationality by explaining the constraints of information-processing capacities of economic actors, while he was developing a classical theory of firm. The limits of rationality due to risk and uncertainty, incomplete information, complexity in the cost function, and other environmental constraints have constructed the theory of limited or bounded rationality. Simon (1957, p.xxiv) believed there was room for a genuine theory of organization and administration in the realm where human behaviors were "*intendedly* rational, but only *limitedly* so" (emphasis in original). Therefore, he implied the bounded/limited ability of human behavior.

Bounded rationality of human behavior is further emphasized by Williamson

(1975, p21):

> "Bounded rationality involves neurophysiological limits on the one hand and
> language limits on the other. The physical limits take the form of rate and storage
> limits on the powers of individuals to receive, store, retrieve, and process
> information without errors"; and "The language limits refer to the inability of
> individuals articulate their knowledge or feelings by the use of words, numbers, or
> graphics in ways which permit them to be understood by others" (ibid., p22).

Williamson tried to incorporate the notion of bounded rationality of human behaviors into

the theory of economic organization. He articulated that bounded rationality mattered

only under the conditions of uncertainty and/or complexity:

> "Given a sufficiently simple environment, bounded rationality constraints are
> never reached and comparative institutional choices between market and firm are
> not posed - not in any interesting way at least" (ibid., p22-23).

He stated only in the conditions of uncertainty/complexity that caused costly transactions,

the bounded rationality constraint was binding, and the alternative organizational modes

were assessed on efficiency respects. Therefore, according to Williamson, the human

factor of bounded rationality does matter only under the influence of environmental factor

of uncertainty and complexity that poses comparative institutional choices.

Now, let's consider the problem of short-term contracts that is subject to pairing of

opportunism in small-numbers relations. While developing the idea of opportunism,

Williamson referred to Knight (1965) who introduced behavioral assumptions in the

theory of economic organization and the condition of *moral hazard*. Williamson (1975,

p9) defined opportunism as "a lack of candor or honesty in transaction, to include self-

interest seeking with guile". He regarded strategic manipulation of information or

misrepresentation of intention that resulted only from (i) selective or distorted

information disclosures or (ii) self-disbelieved promises regarding future conduct as opportunistic (ibid., p26).

However, mere identification of opportunistic inclination in human behaviors is not sufficient to assume that all market activities are flawed due to the axiom of the perfect competition. Under the perfect competition, an opportunistic posturing will be traded by competitive terms. Therefore, only when opportunism is joined with a small-numbers condition, serious transactional difficulties arise (ibid., p27-8). In such conditions, it is the interest of each party to seek terms favorable to them and to encourage opportunistic behaviors, hence an internal organizational mode is selected to avoid both bargaining costs and indirect costs (mainly maladaptation costs).

An internal organization also provides other benefits over the market contractual mode (ibid., p29). First, individuals in the internal exchange, compared to autonomous contractors, are less able to appropriate subgroup gains that are resulted from the opportunistic behaviors at the expense of the overall organization. Second, related to the first, the internal organization can be more effectively audited, thus attenuating opportunistic representation. Finally, the internal organization has an advantage over market mediated exchanges regarding to the dispute settling.

Lastly, information impactedness, a derivative condition that arises mainly due to uncertainty, opportunism as well as bounded rationality, is identified as one of factors affecting the economic exchange (ibid., p31). Information impactedness exits when true information about the transactional condition is known to one or more parties but cannot be costlessly discerned by others. It is almost axiomatic that asymmetrically distributed

information between economic transactors may cause hazardous effects to those with the less information.

Then, Williamson (ibid.) provided more specific conditions. He asserted that in order the asymmetric information condition to be considered as problematic, it should be coupled with (i) a high cost of achieving information parity and (ii) the proclivity of parties to behave opportunistically. Problems can be developed even when all parties have identical information since each party may form different conclusions from the same information, and the information itself can be false and incomplete. The distribution of information between the parties is of special concern in a small-numbers bargaining context due to the opportunistic representation explained in the above.

All these factors related to information impactedness occasion transactional costs, shifting an economic exchange from markets to firms. In sum, given bounded rationality combined with uncertainty and idiosyncratic knowledge paired with small numbers and opportunistic behavior, Williamson argued that

> "prices often do not qualify as sufficient statistics and that a substitution of internal organization (hierarchy) for market-mediated exchange often occurs" (ibid., p5).

Now, we need to explain why economic transactions are internalized within a firm by examining the advantages that firms can provide other than the controlling of the opportunistic motives explained in the above. Williamson (ibid., p25) explained that

> "Internal organization often has attractive properties in that it permits the parties to deal with uncertainty/complexity in an adaptive, sequential fashion without incurring the same types of opportunism hazards that market contracting would pose. Such *adaptive, sequential decision processes economize greatly on bounded rationality*" (emphasis in original).

He continued,

"A further advantage of internal organization is that, as compared to recurrent market exchange, efficient codes are more apt to evolve and be employed with confidence by the parties. Such coding also economizes on bounded rationality. Complex events are summarized in an informal way by using what may be an idiosyncratic language."

Even if, in principle, parties involved in recurrent market contracts could devise the same language, thereby realizing the same economies, Williamson admonishes that such exchanges are more subject to the risk of opportunism, thus have a lower chance to develop the same economies as fully.

Then, He did not forget to point out failures of internal organization of the firm, either. Contrary to Coase's (1937) approach of the marginal costs analysis about the internalizing transaction costs, Williamson (1975: p117-31) turned his attention on more of internal organizational issues, especially on the behaviors of managers as a source of the organizational failure. First, he blamed opportunistic behaviors of managers whose subgoals or bureaucratic intentions outweigh the objective profitability consideration.

"Internal opportunism takes the form of subgoal pursuit which is an effort to manipulate the system or promote the individual and collective interest of the affected managers. ...The opportunities for reciprocity are simply more extensive internally" (ibid., p124, 120).

Second, the generalized expansion bias is favored. The size-preserving tendency adopts a compromised solution by which concessions are made to add new roles to the organization rather than to give up essential functions or resources. Third is a sunk cost phenomenon. The sunk costs of ongoing projects prevent alternatives from replacing the current programs. It is due to the information impactedness that unable to distinguish between faulty and worthy internal performance. Forth, internal communication is also

subject to distortion. Members of the organization may seek to promote personal goals by diverting the communication system to their own uses (Simon, 1957, p171).

Due to the above-mentioned behaviors of managers, a firm's size may continuously grow. Regarding to the size of firms, Williamson (1975, p126) expects that bounded rationality commands finite spans of control. With the expansion of the firm, a manager has to face the *control loss phenomenon*. Therefore, a radial expansion of the firm eventually exhibits diminishing returns, unless offset by other factors. Given the finite span of control, increasing firm size leads to taller hierarchies in which leaders are insulated from lower-level managers. Even if internal organization is supposed to shape a better environment for continuing involvement among members than can be accomplished in the market, increasing size can easily upset the relationship.

In conclusion, his main concern was to economizing the cost function:

"Transaction cost economics subscribes to and develops the view that economizing is the core problem of economic organization" (Williamson, 1989, p137).

Transaction cost economics adopts a contractual approach, regards the firm as a governance structure rather than a production entity, and places greater weight on ex post institutions of contracts. With the theoretic ramification of asset specificity (Williamson, 1989), which went unrecognized in his early work (Williamson, 1975), Williamson emphasizes the incentives to remove transactions from the market and internalize them within the hierarchy. Williamson clearly has provided a theoretical foundation of the transaction cost theory, which has been used extensively to explain the motives of internalizing market transactions within the firm.

II.1.2. TCE Applied to Franchising

The above arguments clearly show that either the market or the firm as organizational forms invoke positive organization costs. A franchiser as an economic organizer should also face positive organization costs. Transaction cost rationale can be applied to explain idiosyncratic organization costs of franchising that stem from the efforts (i) to protect property rights or trademarks and (ii) to minimize agency costs or opportunistic behaviors of agents (Hennart, 1982; Hennart, 1991a).

With reference to the former proposition, Hennart (1982, p38) argued that the relative efficiency of markets in organizing production is a function of the cost of establishing and transferring property rights, which varies with the ease of measuring such rights. Therefore, the cost of measuring trademarks of franchisers becomes the transaction cost, which affect the relative efficiency of markets. This is another vein of the above-mentioned transaction costs resulting from protecting and/or gaining knowledge; hence no further explanation will be repeated here.

Agency costs or opportunistic behaviors of agents in franchising operation can be detected from organizational mode of franchising. On one hand, if trademarks/intangible assets or property rights of franchisers are shared by many franchisees by making contracts, franchisers are subject to free-riding or cheating (Klein, 1980; Klein & Saft, 1985; Minkler, 1990; Hennart, 1991a) and dissipation of franchising knowledge (Hennart, 1982, p90). A franchisee has an incentive not only to cheat or free ride (lower quality to raise revenue) on the franchiser's trademark if its outlet is frequented mostly by non-repeat customers, but also to transfer and internalize the franchiser's knowledge to avoid royalty payment or premium. As a result, contracts will strictly stipulate quality

levels of products/services to enforce the standards of their trademarks and include a clause that prohibits franchisees opening the same kind of business for a certain period of time after the termination of the contract.

On the other hand, even if franchisers decide to have direct ownership, they are subject to managerial costs. Hennart (1982, p45), who has identified the two inherent inefficiencies, shirking and information loss, of hierarchical organization, applied the idea of shirking to the franchising sector (Hennart, 1991a). Every firm faces the shirking cost, and a franchiser is no exception. A manager of an outlet is paid a straight salary by the headquarters or the owner of trademark, and the wealth of a manager does not directly depend on the performance of his/her own outlet. This payment structure, which is unrelated to the outlet's profit, discourages employees to work hard.

As a result, the choice of organizational mode of franchisers, viewed from the TCE, depends on the comparative analysis of two types of costs. They are the costs of (i) enforcing contracts to maintain quality and refrain deviation and (ii) controlling employees' behaviors (Hennart, 1991a, p89).

II.2. Resource-based Approach

Penrose (1955) who tried to find to find out the cause of firm's growth from internal resources rather than external market conditions has laid a foundation of a resource-based view of firms: "Failure to grow is often incorrectly attributed to demand conditions rather than to the limited nature of entrepreneurial resources" (p540). It is interesting to see that she emphasized managerial abilities among other resources.

The resource-based (RB) view of firm has sprung as a reaction to the skewed view of the transaction cost economics of firms. RB theorists argue that a firm's competitive position is defined by a bundle of unique resources. Therefore, organizational capability (OC) or RB theorists have turned their attention away from the transactional costs and benefits of an organization to the critical aspects of resources (Barney, 1991; Conner, 1991; Amit and Schoemaker, 1993; Hunt, 1997) and knowledge (Kogut & Zander, 1992; Conner & Prahalad, 1996) of the firm. They view that transaction cost economics is not a complete theory of economic organization since it understands firms as a unit of transaction that stresses transactional efficiencies of organizing markets and hierarchies. Hence, this rationale of governance decision that focuses on the external failure of markets and internal minimization of costs somehow leaves out the critical aspect of firms' resources and capabilities. By ignoring the uniqueness of the internal assets/abilities/capabilities of firms that are costly and arduous to copy, the logic of transaction cost has difficulties explaining and responding to the question of performance difference between firms. Therefore, RB theory shifts the attention from a cost based analysis to the attributes of firms that generate economic rents and that explain the difference of performance and competitive advantage between firms.

Before we continue, a clear definition of resources/capabilities is necessary. Winter (1987, p170) expressed the difficulty of defining these tricky notions very well:

"It is therefore necessary to confront the difficulties that arise form the complexity and diversity of the phenomena denoted by such terms as knowledge, competence, skill, and so forth. When we use such terms, we hardly ever know precisely what we are talking about (except when we are expert in the area under discussion), and there is sometimes a nagging concern that we are too far from the complex details to be making sense at all."

Since resources and/or capabilities are understood as an epistemological notion in this thesis, we may not have to operationalize the concepts. But, a review of the notion is helpful for further analysis of a resource-based view.

Dierickx & Cool (1989) inspired us to use the levels at which inputs (resources) are defined. Their division of resource level hinted us that hierarchies of resources may exist (Conner, 1991). These include (i) elementary level resources such as individual capability; (ii) more aggregate level of organizational culture; and (iii) even more aggregate level of company reputation. Then, Daft (1986) provided a textbook definition of firm resources:

> "Firm resource include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness".

His definition was comprehensive enough to worry Conner. Conner (1991) warned that a resource-based view may become tautological and lose explanatory power since at some level, everything in the firm constituted resources. Therefore, researchers have tried to confine the locus of their analysis.

Many defined organizational resources/capabilities as a source of competitive advantage that completed business activities in a superior way to those of competitors (Madhok, 1996; Barney, 1991; Hitt & Ireland, 1986). Only Madhok was more explicit about the fact that they could be also constraints. Conner (1991) emphasized the immobility and tacit component of resources. He traced the sources of firms' economic rents to costly-to-copy attributes of firms. Then, Amit & Schoemaker (1993) differentiated resources and capabilities. They defined resources as a stock of available

factors such as know-how that could be traded (patents and licensee), financial or physical assets (property, plant, and equipment), and human capital. Capabilities were defined as a firm's capacity to deploy resources. They were information-based, tangible or intangible processes that were firm-specific and can be thought of intermediate goods that were developed over time through complex interactions among the firm's human capital and other resources. Therefore, capabilities should represent the heterogeneity of firms in the same industry and be more subject to market failure than resources. In this thesis, Collis's (1991) integrative definition of resources that include core competencies, organizational capability, and administrative heritage are defined as firm's resources or capabilities as long as they are *firm-specific* and affect the competitive position of firms.

According to the above definitions of resources/capabilities, we can draw two assumptions about how OC/RB theory understands firms: (i) firms even within an industry are heterogeneous with respect to the resources they control; and (ii) these resources are firm-specific and not perfectly mobile across firms. Certain knowledge, skills, and values are firm-specific since they are accumulated by means of job training and learning process. Naturally, RB theory rejects neoclassical theory's assumption of perfect information, resource mobility, and divisibility. OC/RB theorists deal with a set of untradable, unimitatable, and unnappropriable resources and capabilities that forms the competitive advantage of firms (Barney, 1991; Amit & Schoemaker, 1993). Then, they believe that certain small-numbered, costly-to-copy asset holders are earning above-normal rents.

Combinations of these specific assets that enable firms to earn economic rents are recognized as strategic assets (Amit & Schoemaker, 1993). Strategic assets are valuable,

rare, inimitable, and unsubstitutable (Barney, 1991). Therefore, in the analysis of a resource-based view, the notions of asset specificity and small-numbers condition are still very much in play. But unlike transaction cost theory, RB view does not depend on the notion of opportunistic behaviors.

Arguments based on the OC or RB view of firms provide a platform to generate a dynamic theory of organizational learning and competitiveness. Managers and researchers have to comprehend how firms maintain and improve presently possessed strategic assets since those are the sources of economic rents, performance, and competitive advantages. An in-depth analysis of knowledge formation in relation to the structures of economic entity/organization will be reviewed by studying a knowledge-based view of the firm.

II.3. Knowledge-based View

While OC/RB theory focuses on performance differences between firms using asymmetries in competencies and capabilities, a knowledge-based (KB) view concerns more about the human rather than physical capital (Conner & Prahalad, 1996). The KB view is the essence of a resource-based perspective since it has ability to address issues such as why firms exist and how firms grow. It provides insight about the process of knowledge acquisition and skill building. KB theorists contend that a theory of performance difference between firms needs to explain why competitive advantages are gained within a hierarchy instead of arms-length markets. Therefore, Conner & Prahalad (1996) isolated two sources of company productivity that are originated from the market contracting and that are produced within the organization of firms. Then, by eliminating

the aspect of market contracting, various levels of productivity of firms can be traced to

the extra margin of productivity gains or losses within the organization of firms.

If we accept the idea that a company grows by gaining more competitive

knowledge, a KB approach is a critical tool for the analysis of firms' growth. It is

because a KB view can respond to the question of how

> "...an evolutionary process of capitalism in terms of new methods of production or
> transportation, the new markets, and the new forms of industrial organization that
> capitalist enterprise creates..." (Schumpeter, 1950, p83)

is formed by focusing on new learning in the courses of firms' business operations. In

this respect, a KB view offers a dynamic theory that explains how firms learn and gain

competitive advantages, while resource-based theories present static approaches,

explaining *status quo* conditions of economic activities. Nonetheless, RB based theory

should receive a credit for offering a platform for a knowledge-based view.

Once again, we face a troubling task of defining a vital word, knowledge. It is

difficult to define knowledge since it is a multifaceted concept with multilayered

meanings (Nonaka, 1994). Polanyi (1958) understood that scientific or true knowledge is

deemed impersonal, universally established, and objective. However, throughout his

philosophical book, he tried to make it clear that personal knowledge was an intellectual

commitment that needed a passionate contribution of the person knowing what was being

known. He also implied the existence of a skill component in knowledge when he

defined knowing: "I regard knowing as an active comprehension of the things known, an

action that requires skill". His understanding of knowledge presupposed specificity and

competence aspects of knowledge owned by performers/knowledge holders.

Therefore, knowledge can be defined as a comprehensive information or know-how that is created and organized by the passionate efforts of knowledge holders. Knowledge seems to require two components: (i) object and (ii) ability. Then, knowledge can be defined in terms of organizational theory as the competent ability of knowing how to generate and maintain strategic assets. Therefore, knowledge connotes experience, insights, and skills (Conner & Prahalad, 1996) and technological capabilities (Nelson, 1991). Winter's (1987) understanding of knowledge or competent as strategic assets also seems sensible from a business perspective. He regards knowledge as a competent asset, which is a component of strategic assets. Accordingly, knowledge is a useful thing for a company to have (Winter, 1987).

Taxonomic dimension of knowledge as a strategic asset is well explained by Winter (1987). If knowledge is laid out in a linear fashion, there is tacit knowledge on one end and articulate knowledge on the other. Much of the knowledge that underlies the effective performance is tacit knowledge of the organization, not consciously known or articulatable by anyone in particular (Nelson & Winter, 1982, p134). Therefore, we are more interested in tacit characteristics of knowledge, which are not teachable, not articulated, and not observable in use.

The key assumptions of the knowledge-based view are bounded rationality and non-opportunistic behavior (Conner & Prahalad, 1996). Cognitive limitation that prohibits firms from possessing identical production capabilities and functions, and trust relation that ensures non-opportunistic behavior guide us to a knowledge-based consideration. Williamson (1975, p26) cited the latter as "stewardship" behavior from Goffman (1969, p88).

The critical role of bounded rationality displayed by economic activities of rent generators in the course of new learning deserves more attention. Bounded rationality means cognitive limitations that imply no two individuals share identical stocks of knowledge (Conner & Prahalad, 1996). Each economic actor possesses his/her own tacit knowledge such as experience, insights, and skills that are learned only through personal experience (Polanyi, 1958; Nelson & Winter, 1982; Nonaka, 1994). Polanyi's remarks (1958, p90) that

> "We may say in general that by acquiring a skill, whether muscular or intellectual, we achieve an understanding which we cannot put into words and which is continuous with the inarticulate faculties of animals"

imply not only intransferability of tacit component of knowledge but also limited ability of the human communication system.

It is the tacit component that makes knowledge or skill possessors unable to "fully aware of the details of the performance and find it difficult or impossible to articulate a full account of those details" (Nelson & Winter, 1982, p73). Tacit knowledge is not easy to be identified and learned because it includes a whole range of little things involving individual actions and organizational procedures. Therefore, tacit skills are not interchangeable and are different from information or *recipe* that can be written down in the form of textbook, patent, and document (Nelson, 1991).

These attributes of tacit component lead to the second assumption of the knowledge-based theory. It is the non-opportunistic, honest behavior of economic participants. This is a direct contradiction of transaction cost theory in explaining the existence of firms. Because of the tacit component of know-hows that demands costs or that is simply impossible to transfer to other parties, firms may be better off by

internalizing such transactions within the firm boundary, avoiding the price mechanism. This rationale explains the *raison d'être* of the firm, without relying on the assumption of opportunistic motives of transactors.

In sum, KB theorists can explain transaction costs that are not necessarily caused by opportunism. They stress on bounded rationality of individuals among whom they do not share exactly the same decision criteria. Therefore, it is still difficult to reach agreements in the market place, despite of honest efforts of participants. While transaction cost economics points opportunism as a primary contributor that brings about an organizational firm, knowledge-based theory explains an organizational entity even when opportunism is held absent. The latter shows that transaction costs can arise not only from opportunism but also from bounded rationality of individuals as well as tacit component of knowledge. Therefore, KB theory proves that firms exist because of knowledge-based transaction costs that are independent of the opportunistic considerations scrutinized by Williamson.

II.3.1. Economic Entity and Knowledge

Since KB theory views firms as a package of heterogeneous knowledge, instead of a mere contracting unit or a black box with an identical production function, it reveals the dynamic relationship between the economic entities (i.e. firm and market) and knowledge. The organizational mode of economic entity is a major instrument which governs (i) how the current *static* knowledge is coordinated and used within the organization and more importantly (ii) how the future *dynamic* knowledge is acquired and

developed in the course of the work (Conner & Prahalad, 1996). Different modes may

employ, require, and lead to different element of knowledge.

Behavioral aspects of firms regarding to preservation of unused potential

knowledge are noticed early by Penrose (1955, p534):

> "Hence a firm in acquiring resources for particular purposes - to render particular
> services - also acquires a range of potential productive services, most of which
> will remain unused. This multiple serviceability of resources often gives firms a
> flexibility in a changing and uncertain environment which may become of great
> importance in determining the direction of growth".

Her comments explain one of benefits of incorporating resources rather than having a

contractual relationship with resources.

Then, a question of how to arrange resources within a firm emerges. The critical

role of hierarchical firms compared to market transactions in terms of arranging and

managing knowledge is *authority* that can control knowledge within the boundary of

firm. Once two or more knowledge holders are incorporated in a firm, knowledge is

more easily coordinated and mingled within the hierarchy than can be accomplished in

markets (Rumelt, 1995, p124) since the firm has authority to control individual behaviors

of knowledge-holders (Simon, 1951). Particularly, tacit components of knowledge can be

more easily managed and arranged among the knowledge-holders by working closely

together under the same authority.

Meanwhile, an individual may substitute the other in the process of accomplishing

a project in a firm. Conner & Prahalad (1996) called this process as *knowledge-

substitution*. As a result, every member who has had many chances of personally

experiencing others' tasks can internalize each individual's tacit knowledge. This means

that bounded rationality of individual ability is supplemented by the organization

structure. Therefore, individual knowledge of all party is internalized in a firm procedure, even if each individual may not have chances to internalize all the required skills to accomplish a project.

However, if these knowledge holders are bound by the contractual mechanism in the market, each party manages its own knowledge and cannot be controlled by anything but the contract. Each individual has the responsibility to execute his/her obligations as negotiated in the contract. The contract forces to perfect each individual's own work, expecting others to take care of their own. As a result, market contracting enables individual knowledge holders specialize their own expertise. Specialization, however, is not the sole property of contracts since organizational firm readily enables individuals specialize in different aspects of business activity. The rule of division of labor in the contract limits the chance to personally experience the full range of knowledge or skills necessary to complete contracted projects. The whole mechanism of contract thus gives less chance to internalize partners' knowledge due to the lack of chances to personally experience them. Therefore, market contracting economizes through specialization alone, while firm organization economizes through specialization and knowledge-substitution (Conner & Prahalad, 1996).[1]

In the above, the relationship between two economic entities and knowledge formation is examined. However, only one way interaction of how two types of economic modes (i.e., firm and market) arrange presently possessed knowledge was

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[1] Since only knowledge formation via the hierarchy and market is considered here, the cost related analysis of using market and organizing firm is left out. However, we should also remember that each mode of economic entities suffers from opportunistic behavior,

considered. Now, we can think of the other way of interplay between stocks of knowledge and economic modes. Based on the rationale of bounded rationality, it can be presumed that no one has all the necessary knowledge *ex ante* whether to design a firm and make a contract. As a result, an economic individual bounds to make a contract or organize a firm. In the long run, of course, every economic player should have many chances to learn and make up for its weakness by either internalizing economic activities or making contracts.

Here, the focal point, however, is rather at the initial stage of a business activity. Assuming limited experience and bounded rationality, each individual in its primitive stage should prefer the economic entity that has been selected before. The historical dimension of a firm's activity is critical since its past experiences gender the underlying routines of the future activities (Madhok, 1996). The limited reserves of hands-on experience, skill, and knowledge prevent from exploiting the other option. Despite of benefits related to new experiences, lack of knowledge in a new sphere of activities will incur higher costs for the measurement, acquisition, interpretation, and diffusion of the new knowledge. On the other hand, harnessing already experienced knowledge can be a viable and in a sense costless or more efficient option. Then, a contractor is expected to continuously use price mechanism in a market, and a firm organizer is expected to continuously internalize economic activities within the firm. As a result, the characteristics of presently possessed knowledge may also determine the preferred organizational mode *ex post*.

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marketing, organizing, and agency costs. Hence, a balanced approach for the selection of optimum mode of economic entity is necessary.

II.3.2. Economic Entity and Learning

Now, let's consider how each economic organization responds and adjusts to the new or future knowledge development. First, let's review how new knowledge is formed or developed within the boundary of firms. Nelson & Winter (1982) insisted that knowledge was formed as an evolutionary process and stressed the cumulative nature of technological advance. They put it in this way:".... the output of today's searches is not merely a new technology, but also enhances knowledge and forms the basis of new building blocks to be used tomorrow" (ibid., p256). Dierickx & Cool (1989., p1509) also had the same idea: "asset stocks are "built" or *accumulated* through a consistent time pattern of expenditures or flows" (emphasis in original). Therefore, knowledge formulation or creation is understood as a long-range process and a dynamic progressive change.

If new knowledge advances in a *cumulative* way in the sense that one knowledge sets the stage for the next (Nelson, 1991), organizational firm takes advantage over the market mechanism due to the logic of bounded rationality. Firms which have had internalized all the previous know-hows can easily add new knowledge onto the existing ones, while contractors should renegotiate for anther contract to acquire new knowledge. Then, the organizational firm has advantage over a collection of market transactions if the redeployment of resources is more efficient and productive within the firm due to interdependencies of knowledge holders (Conner, 1991).

However, both economic modes stand on an equal basis inasmuch as both can closely lookout the development of new knowledge. Then, once a new development is detected, firms seem to be more efficient to implement new knowledge since they do not

require time and costs related to renegotiating or making another contract to align with the new knowledge. The internal arrangement within the firm can reformulate previous directions without renegotiating the existing contract.

In the case of the market mechanism or contractual mode, however, changes in duties and responsibilities for the adoption of the new knowledge require renegotiations. Accordingly, new development or knowledge is achieved through engaging in a series of contracts for the market-contracting mode (Conner & Prahalad, 1996). Then, making a contract regarding to a new knowledge will take more time and cost than can be done by the control mechanism within the hierarchy because involved parties will have difficulties to come up with the same idea about the value or measurement of the new knowledge due to the bounded rationality. This process should be complicated even more when contracting parties are not familiar with the contents of new knowledge.

Then, the choice of economic modes depends on the characteristics of future knowledge. If the rent generating economic activities are routinized and specialized through division of labor and when knowledge development is expected to be lean, simple or less fluctuating, economic rent producers may engage in a contractual mode which facilitates efficiency by pursuing specialization. *Ceteris paribus,* Conner & Prahalad (1996) expect that an economic entity is likely to select market contracting if it believes a priori that the environment is not that dynamic and uncertain. Despite of all the analyses about the knowledge and economic entities, the irony is that no one can anticipate at the present how the content of knowledge that will be evolved in the future will deviate from the current course of work. It all depends on the dynamics of future

knowledge that will guide us to select a proper economic mode, which will promote learning and advance knowledge with less cost, time, and efforts.

The KB approach of understanding the relationship between economic modes and knowledge so far has not depended upon potential of opportunistic behaviors. RB and KB theories have shifted the pivotal focus of organizational governance from the failure of markets due to the prevalence of opportunism to the failure or success of firms constrained by the bounded rationality (Madhok, 1996). Since KB theorists are able to analyze transactions between two economic entities without considering opportunism, they have contributed to the understanding of the firm in a different perspective. Therefore, the transaction and RB/KB theories complement each other for the complete understanding of economic activities of firm behaviors and market mechanisms.

II.3.3. Knowledge Creation Process of the Economic Entity

Transaction cost economics has paid attention to individual firms by analyzing internal efficiency and market transactions. It compares and contrasts two types of economic entity, namely firm and market. Then, resource-based theory has concentrated mainly on firms to identify/comprehend why firms perform differently. Among others, knowledge is recognized as a single important factor contributing to a different performance. Naturally, the dynamic process of learning and knowledge creation in an organization becomes the core topic in the knowledge-based theory.

If firms obtain above normal rents only when they have superior resources or knowledge, the first obvious question to ask is how to get those. Can they be bought in

the market or developed only within the boundary of the firm? In this section, the formation of competitive knowledge within firms and via contracts is reviewed.

Nonaka (1994) asserts any organization that dynamically deals with a changing environment should not only process information but also create information and/or knowledge. Despite the prescriptive tone of Nonaka's presentation of the theory of organizational learning, it is persuasive that organization should design a system that can arrange, develop, and redeploy its members' tacit and explicit knowledge. However, many regard the mechanisms that Nonaka mentioned and that are necessary for the formation of new knowledge are already embedded in the organizational structure of firms. Prahalad & Hamel (1990) view that a critical activity of firms is to create a set of core competencies and products, which resulted from those competencies. In addition, they suggest not to contract out these core functions in market places, even if a contractor can deliver core products more cheaply than can the firm, because harnessing existing competencies extends the underlying core competence and enhances new avenues for its redeployment.

The organizational setting of firms provides an environment in which knowledge is accumulated and created. Conner (1991) is also in line with this view contending that employees familiar with the firm's culture, routines, knowledge, etc. should be better able than outsiders to transmit/translate new know-hows in a way that links to the specific current knowledge. The resulting relatedness between new and current resources provides opportunities for gains from generating redeployable knowledge, skills, and routines. Since each and every firm has a distinctive combination of knowledge, culture, routines, and resources, the transformation of new knowledge should be easier within an

organization than between organizations. By interacting with each other within the boundary of an organization, knowledge is produced and reproduced, thus forming a path-dependent progress. This progress explains how firms grow and expand by accumulating know-hows and why firms may prefer to internalize transactions.

Then, we may ask why firms engage in contracts and form joint venture and alliances if they can benefit from the new knowledge only through interactions within the firm. If organizationally embedded know-hows, which represent the core components of rent generating assets, are more difficult to transact without losing values than generic know-hows, how could a firm benefit from such know-hows that are acquired through a price mechanism?

On the surface, TCE seems to be unable to explain benefits of market transaction because of its reliance on the notion of market failure caused by opportunistic intention, asset specificity, and small-numbers conditions. However, once we understand market failure or imperfection is a relative thing, we cannot expect all markets always fail all the time. Then, transaction cost economists my have no objection about the explanation of why firms sometimes use market transactions to acquire new knowledge.

A resource-based view may provide an alternative perspective. Madhok (1996) sets out the situation when firms may rely on contracts. Madhok points out that knowledge or routines embedded in an organization which have been the source of competitive advantage can also be constraints or barriers as firms grow and expand into the related or unrelated areas of business. Organizing a new venture within the firm away from the routines means new learning, adaptation and implementation processes that will surely entail costs. Accordingly, it might be efficient for a firm to engage in contracts

with outsiders. Madhok illustrated a set of related industries such as mainframe computer and personal computer industries. If a firm expands into a totally unrelated new venture, it is more vivid that the present assets/knowledge of the firm can become burdens.

Under such circumstance, firms may rely on external resources (Amit & Schoemaker, 1993). Then, firms have to develop their own way (capability) of deploying the acquired resources. Therefore, hybrid organizational modes such as joint ventures and strategic alliances provide a means to learn others' core competencies and knowledge. Accordingly, collaborative organizational mode is not a simple cost-efficient alternative to market or hierarchy but a strategic alternative for the acquisition of partners' competitive knowledge (Hamel, 1991). Since such collaborative modes are not the crux of this study, the theoretic analysis of alliances and/or collaboration between firms is discarded in this thesis.

Yet, availability of core competencies or knowledge is still questionable. If such competencies are readily available and easily transferable in a factor market, just like bolts and nuts, it is a matter of time that everyone has those and no one will have a competitive edge over others. However, it is simply impossible to trade core competencies since firm-specific knowledge is accumulated internally through on the job training and learning (Dierickx & Cool, 1989). The business partner's core competencies that made him/her generate the above normal economic rents are neither easily transferable nor readily available. Therefore, it should be reminded that contractual relationships serve only as a stepping stone that leads to new knowledge. Hence, a firm has to go through the same procedure of on the job training, dynamic routines, and learning to make its partner's knowledge as its own core competence.

II.3.4. Entry mode, Learning, and Franchise Operations

Some may argue that above arguments/reviews are not applicable to this study of franchising business since a franchisee can easily buy the core competencies necessary for the successful operation of the franchise system from a franchiser. Yes, that is true. But, is it also true for franchisers, who are the crux of this thesis? Can a franchiser buy necessary competencies or knowledge in the market whenever necessary?

As mentioned in the introduction, major theories that have been reviewed up to now have been barely used to understand the franchising business. While intensive thoughts have been given to the study of knowledge creation for non-franchising firms, there has been much less effort to understand how a franchiser gains core assets especially via expansion into foreign markets. Whether a firm is in the franchising business or not, the pursuit of knowledge formation is a universal issue. Therefore, understanding the franchising business, which has more of a hybrid business structure between a franchiser and a franchisee, in terms of knowledge creation or learning from a KB perspective can be an interesting approach.

Then, studying the modes of a firm's foreign market entry as a catalyst of competence or knowledge advance deserves more attention. Therefore, the foreign market entry mode of franchisers is researched and emphasized from the perspective of knowledge and learning. Then, transaction cost economics will be also used to for the balanced analysis of the entry modes of franchisers.

Next, the third background theory of this research is internationalization theory (IT). IT highlights the behavioral strategies of international firms. Due to its focus on the relationship between accumulation of firms' foreign market knowledge and levels of

investment, IT is in some sense in line with Nelson & Winter's evolutionary view of

firms.

II.4. Internationalization Theory (IT)

One of theories that deals with the accumulation of knowledge is IT developed by

the Uppsala scholars. IT is considered as a relevant theory of foreign entry mode in this

thesis due especially to its attention on the process of knowledge accumulation in

connection to firms' international expansion. But contrary to the resource/knowledge

based theories, knowledge in IT represents more of information rather than core assets or

competence. It is experiential knowledge about the foreign market (Johanson & Vahlne,

1977).

IT is a model of the internationalization process of the firm (Johanson & Vahlne,

1977): "the internationalization of the firm is seen as a process in which the enterprise

gradually increases its international involvement" (Johanson & Vahlne, 1990, p11).

Knowledge about a foreign market is the kernel of analysis, and two assumptions are

presupposed: (i) lack of information about a target market is a major barrier for the

penetration of the market; and (ii) necessary information about a target market is mainly

acquired through direct involvement in the market (Johanson & Vahlne, 1977).

However, they do not seem to have a clear understanding of what they mean by

knowledge. In one area of the paper they stress the recipe aspect of knowledge:

> "By market knowledge we mean information about markets, and operations in
> those markets, which is somehow stored and reasonably retrievable - in the mind
> of individuals, in computer memories, and in written reports" (Johanson &
> Vahlne, 1977, p26).

Then, in other parts of the paper, they stress the tacit component of knowledge, quoting Penrose: "One type, objective knowledge, can be taught; the other, experience or experiential knowledge, can only be learned through personal experience.... " (Penrose, 1966, p53). They continue to stress tacit knowledge by saying, "We believe that this experiential knowledge is the critical kind of knowledge in the present context. It is critical because it cannot be so easily acquired as objective knowledge" (Johanson & Vahlne, 1977, p28). In their latest version (Johanson & Vahlne, 1990, p12), however, they clarified about the character of knowledge: "Experiential market knowledge generates business opportunities and is consequently a driving force in the internationalization process." So it is clear that they mean more of personally experienced market-specific information when they mention knowledge.

Since IT theorists regard experiential knowledge, which is progressive and accumulative in nature, as a key determinant of international operation, they have come up with a theory that explains the incremental involvement of firms' international activities. Based on the behavioral theory of firms advocated by Aharoni (1966) and Cyert & March (1963), IT explains the foreign investment process of a firm in relation to the accumulated knowledge about a foreign market where the firm is operating. Erramilli & Rao (1990) also emphasized the market knowledge as a key determinant of entry mode choices, even if their view was not based on IT model. They found that service firms with greater market knowledge tend to be more aggressive in their selection of foreign market entry mode. Cavusgil (1980) also presented a conceptual framework of gradual and sequential stages of firms' international marketing involvement. His stage theory is constructed based on such variables as prior experience, market information, and

associated uncertainty of the foreign markets. In the area of international franchising

study, McIntyre & Huszagh (1995) viewed international franchising operation as

progressive stages based theoretically on Cavusgil's stage model. They identified four

stages of international franchising development and found differences in terms of

international sales percentage, expansion plan, and ownership structure. Welch &

Luostarinen (1988) agreed that internationalization of the firms had been a sequential and

stepwise process involvement up to the mid-1970s. They found evidences of departure

from this pattern since then. Several factors such as resources availability, knowledge

development, communication network, risk and uncertainty, control, and commitment

were recognized as determinants of forward momentum of internationalization process of

firms. Therefore, IT is parsimonious in a sense that it focuses only on the knowledge

level of a foreign market and disregards other key determinants of foreign market entry.

IT suggests that progressive accumulation of information about a target market

leads incremental foreign investment activities. Since knowledge accumulates rather than

being bought (Barney, 1986), organizational learning is stressed in IT model (Barkema *et*

al., 1996; Andersen, 1993). Simply, IT explains that (increased) market knowledge will

lead to (increased) market commitment. Based on the availability of knowledge, two

patterns of internationalization process are explained (Johanson & Vahlne, 1990). One is

the progressive engagement in a foreign country, and the other is the successive

expansion into foreign markets where more psychic distance is felt by the firm. Then, a

distinction is made between state and change aspects of internationalization: market

knowledge and market commitment of time one are assumed to affect decisions regarding

to the investment level of foreign operation in time two (Johanson & Vahlne, 1977 & 1990).

The empirical supports of IT have been found mainly from Swedish firms (Johnson & Wiedersheim-Paul, 1975; Johanson & Vahlne, 1977). Swedish firms studied at the University of Uppsala made small steps instead of making a large amount of investments: sales subsidiaries were preceded by sales agents, and local production was preceded by sales subsidiaries. A similar successive establishment of operation was also found in new countries, and the time order of such establishments seemed to be related to the psychic distance between the home and host countries. The key weakness of their study, however, is a lack of statistical representitiveness, which was well recognized by the authors; they were based on a few case studies.

Then, Johanson & Vahlne (1990) recognized an exceptional case of market commitment that breaks the IT of making small steps. It is big firms with abundant resources. When a firm has a large amount of resources, it is expected to make the bigger internationalization steps than those with the fewer resources. Thus the size of a firm comes into play. Therefore, austere critique of IT points its limited application of the theory to small countries and firms, despite Johanson & Vahlne's (1990) efforts to find other researches confirming IT. Andersen (1993) also suggests various measures to enhance the model to be accepted as a solid theory of international business. Nonetheless, IT is used as a underpinning theory of this franchising study because of a large number of small- and medium-sized US international franchising firms and its emphasis on the market knowledge as a dynamic determinant.

Following **Table 2-1** sums up key implications of the three theories studied in the

above regarding to their perspectives on firms, key assumptions, knowledge, etc.

Table 2-1. Key Implications of the Theories

	Transaction Cost Economics	RB KB Perspectives	Internationalization Model
Understanding of the firm	Cost minimizer	Competence utilizer	Knowledge learner
Key assumptions	Market failure due to opportunistic behavior	Market failure due to bounded rationality	Bounded rationality
Source of competitiveness	Emphasis on exploitation of advantages	Focuses on exploitation as well as development of competencies	Emphasis on market-knowledge
Decision rule for initial foreign market entry	Minimization of transaction costs	Utilization of resources and organizational learning	Availability of market-specific knowledge
Decision rule for successive expansion	Minimization of transaction costs	Utilization of resources and organizational learning	Experiential knowledge and previous resource commitment
Transfer of knowledge	Assumes perfect transferability only limited by asset specificity, small numbers and opportunistic behaviors	Imperfect imitability and mobility of firm-specific know-how due to bounded rationality; no role of opportunism	Knowledge is learned through experience: No thought was given to transfer of knowledge between firms
Knowledge Augmentation	Static: Focuses on current advantages/specialization of the firm	Evolutionary: Today's knowledge is a stepping stone for tomorrow's	Evolutionary: Market knowledge/information is accumulating
Concern for Knowledge dissipation	Very much	Little - due to emphasis on tacit competencies	None - a firm is a learner not a knowledge transferor
Orientation towards contractual mode	Negative: Cost minimization with protective stance	Balanced: Accounts both TC perspectives and benefits of value-creation	Positive: The partner is viewed as helping hands.
Limitations	None	None	May not be applied to big firms

III. CONSTRUCTION OF THE FRAMEWORK

Selection of an entry mode is the cornerstone of the global market expansion, and there should be determining factors of the entry mode. This thesis tries to identify the determinants, and their impacts on the choice of the entry mode of international franchisers. Three major categories such as industry, location, and firm-specific determinants are constructed to analyze their influence on the selection of several modes of entry. Each category of determinants contains several variables, whose relationships with the entry modes will be hypothesized. The objective of this chapter is to identify and examine individual variables and to make hypothetical relationships between the dependent and independent variables.

III.1. Dependent Variables

Seven types of the entry mode are available to international franchisers. They are direct franchising (franchisee-owned outlets), company-owned outlets (subsidiary/direct investment), master franchise/area development agreement, joint ventures, licensing, merger/acquisition, and pilot/branch operation. Among these seven types, only six will be identified as one of major foreign market entry modes of international franchisers. Pilot/branch (P/B) operation is excluded due to a very limited usage.

Understanding advantages and disadvantages of each mode is the first step to frame determinants of entry mode since it will explain why firms select and at the same time avoid a certain mode. The benefits and disadvantages of these entry modes presented below are mostly reviewed by Abell (1990, chapter 3) and Justice & Judd (1989, chapter 22).

III.1.1 Direct Franchising (DF)

DF is a straightforward option that grants franchises to individual unit franchisees in the target market. Foreign franchisee applicants individually contact US franchisers. It is merely an international extension of the domestic operation and does not require introduction of new procedures or systems. Therefore, DF can be used in a foreign market similar to the domestic market. Then, the path to a franchiser's successful international operation of the system depends on the selection of franchisees, who will take the individual responsibility of localizing the system by themselves.

On the other hand, franchisers should have managerial energies to police the international outlets. Duplication and repetition of control and management efforts are expected since franchisers have to deal with individual unit owners. Foreign markets with different languages and business cultures further complicate the managing efforts. Therefore, remote markets in terms of psychic distance, which require more efforts, may not be suitable for DF.

III.1.2. Company-owned Outlets (subsidiary/direct investment)

Establishment of a local subsidiary enables franchisers to have a direct control over the development of target markets. A subsidiary will allow franchisers on-the-spot control of the franchise system with more detailed information and appropriate ways than can be done through DF. A close contact with local markets will facilitate a hands-on approach for the development schedule.

A Similar way of entering is to establish franchiser-owned outlets by simply establishing company-owned outlets in foreign markets. In the long run, having either

subsidiaries or company-owned outlets draws advantages of being a local company. Direct ownership indicates willingness of franchisers to invest and grow with local markets. Therefore, if a company stays in a country long enough to assimilate with local customs, it would be recognized and accepted as a local company by local foreign consumers' mind and would receive more supports from local institutions.

However, direct ownership is a very high-risk way of entering foreign markets, and franchisers are well advised to avoid this entry method (Justis & Judd, 1989). The pilot survey of this research also strongly indicated that US franchisers barely used this mode. Heavy financial requirements in terms of initial capitalization and other operational costs such as rent and salary should explain why. Franchisers also have to face and handle foreign cultural and economic surroundings of the international markets. Therefore, a successful international operation via subsidiary or company-owned outlets presupposes a sound coordination between franchiser's expatriate managers and locally recruited employees who will incorporate idiosyncrasies of the local market into the system.

Additional financial obligations of the initial set-up costs and managerial responsibilities of the day-to-day operation of remote foreign subsidiaries/outlets make it difficult to select this mode by franchisers who do not have enough financial and managerial resources. For example, Abell (1990) reported that the approximate cost of running a one man office, with appropriate marketing, clerical and secretarial support in Tokyo in 1990, was somewhere in the range of one million pounds sterling, which is a huge investment by anyone's standard. Other than financial issues, legal and administrative procedures of establishing a 100 percent owned subsidiary/outlet in a

totally different social and organizational system will pose difficulties for most international franchisers.

III.1.3. Master Franchise/Area Development Agreement (MF/AD)

Konigsberg (1989) carefully laid out the difference between master franchise (MF) and area development (AD) agreement. Under a MF agreement a franchiser grants an exclusive right to master franchiser/sub-franchiser to open franchise outlets itself and to franchise third parties, described as sub-franchisees, to open franchise outlets within a specified or exclusive territory. Under an AD agreement a franchiser grants exclusive rights to a developer to develop an exclusive territory by itself opening a number of outlets. Therefore, the physical size of and the population distribution within the target market are likely to have a substantial influence upon the selection of a sub-franchiser or an area developer. In this thesis, however, the two modes are considered as one because of their similarity.

The most popular method by which franchisers expand overseas is the MF/AD mode (Abell, 1990). Lower capital requirements combined with rapid growth result in preference of this route into foreign markets by many international franchisers. MF/AD agreement enables a franchiser to establish its system in foreign markets without committing financial and managerial resources that are necessary for the establishment of a subsidiary or joint ventures (JVs). An international franchiser, however, has to be very careful in selecting its partners since the success of operations via MF/AD is very much depends on the financial and managerial capabilities of sub-franchisers or developers who undertake the development of a target territory.

The key drawback of this approach is the limited control of the whole operation by franchisers. Compared to the hands-on management of subsidiary, MF/AD is a hands-off arrangement, especially when a sub-franchiser or a developer is a large foreign enterprise, which will prefer to have a modified system to accommodate the local needs. Naturally, the loss of control may generate lower revenues than those from subsidiaries or JV operations. Besides, franchisers have to share upfront fees and royalties with master franchisers or developers. In most cases, however, the rate of return on investment of MF/DA can be more efficient than that of subsidiaries or JVs.

Another risk of selecting MF/AD mode into foreign markets is the possibility of creating future competitors who have accumulated detailed knowledge about the development of a franchise system. A franchiser has to remind that it should be difficult to impose post-term non-competition laws in many countries. The exemption is only up to one year in the EC countries (Abell, 1990). Lastly, the termination of MF/DA is more complicated than that of above two modes. In a worst scenario case, the termination of a developer results in the purchase of a foreign business, and the termination of a sub-franchiser results in the franchiser becoming a franchiser in a troubled area.

III.1.4. Joint Ventures (JVs)

JVs are formed either as a result of collaboration with local firms or of local rules on foreign ownership restrictions. Some countries do not allow foreign ownership in excess of 50% and do not permit creation of foreign-owned enterprises. In such condition, JVs are the only option if a franchiser wants a hands-on approach in a target market. For example, McDonald's Corporation entered Mexico with a 49 percent

ownership and the remaining 51 percent owned by the Mexican partner in compliance with the Mexican law (Justis & Judd, 1989). McDonald also shares ownership with Piazza di Spagna and Food Italia Spa in Italy (Sadi, 1994).

Besides legal constraints, economic benefits of JVs derive two or more firms put together. One of the most obvious benefits of JVs is the reduced financial risk compared to that of a wholly-owned subsidiary. Sharing ownership lessens financial burdens by alleviating an initial investment requirement and successive operation costs. JVs also provide the best means for merging complementary skills and strengths. JVs enable franchisers to take advantage of the local partners' knowledge about the local market conditions such as legal procedures, distribution channels, and sources of raw materials. Local partners' business and political contacts, manpower, and distribution networks added on to the system will improve the success rate of foreign franchise operations. Such joint efforts are advantageous to overcome local barriers raised by the local government officials, business associations, and consumers.

Despite various benefits, JVs are not flawless. The whole process of the joint efforts to manage foreign operations with partners should not be always an easy task to a franchiser who is used to run the system by itself. Before entering into a JV, franchisers should carefully consider the fundamental condition of joint control that is to share the authority of decision-makings. The whole process of dealing with partners with different educational, cultural, and language backgrounds can be quite disturbing.

The situation becomes worsened when each party has different goals or conflicting interests. Different opinions in various issues, such as the management of profits, personnel, and promotion may hinder a harmonious teamwork of the JVs. The

foremost and biggest problem of entering into JVs is the legislative procedure of the

foreign countries imposed on the formation of the JVs. For example, establishing such

joint companies is not a simple or straightforward matter under the legal systems of some

central economies such as China and Russia (Abell, 1990).

III.1.5. Licensing

Licensing allows franchisers enter foreign markets by selling the right to use

trademark, trade secret, patent, or other valuable knowledge in return for a fee or royalty.

International licensing includes a variety of contractual arrangements by which domestic

companies (licensors) make available their *intangible assets* (patents, trade secrets, know-

how, trademarks, and company name) to foreign companies (licensees) in return for

royalties or other forms of payment (Root, 1994). Management contracting binds a

franchiser who provides management know-hows to a foreign partner who furnishes the

necessary capital and obtains the licenses to start the business. Transfer of intangible

assets is distinguished from other forms of contractual arrangement, which provides only

professional services to the recipient firm. Usually, technical supports are accompanied

to ensure the proper transfer of these intangible assets or property rights. In franchising,

these supports include general management, marketing, and technical assistance. As a

result, licensing enables the licensee (franchisee), who not only gains the trade secrets,

knowledge, and capability of the licensor (franchiser) but also receives supports, to

expand at a little risk (Justis & Judd, 1989). For example, Radisson grants licensing

under five markets brands: Plaza Hotels, Suite Hotels, Radisson Hotels, Radisson Inns,

and Radisson Resort (Sadi, 1994). Similarly, Hyatt International Corporation offers

licensing under three brands: The City Center/Business Hotels, Destination Resorts, and Park Hyatt Hotels.

Most advantages and disadvantages of licensing are similar to those of JVs. The most obvious advantage of licensing arrangement as a foreign market entry mode is to circumvent entry barriers (Root, 1994). Licensing allows franchisers avoid political risks and regulatory restrictions since many host governments prefer licensing over foreign direct investment as a way of getting new technology.

Licensing also reduces the burdens of resource commitment. Since licensor does not own physical assets in the target market, it is immune to the worst scenario of expropriation by the host government. Therefore, small franchisers whose financial and managerial reserves are shallow should favor licensing over the alternative modes of equity investment.

Licensing, nonetheless, has handicaps due to the limited control on the licensee's market performance (Root, 1994). Lack of control on the development schedule of target market, may hinder a fast expansion of the franchiser's brand name. The ultimate risks involved in expansion via licensing should be the possibility of licensees' becoming a potential competitor. Equipped with the knowledge acquired through licensing arrangement, the licensee may become a competitor. Therefore, a licensor is better be cautious about the dissipation of technology. However, controlling licensees, who are in remote foreign countries, and protecting trade secrets will always be tough tasks for licensors.

III.1.6. Merger and Acquisition (M&A)

Acquisition of existing networks or enterprises can be an aggressive strategic move to penetrate target markets. Despite a possible distinction between the non-corporate asset-specific and full corporate acquisition, we opertionalize both cases as merger/acquisition in this thesis for the sake of simplicity.

The obvious benefit of M/A is a possibility of instant usage of existing networks as soon as the paper is signed. In the short-run, M/A mode can be a powerful way to enter a market since franchisers can save time to develop a network system in a target market. Harnessing existing networks also provides a chance to catch up incumbent rivals. In the long run, franchisers will gain other benefits similar to having a subsidiary. Firms such as Pirmus (UK), Norfolk Capital (UK), Queen Moat (UK), Saison (Japan) and Regent (Hong Kong) are examples of international franchisers expanding through acquisition (Tse & West, 1992).

The leading problem of this mode is disapproving of foreign ownership by local business authority. Japan is a good example, and in other countries, such as Switzerland, the legal and political restrictions may make such acquisitions extremely difficult, if not possible (Abell, 1990). Therefore, legal and commercial procedures of target countries should be considered. Another problem is the correct assessment of the value of target firms.

There are critical financial and legal constraints that international franchisers need to overcome to conclude a M/A deal. First, franchisers nee to go over the whole process of investigation, valuation, and negotiation with the target firm. Second, governmental and legislative interference has to be resolved. Third, closing a final M/A deal requires

the accessibility of a competent group of financial analysts, accountants, and lawyers due to the payment and tax consideration.

III.1.7. Pilot/Branch (P/B) operation

Setting up a branch as a pilot operation is an alternative approach to the above six options. A pilot operation in a new environment is expected to form a good base for amendments and additions to the existing formats (Smith, 1990). The underlying reasoning of P/B mode is to avoid heavy resource commitment, while modifying and testing the original franchise format to better adapt itself to local circumstances.

Despite the prescriptive suggestions of this approach for an initial market entry, a key drawback of this mode is the mandatory investment. It still needs a fair amount of resource commitment in terms of time, money, and managerial energy. The whole process of setting up and running a branch is simply a microcosm of operating a full-scale operation. Therefore, this mode cannot be a gimmick to the problem of foreign market entry. However, this mode is excluded as one of the major foreign market entry modes of international franchisers due to the lack of such cases in the previous survey findings.

III.1.8. Three Types of Major Foreign Market Entry Modes

In sum, above six types of entry mode can be positioned in terms of the degree of control, dynamics of learning, and resource commitment as shown in the **Figure 3-1**. Resource commitment includes both monetary and managerial inputs required to establish and run foreign operations. Highly committed firms will have more control. Then, the degree of control is assumed to be in line with the learning ability. The logic is

that firms with more control should have more initiatives in learning and gaining knowledge than firms with less control. Therefore, each level of investment, control, and knowledge gaining seems to have a positive relationship with each other as shown in **Figure 3-1**. Accordingly, MF/AD agreement is recognized as a mode that requires the least resource commitment and that permits the least control by franchisers. The direct opposite mode is M/A and company-owned outlets that allow high control and demand high level of resource commitment.

Six types of entry choices are grouped into three: (i) low resource commitment: **Type 1** – MF/AD; (ii) medium resource commitment: **Type 2** – DF and licensing; and (iii) high resource commitment: **Type 3** – JVs, company-owned outlets, and M/A. Therefore, the key criteria for the grouping of entry modes are the level of control and resource commitments.

Figure 3-1: Three Types of Entry Mode
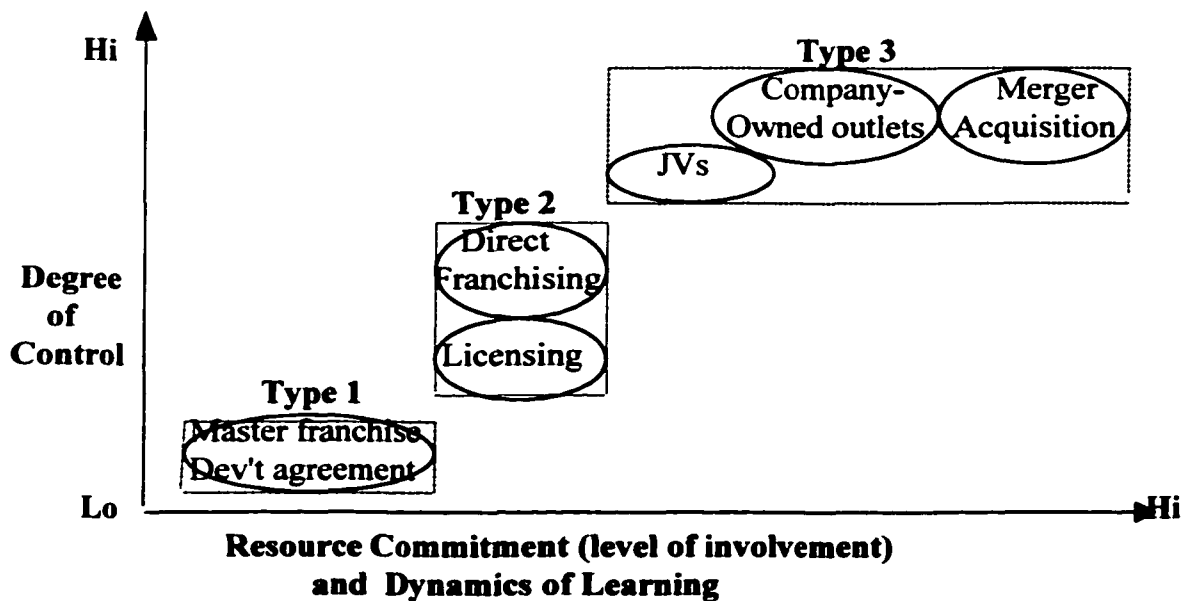
III.2. Independent Variables and Hypotheses

Dunning's (1995, 1993, 1988, 1977) eclectic paradigm (ownership, locational, and internalization advantages) has presented a grounding framework of the theory of determinants of the international entry mode. Dunning sets the example of a tripartite construct, which is followed by Hill *et al.* (1990) and Kim & Hwang (1992) who incorporated strategic, transactional, and environmental variables. Others dichotomize the determinants of entry mode as internal and external factors (Root, 1994; Erramilli, 1992). In the field of franchising research, many (Aydin & Kacker, 1990; Huszagh *et al.*, 1992; Julian & Castrogiovanni, 1995; Kedia *et al.*, 1994) have also studied the theory of determinants of internationalization of franchising sector. The framework of this thesis builds on the tripartite determinants of various variables, which are grouped as industry, firm-specific, and location determinants.

III.2.1. Industry Determinants

Even if the kernel of this thesis is the analysis of the firm-specific attributes based on a RB/KB perspective, the influence of industries cannot be ignored since it sets the tone of overall business conditions. If we accept an idea that a successful firm matches its internal competencies to external environment, considering industry characters seems valid. Industrial organization theorists reinforce this view. Bain (1968) and Mason (1953) presented the famous structure-conduct-performance framework:

Industry structure -----> Conduct (Strategy) -----> Performance

The essence of this industrial organization paradigm is that a firm's performance in a market place depends on characteristics of the industry structure in which it operates.

Then, the industry structure was defined as relatively stable economic and technical dimensions of an industry that provide the context in which firms compete (Bain, 1972). The crucial aspect of Bain/Mason paradigm is an emphasis on industry structure because it determines conduct/strategy which in turn determines the performance (Porter, 1981). Accordingly, all that matters becomes the industry structure since conduct merely reflects the environment. Naturally, traditional industrial organization theorists focused on industries rather than firms as their unit of analysis.

Even if there are discrepancies between industrial organization paradigm and this thesis in the understanding of the source of competitiveness and of the unit of analysis, industry traits are regarded critical as they are expected to have influences upon the entry mode. Previous studies hint the importance of industry structures. Different findings about the international entry mode of US franchisers may have resulted from the different sampling of firms. Contract & Summit (1998) targeted only hotel industry. Zietlow & Hennart (1996) concentrated on food service sector (35 franchisers) with a smaller sample of hotel/motel (7 franchisers) and business services (4 franchisers) industries. Fladmoe-Lindquist (1991) gathered data from a small number of firms, i.e. only twelve: Two hotels, seven restaurants, two merchandises, and one food company were samples.

Despite of each research's interest in the entry mode of franchisers and service firms, the alternative modes of entry were different, also. Contract & Summit examined whether to franchise or not; Zietlow & Hennert recognized six expansion modes at the level of retail and wholesale; and Fladmoe-Lindquist considered equity investment and franchise contract. These researches imply that different industries require different types

of entry modes. The selection of entry modes seems to be influenced by the characteristics of industries.

Apart from the traditional analysis of the industry structure, technology sophistication, mandatory financial investment, and internationalization of industries are recognized as the key industry determinants of the entry mode. Then, types of goods (durable goods and intangible services) and distribution (retail and wholesale) are also included as industry determinants.

III.2.1.1. Technology level

The level of technology sophistication should control an overall configuration of business activitites. Franchisers in a high-tech industry should require more control not only to protect their proprietary knowledge but also to precisely transfer their knowledge to international markets than those operating in low-tech industries. In such high-tech industries, TC economics predicts internalization of the transaction due to a market failure caused by opportunism. The logic of TC economics has been a dominant justification in this type of transaction, explaining the establishment of subsidiaries when technology leaders, i.e. MNEs cross borders to set up foreign operations. Therefore, the TC perspective may try to look into other explanations if such high-tech franchisers use contractual mode of entry. In such high-tech industries, RB/KB perspective of firms, which emphasizes the imperfect mobility of tacit capabilities, is in line with the logic of TC economics. It also predicts internalization of the transaction. But the background reasoning is not based on opportunism but on bounded rationality (the imperfect imitability of know-hows). Therefore, firms may care less about the financial burdens of

foreign investments and care more about having more control to accurately transfer sophisticated production skills.

However, if a franchiser in a high-tech industry has developed a franchise format that has successfully transferred its knowledge to domestic franchisees, it can be expected that the franchiser will continue to use contractual mode for the foreign entry. The reasoning is not related to the minimization of transaction costs incurred by opportunism but to the knowledge of running a business. Once franchisers master the whole process of transferring their operations to franchisees via the package of franchise format, they may simply continue to make contracts with foreign franchisees. Then, despite the presence of market failure, franchisers may continue to franchise out because it is the only business means they know.

This logic implies that the selection of entry mode is not directly related to the level of technology sophistication. It means the franchiser's knowledge of running a business, which is limited to making contracts with franchisees, is the major force behind the selection of an entry mode. This rationale of entry mode is based on the resource-based view of the firm, and seems to have a strong implication of franchisers' selection of the international entry mode.

However, even if a franchiser has successfully developed a franchising format in the domestic market, it does not necessary mean that he/she will be able to develop a proper package for foreign franchisees. Because of the logic of bounded rationality, the franchiser may not be able to design a proper communication system that will smooth the transfer of knowledge. The sophisticated level of technology, which is based on many components of tacit knowledge, will make the process of knowledge transfer even more

difficult. Then, the franchiser will select an entry mode that will facilitate the transfer of knowledge by investing more resources. Hence, the high level of technology can have an impact on the decision making of entry modes.

In general, consideration of high-tech industry for franchising sector may seem unnecessary since there are not many franchisers operating in high-tech industries. However, this analysis makes it easier to examine the opposite case. If a franchiser competes in a low-tech industry, the focus shifts from the transfer of knowledge to cost minimization. The low-tech industry case makes it clearer how an ordinary franchiser, who runs the system by selling the franchise format to franchisees, will select the foreign market entry mode. *Ceteris paribus*, a franchiser will always try to minimize its resource commitment to lower financial, operational, and managerial risks. The default foreign entry mode, therefore, will be Type1 entry mode (MF/AD).

> *H1: The lower the technology level of the industry in which a franchiser operates, the more likely that the franchiser will select Type 1 entry mode.*

III.2.1.2. Mandatory level of financial investment

Some industries such as hotels and motels and car renting require heavy financial reserves to start the business. Outwardly, resource-based view seems to favor collaborative entry modes in this type of industry since contractual mode reduces the financial burdens by sharing the financial costs with foreign franchisees. Since firms' competitive position can be improved by shared commitments of financial resources, the RB theory expects firms to make contracts using lower commitment entry modes. By combining financial resources of the engaged firms, contractual mode may enhance

competitive positions, reduce financial pressures, and improve operational results.

Therefore, the huge mandatory financial requirement is expected to make franchisers use

Type 1 or 2 entry modes rather than Type 3.

Survivors of such industries that mandate huge investment should be equipped

with adequate financial reserves. Franchisers in this type of industry may be comparable

to big MNCs in terms of size and financial reserves. Then, IT found that big firms with

abundant financial resources tend to take giant steps by aggressively investing into

foreign markets. The conceivable high transaction costs related to heavy investment

transactions will also motivate franchisers internalize transactions. TC economics

predicts that franchisers will internalize this type of transaction due a possible market

failure. Franchisers will find it difficult to find financially qualified partners in a remote

foreign market. As a result, majority of firms in the hotel industry is found to take direct

investment mode (Contractor & Kundu, 1998).

Therefore, the RB view and TC economics project conflicting entry mode type

respect to the high level of mandatory financial investment required by an industry.

Then, IT is in line with the TC economics only because IT expects big firms in such

industries, and big firms, which have enough resources to invest, are expected to take big

steps or resource commitment.

Then, how to operationalize the mandatory investment level becomes critical. In

this research, industry determinants are all operationalized by obtaining the perception of

managers. Therefore, managers are asked the level of mandatory investment of the

industry in which their companies are operating on a seven point Likert scale.

*H2: The higher the mandatory investment level of the industry in which a
franchiser operates, the more likely that the franchiser will select a low resource
commitment entry mode.*

III.2.1.3. Internationalization of the industry

There seems to be a variation in the degree of internationalization among the US

franchisers. For example, 918 franchises listed in *Entrepreneur* (1996, January)

magazine showed various degree of internationalization of the franchising sectors.

Following **Table 3-1** shows a wide variance of the degree of internationalization among

the 918 US franchisers (international firms operating only in Canada are excluded).

Table 3-1: Number of International US Franchisers by Sectors

Industry Type	Number of US Franchisers
Automotive	**30**
Beauty & Health	16
Building Products & Services	2
Business Services*	26
Business/Staffing Services	6
Children's Products & Services	21
Food/Quick Service	**87**
Food/Full-Service Restaurant	**23**
Food/Retail Sales (convenient stores)	3
Home Improvement Product Services	13
Hotel & Motels	4
Maintenance Services	**44**
Photograph Services	11
Real States	6
Recreation	12
Retail	16
Service Businesses**	26
Training Services	18

Source: *Entrepreneur*, January, 1996
(* Include accounting, consulting, & tax services, advertising, business marketing
services, brokerage, mail services, signs, etc.

** Include check cashing service, dating, dinner delivery, DJ/party, dry
cleaning/laundry, electronic repair, income tax, moving, postal services, and
environmental, security business, etc.)

From the table, we can recognize that some franchising sectors are more active in

internationalizing their operations because of either competitive domestic industry

structure or internationalization push or trend among competing firms. RB theory

predicts that more committed entry modes will be used in an industry in which many

franchisers have pursued international expansion because the knowledge necessary for

international expansion should have been accumulated within the industry. IT is in line

with this view since it expects firms increase commitment level as they gain more market

knowledge. However, TC economics may expect lower incentives for internalizing

transactions due to the reduced transactions costs as firms become used to making

contracts in foreign market conditions.

*H3: The higher the degree of internationalization of an industry in which a
franchiser operates, the more likely that the franchiser will use a higher resource
commitment entry mode (Type 3).*

III.2.1.4. Product and distribution types

Since most franchise businesses are engaged in services and share commonalities

of service business, distinctiveness of each industry's traits may not prevail. Therefore,

franchisers are further divided according to their product and distribution types. Three

types of products such as non-durable, durable consumer goods and intangible

services/goods, and two types of distribution methods such as retail and wholesale

business are used to group franchisers.

Franchisers producing durable consumer goods are considered to have similar characteristics of firms in manufacturing industries. Therefore, these firms are expected to have different ways of running franchise business from those who provide pure services. Retail and wholesale channel methods may also link to different characteristics of industry factors. Then franchisers producing durable consumer goods or running a wholesale business are expected to have similar attributes of MNCs in manufacturing industries. Once a franchiser is identified with a MNC in a manufacturing industry, RB/KB, TC economics, and IT expect that the franchiser will internalize the transactions based on the assumptions of bounded rationality, opportunism, and big-firm phenomenon, respectively.

> *H4a: Franchisers producing durable consumer goods will use a high resource commitment entry modes (Type 3) than those selling intangible services/goods.*
> *H4b: Franchisers in a wholesale business will use a high resource commitment entry modes (Type 3) than those in retail business.*

III.2.2. Firm-specific Determinants

While a neo-classical view of international economics focused to address the location of production until the 1950s, Hymer (1976) turned his attention to the organization of international activities. Hymer was a pioneer who recognized advantages of some kind of innovatory, financial, and marketing skills that were possessed by MNEs to overcome foreign conditions. Dunning (1993, p66) also asserted the theory of determinant of MNEs should consider not only the location of value adding activities but also the ownership advantages of the organization since MNEs have managed and controlled production facilities located in foreign countries.

Dunning (1977, 1988, 1993, 1995) has deliberately taken into account firm-specific advantages in his OLI (ownership, location, and internalization) triad of variables as one of three key determinants of international production. Dunning's eclectic paradigm has provided a solid foundation of the theory of determinants of foreign entry modes and guided students of international study to pay an attention to firms' ownership advantages. Recently, Dunning (1998) discuss that the emphasis on the firm-specific determinants of international activities needed to be complemented by renewed interests in spatial aspects of FDI. The approach of this thesis is fully in line with Dunning's perspective. Accordingly, both internal (firm-specific) and locational determinants of international economic activities will be extensively examined in the following section.

III.2.2.1. Global strategic motivations

Abell (1990) suggested the motivation of internationalization was the most fundamental question to be raised before going abroad. "Is it to earn profits by exploiting foreign markets?" "Is it to establish an international image to domestic customers?" Or, "Is it a defensive move to keep up with rival competitors?" Without a doubt, strategic motives directly affect on overall foreign business activities, including the mode of entry.

Dunning (1993, Chapter 3) provides a framework of the motives of foreign operation. He categorized four types of MNE activity: (1) natural resource seekers; (2) market seekers; (3) efficiency seekers; and (4) strategic asset or capability seekers. Among these types, most US franchisers may fall in the category of market seekers. Many researchers who studied international US franchisers found that two major factors such as domestic market saturation and foreign market potential have encouraged US

firms go abroad (Walker & Etzel, 1973; Hackett, 1976; Aydin & Kacker, 1990; Preble, 1992; and Hoffman & Preble, 1993).

For these market seekers, minimizing expansion costs is critical since they are seeking foreign markets to augment their revenues. Therefore, the decision rule of TC economics, which is to minimize costs, seems appropriate to explain these franchisers' international expansion mode. Then, KB theory approaches the selection of entry modes from a different perspective. It focuses on the transfer of firm-specific know-how between franchisers and foreign applicants.

Before we continue, we need to remember how a franchiser runs the business. A franchiser is an entrepreneur who has developed a package of knowledge, which can be highly standardized (Aydin & Kacker, 1990), hence easily transferable to franchisees. Since the success of a franchising system depends on how well a franchiser transfers a well-prepared package of know-hows to franchisees, transferring key operational knowledge becomes a daily routine of the franchise system. Once we understand transferring knowledge is one of key competencies of franchisers, a knowledge-based view predicts that franchisers will use contractual entry modes in foreign markets, exploiting its ownership advantages and reducing costs at the same time. Therefore, US franchisers are expected to enter foreign markets by making contracts with local franchisees.

Now, let strategic motivations of international franchisers come in to play. Most researchers understand international franchisers as exploiters of firm-specific skills and do not recognize them as asset seekers who try to improve their long-term capabilities. However, some franchisers may seek foreign markets to sustain or advance their

competitiveness by learning new knowledge in the global markets. Therefore, *H5* is testing about whether franchisers have specific motivations of gaining new ideas in the global markets.

The TC theory is not an appropriate tool for the explanation of this type of transaction since it emphasizes the exploitation of firms' advantages and minimization of the transaction costs, leaving out the dynamic aspects of learning. Since KB theory focuses on exploitation as well as development of advantages, it is more pertinent to discuss about the organizational mode of learning. Since franchisers are expected to learn more by personally experiencing advanced knowledge, highly committed entry modes that permit more control and facilitate learning will be used. If emphases of strategic objectives are on learning and international competitiveness rather than exploitation of advantages, a franchiser will be more willing to commit in foreign markets.

> *H5: The higher the incentives of gaining global competitiveness via foreign experiences, a franchiser is more likely to seek a higher level of resource commitment modes (Type 3).*

III.2.2.2. Individual firm's attributes

The RB approach and Dunning's ownership advantages all predict that a bundle of assets will determine the organizational mode that a franchiser will choose in the overseas markets. Among various attributes of a firm, personnel and capital resources (Erramilli, 1992), size and experience (Terpstra & Yu ,1988; Weinstein, 1977) of a firm were identified as key internal determinants of foreign entry mode by researchers who studied US service firms. In addition, startup cost, domestic ownership structure, flexibility of

international marketing plan, and aggressiveness of individual franchisers will be tested in the following in relation to the foreign market entry modes. Since there is no way of getting secondary information about these attributes, straightforward questions were asked to managers. Therefore, managerial perceptions on these issues will be used to test the relations between these explanatory variables and the entry modes.

III.2.2.2.1 Availability of resources: Financial and managerial

Among other abilities, the financial strength of a franchiser is one of the most important attributes to be considered (Abell, 1990). Surplus of managerial and financial reservoirs is a necessary condition to consider a higher level of capital commitment into foreign countries. The relatively insignificant financial requirement of making contracts with MF/AD and licensees compared to the necessary financial investments of establishing and operating foreign subsidiaries or JVs will make resource-scarce franchisers avoid setting up subsidiaries or JVs.

In the above, *H2* tested about the financing requirement of the industry in which a franchiser operates. Here, the financial capability of a franchiser is tested, irrespective to the investment requirement of industries, since there can be franchisers with strong financing capabilities, enjoying a wider range of entry options. Since firms can access more control by holding more shares, franchisers with strong financial resources may enter foreign markets via the highly committed entry modes (Type 3).

A resource-based view expects that firms with low resources are expected to try to gain others' resources by making contracts. IT should be in line with this view: Small firms with little knowledge of foreign markets make progressive investments. Therefore,

TC economists may have little interest in such firms, which concern more about investment requirement rather than transaction costs.

Majority of franchisers are not listed in public, hence do not publish their financial data. Therefore, managers were asked to measure their firms' abilities in relation to other firms in the same industry in this survey questionnaire. Erramilli (1992) also used the managerial perception that measured the degree of influence of personnel and capital resources on the entry mode choices.

> **H6a:** *The more a firm is constrained by the financial conditions, the higher the possibility of selecting lower level of resource commitment modes (Type 1).*
> **H6b:** *The more a firm is constrained by the managerial capabilities, the higher the possibility of selecting lower level of resource commitment modes (Type 1).*

III.2.2.2.2. Start-up investments of outlets

Firms were asked to indicate the investment requirement in dollar terms to set up a new franchise outlet (questionnaire section A-8). Even if the level of investment is asked at the industry level, individual franchisers' start-up costs to open an outlet was asked to test at the firm level. The same logic applied to the relationship between the industries' investment level and the foreign market entry modes is expected for the relationship between the start-up investment level and the entry modes.

> **H7:** *The higher the start-up investment level of a franchiser, the more likely that a franchiser will select a lower resource commitment entry modes (Type 1).*

III.2.2.2.3. Size

Size of firms is a critical indicator of firms' ability to absorb the costs (Buckley & Casson, 1991), uncertainty (Erramilli & D Douza, 1995), and perceived risk (Eroglu, 1992) related to foreign direct investment. Therefore, big firms are generally expected to undertake more risks and make larger internationalization steps than smaller firms (Johanson & Vahlne, 1990). A positive relationship between the firm size and foreign direct investment was founded by empirical researches (Terpstra & Yu, 1988; Kasoff *et al.*, 1997). Small firms are expected have a limited bundle of resources, making contractual modes to access others' capabilities.

Firm size can be operationalized in various ways such as number of employees, number of domestic or foreign outlets, and annual sales. Small- and medium-size enterprises are defined as firms whose employment is less than 500 unless otherwise specified. This definition was agreed upon in the US by the 1980 White House Conference on Small Business.[1] If this definition is applied to the franchise sector, most US franchisers will fall into this category, making the number of employees a useless indicator of the size of a franchiser. Therefore, Aydin & Kacker (1990) considered sales volume, the number of states covered, and total number of outlets; Julian & Castrogiovanni (1995) and Huszagh *et al.* (1992) considered only the number of domestic outlets; and Kedia *et al.* measured the number of employees in headquarters, the number of company- and franchisee-owned outlets, and total sales of the previous year. Based on

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[1] See United States Small Business Administration, *The State of Small Business: A Report of the President, 1982* (Washington, D.C., United States Government Printing Office, 1982), P.3.

these research ideas, firm size is operationalized in terms of domestic sales and the number of domestic outlets.

RB theory and IT both predict that small- and medium-sized franchisers will prefer Type 1 entry modes since such firms can be generalized as having less resources than big firms. Especially, such firms are assumed to have less information/knowledge about target markets, hence looking for partners or helping hands in foreign circumstances. For bigger franchisers, it is presumed that they have more agenda for international operations, thus willing to commit more resources. Even if there seems to be some connection between the size and resource level of firms, they may not be in perfect match. Therefore, size and financial availability of franchisers are tested as separate variables.

> *H8a: The smaller the size of a firm in terms of domestic sales, the higher the possibility of selecting a lower resource commitment entry mode (Type 1).*
> *H8b: The smaller the size of a firm in terms of the number of domestic outlets, the higher the possibility of selecting Type 1 entry modes.*

III.2.2.2.4. Domestic ownership structure

Domestic ownership structure is one of important characteristics of franchisers. Despite of the default ownership structure of franchising business, which is to make contracts between franchisers and franchisees, some franchisers like to have more company-owned outlets than others based on various reasons. On the contrary, some do not own even one outlet, insisting that they are not competing with franchisees.

RB view suggests that firms' domestic ownership strategy should extend to international operations. TC economists and IT theorists have studied mostly

manufacturing firms and not paid much attention on the equity ownership strategy of firms in the domestic market. Therefore, they are unable to present a logical explanation regarding to the relationship between domestic ownership structure and foreign market entry modes.

H9: The higher the percentage of domestic outlets owned by a company, the higher the possibility of selecting Type 3 entry modes by the firm.

III.2.2.2.5. Experience

Almost every research that studied the theory of determinant of internationalization considers experience as a key determinant of a firm's asset. This variable, however, should be differentiated from the variable mentioned in the above, *H3*, which is the internationalization of an industry in which the firm operates. *H3* considered at the industry level, whereas experience is considered at the firm level.

Experience of a firm is important because of its relationship with confidence (Penrose, 1955). The less a firm is experienced, the less confidence a firm will have in the outcome of actions. Penrose regarded this lack of confidence as costs (ibid., p535):

> "...... a firm has a fixed amount of experienced entrepreneurial services available ...... and that for any more extensive expansion it will be necessary to fall back on the use of less experiences services, with the consequence that the firm will have less confidence in the outcome of actions. ..... This lack of confidence can be looked upon as causing increasing costs."

RB theory and IT provide a conceptual framework regarding to the relationship between experience of a franchiser and a preferred mode of entry. The longer a firm operates in a foreign market, the more experiential knowledge about the market should have been accumulated within the franchise system. Therefore, the time spent in a

market will have an impact on the value-creating activities of firms. If more knowledge is acquired over the period, a franchiser may have more confidence about the operational results in the target market, thus taking active steps in developing the market.

Theoretically, experience of a firm in each foreign market should be separated. For example, a US franchiser entering the Japanese market first time should be recognized as a novice in that market, even if it has operated in the UK over thirty years. However, due to the limited availability of information about individual firms' operating history in each international market, the first year that firms opened outlets in foreign markets is surrogated as experience of firms.

H10: The more experience a franchiser has, the higher the probability of selecting higher resource commitment (Type 3) mode.

III.2.2.2.6 Flexibility of international marketing plan

Root (1994) understood that firms develop the international marketing program once the entry mode was decided. Since he considered foreign market strategies in a sequence, he placed designing of marketing mix after selection of entry modes. However, the ordering of such sequence can be changed. Therefore, it would be interesting to see the relationship between flexibility of firms' international marketing plan and selection of entry modes.

Many researchers believe that the pressure for local responsiveness or standardization comes from the industry characteristics (Prahalad & Doz, 1987; Porter, 1987). Therefore, it is supposed that firms have tendencies to have either globally standardized or locally customized international marketing approach before they decide

to enter a target market. As a result, over a period of international experience, firms develop a marketing program that easily adapts to local markets or strictly maintains a standard marketing mix. Basically, three types of international marketing approach such as straight extension, adaptation, and inventive programs are recognized (Kotler, 1991).

From the organizational capability perspective, those three types of international marketing approach are directly related to competence level of firms. Some will easily adapt to a market, while others have limited resources and organizational inflexibility to change. Those who are more flexible to changes will develop a program suitable for a target market, devoting extra time and efforts, while others may continue to use their standardized marketing plans wherever they go. Therefore, if a franchiser has a standardized marketing plan and does not have organizational flexibility to change it, he/she will prefer to make a contract with master franchisers or area developers.

H11: The less flexible of a franchise system to the changes of international marketing program, the more likely that it will enter lower resource commitment entry modes.

III.2.2.2.6. Aggressiveness

Firms have a different degree of aggressiveness in penetrating foreign markets. Some franchisers work hard to penetrate foreign markets while others roam around waiting for being contacted by qualified franchisees. This contradicting behavior of firms should result in a different selection of entry mode.

The conventional approach or understanding of a speedy geographical expansion or penetration (Root, 1994) of a target market is to make licensing or other contracts. It is

reasonable to assume that firms will be easier to penetrate a target market via contractual modes that do not require financial and managerial involvement. However, one critical issue is missing here. It is the lack of initiation and/or control. Relying on contracts means relying on foreign applicants. As a result, if there is no counter partner, a firm cannot ever penetrate a target market.

Based on **Figure 3-1** (p54), the KB view perceives that aggressive firms need to have more control to take initiatives in developing foreign markets. TC economics also expects that such aggressive firms may want to avoid transaction costs caused by opportunistic partners, hence internalizing transactions. IT should be in line with those views since aggressive firms can be identified as big ones that have tendency to internalize foreign operations.

H12: The more a franchiser is to quickly develop foreign markets, the higher the probability of selecting high resource commitment entry modes (Type 3).

III.2.2.3. Knowledge-based attributes

Based on the extensive literature review in Chapter II of this thesis, which has focused on the relationship between economic entities and knowledge, four knowledge-related variables are hypothesized in relation to the foreign market entry modes. They are (i) a desire to control international operations, (ii) a desire to upgrade production knowledge, (iii) the ease of knowledge-transferability, and (iv) the ease of knowledge-codifiability. There should be high correlations among these four variables since they are all based on knowledge-based perspectives.

Yet, entry mode researchers haven't tested these variables in relation to entry modes. Lack of validity in measuring knowledge-based attributes made researchers rule out these variables. Developing objective indexes to measure knowledge-based attributes should be a challenging but a rewarding research topic. In this thesis, managerial perceptions were used to measure these variables.

III.2.2.3.1. Desire to control international operations

In chapter II, firms and markets were compared to show how each economic entity accumulates and gains knowledge. It was shown that firms have advantages over market transactions in gaining new knowledge due to the internal mechanism of authority. Authority means power to control. With power to control, firms are easier to arrange, deploy, and learn new knowledge than market transactions. And in order to have more say in decision-makings, firms are expected to have more equity investments. Even if the format of franchising business enables franchisers have control over foreign franchisees, equity investments will make it easier to control foreign operations, especially when franchisers are motivated to gain foreign know-hows.

H13: The more a franchiser wants to control foreign operations, the higher the probability that the franchiser will select high resource commitment entry modes.

III.2.2.3.2. Desire to upgrade production knowledge

This variable seems inessential to this study since it is not pertinent only to international firms. However, it implies firms' intention to upgrade their know-hows in the international setting. Then, the question should be understandable and specific to

respondents/managers. Therefore, among various types of knowledge, only production knowledge is asked to make it clear and specific to respondents.

Then, some may expect that, needless to say, firms should respond in a positive manner to this normative question. Not all, however, is expected to have a high desire of upgrading their production knowledge. As Dunning (1993) explained, there are market seeking, natural resource seeking as well as strategic assets or capabilities seeking firms at the present time. Then, strategic asset seekers are expected to have the higher desire to upgrade their (production) knowledge than others.

Now, the question is how knowledge seekers enter foreign markets. KB theory suggests that they will need equity based entry modes since internalization facilitates learning. TC economics is in line with this view: Firms with less knowledge will incur higher transaction costs and be better off by internalizing transactions.

H14: The higher the desire to upgrade production knowledge, the higher the possibility that a franchiser will select equity ownership entry modes (Type 3).

III.2.2.3.3. Ease of knowledge-transferability

Transferring firms' knowledge has been one of major issues to advocates of knowledge-based viewpoints. However, this critical idea seems tautological in the study of franchising since transferring knowledge is imbedded in the franchise system. Franchisers are supposed to easily transfer franchising knowledge to franchisees. Even so, the argument is that there could be variations in easiness of transferring franchising knowledge.

The intensive analysis of the Chapter II.3.1 & 2 was that firms learn by simply doing and experiencing capabilities/knowledge due to bounded rationality and imperfect transferability of knowledge. In Chapter II.1.1, information impactedness exists due to the uncertainty, opportunism as well as bounded rationality, causing positive transaction costs to one of parties. The remedy recommended by the both theories is to internalize transactions.

> *H15: Franchisers with the Type 3 entry modes will find it easier to transfer their franchise knowledge than those with the lower commitment entry modes.*

III.2.2.3.4. Ease of knowledge-codifiability.

In addition to immobility of knowledge, codifiablilty of knowledge has been another key topic of the KB view. True capabilities and strategic assets were recognized as non-codifiable and non-immitatable (Chapter II.3). However, in order to run a franchising business, franchisers should have been able to document or codify their franchising operations. Accordingly, the issue of knowledge codifiability may seem irrelevant in the study of franchising.

Then, there might be difference among franchisers' abilities in codifying their operations according to their ownership structure. Those who have had opportunities of owning foreign outlets may have experienced or learned better ways of documenting/ codifying franchising operations than those who never have invested in foreign outlets. The argument comes from a KB viewpoint that capabilities are gained only through on the job or hands-on experiences/training.

H16: Franchisers with the higher commitment entry modes will find it easier to document about their franchise operations than those with the lower commitment entry modes.

III.2.2.4. Nationality

I have contacted 24 Franchise Associations around the world only to find out that none but the UK International Franchise Association had the list of its international franchisers. Therefore, only two national franchisers are compared and contrasted in this thesis. Since the same questionnaires were sent to international managers of each national firm, different responses to various questions can be easily tested.

Among many variables, a different ownership strategy is expected due to the difference in the country of origin (Hennart & Larimo, 1998). Then, IT and TC viewpoints are not designed to predict national differences in the selection of the entry modes. But, the RB view implies that a different preference of entry modes between the two national firms due to individual capabilities of each national firm. A different bundle of abilities as a group will lead to a different selection of entry modes. National firms with lower capabilities are expected to learn more from international operations by internalizing transactions than by making contracts. Then, the UK firms are expected to have more equity modes since they are generally understood running behind the US firms in the franchising business.

H17: There will be a higher percentage of the UK franchisers using the higher commitment entry modes than that of the US franchisers.

III.2.3. Locational Determinants

III.2.3.1. Overall perceived foreign market risk

Geographic move from the domestic to foreign markets is not a simple change of operational base but a major shift of environment (Bartlett & Ghoshal, 1989). The economic and political imperatives of the global competition (Prahalad & Doz, 1987) have been always on the top of check lists that international managers have to review before entering foreign markets. They should assess the degree of risk associated with a new venture. Overall risks associated with the target market should be accepted before the company penetrates foreign markets.

Therefore, researchers, who are trying to understand the influence of locational determinants of a target market, operationalize the risk associated with the political and economic conditions by using published data such as GDP, FDI indexes, etc. (Contractor & Sumit, 1998). However, managers may not always interpret their external environments via archival data but use perceptual measures (Boyd *et al.*, 1993; Fahey & Narayanan, 1989). Managers may have limited time, enthusiasm, and abilities to look into hard data for every prospective target country.

Hence, managerial perceptions are used in this study to measure the degree of overall political risks recognized by franchisers. It seems reasonable to use managers' responses since it is their perception, not the hard data, that makes the final decision to enter foreign markets. Agarwal & Ramaswami (1992) used managerial perception of country risk, and Blair and Kaserman (1982) also used the perceived risk of franchisers and franchisees in terms of discount rate as the most critical assumption designing the optimal profit structure of a franchiser.

The relationship between the entry modes and the overall perceived political risk of target countries by managers seems quite predictable. When a high political risk is perceived, managers will try to withdraw from the target country. If still decided to enter the market, it will choose the lowest level of financial commitments.

> **H18:** *The higher a franchiser emphasizes the overall perceived political risk of a target market, the less likely that the franchiser will use Type 3 entry modes.*

III.2.3.2. Legal difference

Local legislative guidance set by host governments plays a decisive role on the choice of firms' entry modes. Legal difference or bureaucratic paper works are one of obstacles that international firms have to overcome. In Japan, for example, each unit franchise agreement is likely to be an agreement for the transfer of technology and required to be registered at the Fair Trade Commission as an international contract under the Anti-Monopoly Law (Law No 54, 14 April 1947) and at the Bank of Japan under the Foreign Exchange and Foreign Trade Control law (Law No 228, 1949 as amended) (Abell, 1990). Such legal burdens may prevent a settlement of direct franchising. Some other governments such as Korea, India, and Japan require foreign international franchisers to use local raw materials (Sadi, 1994). Since such government regulations have a direct impact on the quality of the products/services, franchisers may avoid those markets.

The formal request of disclosure in certain jurisdiction may also hinder the franchiser's intention of direct franchising. The franchise-specific laws mandated by *Loi Doubin* in France impose disclosure requirements upon franchisers (ibid.). Despite its

simplicity, the practice of law in the civil jurisdictions such as France and German may put administrative burdens on the US and UK franchisers who are used to common law. Therefore, American franchisers are easier to enter into Canada, the UK, and Australia which share the same legal heritage of common law than into others who have code law system. Naturally, they may pursue other common law jurisdictions that require long form agreements, stating every right of each party. Comprehensive protection of trademarks and brand names will also directly affect on the decision making of whether to enter the country. Therefore, legislative and legal complexity of target countries should be considered carefully before entering them.

What kind of entry modes will be beneficial when firms face different legal system? Such condition will further increase transaction costs from a TC point of view and will make firms internalize transactions. However, IT predicts that firms will minimize equity investments due to the limited local market/legal knowledge and make contracts with sales agents. Once firms realize how little they know (or little capabilities they have) about foreign legal systems, they should make contracts with local franchisees to gain knowledge about the system.

H19: The more a franchiser concerns the legal difference between the home and target markets, the more likely that the franchiser will use Type 1 entry modes.

III.2.3.3. Strategic importance of target markets

There are "sticky places within slippery space" (Markusen, 1996) since certain geographic areas have more strategic values than others (Dunning 1998). Low labor costs, abundant resources, expanding demand conditions, and challenging rivals are

frequently cited reasons of why firms consider certain locations more seriously. In addition, efficient infrastructure, favorable governmental supports, and concentration of capabilities which all combined to result in opportunities for new learning and innovation seem more important in this age of global competition. Firms start to identify and appreciate those foreign markets since they can gain knowledge and become more competitive by experiencing business activities in them.

III.2.3.3.1. Foreign markets as the source of learning

Dunning (1998) enlightened importance of location as sources of dynamic learning. He suggested that an emphasis on firm-specific determinants of international activities should be complemented by a renewed understanding of the spatial aspects that enable high value asset-augmenting activities. Advanced industrial countries and some large developing countries have become targets of FDI because of the availability of advanced technological knowledge, management expertise, and organizational competencies. Scott (1996) also acknowledged the growing concentration and specialization of manufacturing and service activities in large metropolitan areas. He contended a possible emergence of city-states resulting from development of the world capitalism marked by an intensified regionalization of production. Advances in transportation and telecommunication technologies that facilitate the mobility of firm-specific assets across national boundaries have made the geographical concentration of dynamic activities possible.

However, students of international franchising activities have never approached locational determinants of foreign markets with such a view. International markets are

viewed as objects of extraction rather than as sources of dynamic learning or sustaining competitiveness. Foreign markets are targeted to take advantage of firm-specific competencies of US franchisers over endogenous firms. This view has been naturally shaped and widespread in the US franchising sector since almost every aspect of franchising business format has been extensively developed by the US franchisers. The US franchisers have been world leaders in their respective franchise business.

However, it is quite possible that a franchiser gains international competitiveness by engaging in international operations. A close contact with specific foreign market conditions may enable international franchisers learn new trends, develop global products, and adopt efficient managerial skills. Therefore, the role of foreign locations as a source of competitiveness will be empirically tested in the later chapter.

If managers recognize foreign markets as sources of learning instead of revenues, the RB perspective expects that firms will engage in a higher level of resource commitment entry modes based on the rationale of bounded rationality. A close contact to local conditions is expected to facilitate a learning process. TCE may not be an appropriate tool for analyzing this situation since it focuses on exploitation of advantages not on development of competencies. However, it will still advocate a high resource commitment entry mode due to expected high transaction costs for an acquisition of unknown skills.

H20: The higher a franchiser emphasizes the strategic importance of international markets as a source of dynamic learning, the more likely that the franchiser will use Type 3 entry modes.

III.2.3.3.2. Foreign franchisees as sources of new knowledge

The rationale for this variable is same as above, but the emphasis is shifted to foreign franchisees. If international franchisers recognize foreign franchisees as new knowledge providers, the relationship between franchisers and franchisees may change. Franchisers may want a closer relationship with the possessors of new knowledge, initiating joint ventures or merger/ acquisitions (Type 3 entry modes).

This logic seems applicable for non-franchising firms. However, it can be easily criticized as a radical speculation that ignores the standard format of franchising; franchisers are knowledge providers and franchisees are knowledge receivers. The intention is not to break this conventional relationship but to explore the possible difference of entry mode strategies based on the recognition of foreign franchisees as a source of new knowledge.

When there is asymmetry in the possession of information, TC economics suggests internalization of transactions due to the opportunistic behaviors. Therefore, TC economics suggests a slight different entry mod, even if it is also one of Type 3 entry modes. Only IT suggests lower level of entry commitments since firms with little (marketing) abilities would want to make contract with local agents who have more information or market knowledge.

H21: The more a franchiser recognizes foreign franchisees as a source of new knowledge, the more likely that the franchiser will use Type 3 entry modes (JVs or M&As).

III.2.3.3.3. Competitive market structure

In most cases, those markets that are strategically important to a franchiser as sources of international competitiveness will be also strategically important to others. Therefore, such markets naturally form a competitive market structure. However, the two conditions may not always go hand in hand. There could be other reasons of shaping fierce competition. Therefore, the degree of competitive market structure will be tested separately from the importance of foreign markets as a source of knowledge.

The competitive market condition is measured by perceptions of managers. RB theory predicts that firms will require more control to successfully transfer tacit knowledge to have a competitive edge over competitors, thus expecting a high degree of resource commitment in a competitive market condition.

H22: The more competitive structure a target market has, the more likely that a franchiser will use high resource commitment entry modes.

III.2.3.4. Pressure for local responsiveness

Prahalad & Doz (1987) provided a simple two by two framework based on business pressures from global integration and local responsiveness. Franchising format seems well prepared to pressures from global integration such as cost reduction, multinational customers, and universal needs. However, standardized franchising formats may not be sensitive to pressures from local responsiveness such as differences in customer needs, in distribution channels, and host government demands. Among these pressures, idiosyncratic customer needs from nations to nations are considered here.

The selection of entry mode should be influenced, if a franchiser has received frequent requests of changes in product features from franchisees across the world. If those requests are not relevant to improve product quality, firms may just allow such request only in those markets. For example, franchisers making hamburgers will not use beef in certain countries due to the customary and religious reasons. Therefore, the KB approach suggests that franchisers will make contracts with foreign franchisees. Since franchisers do not have an intention of learning foreign idiosyncrasies, they will make franchisees satisfy local needs.

> *H23: The more the number of requests to change a franchiser's product features, the higher the probability that the franchiser will select non-equity ownership entry modes.*

III.2.3.5. Size and demand condition: Market potential

Market potential (size and growth) has been found as an important determinant of foreign investment (Agarwal & Ramaswami, 1992; Eramilli, 1992; Terpstra & Yu, 1988). Some researchers measured the degree of market potential using managerial assessment (Agarwal & Ramaswami, 1992; Eramilli, 1992) and gross domestic product (Terpstra & Yu, 1988). Again, managerial perceptions will be used to measure how much the demand conditions affect on the selection of entry modes in this research.

The development schedule of markets with high demands is likely to be directly related to the revenue flow of a franchiser. For example, it will take some time to fully penetrate a large country with many booming urban cities. A franchiser should react quickly in order to maximize its operational results for such large and/or high demand

markets. In this case, franchisers need to have control over the swift establishment of outlets. If a franchiser delays its market establishment, rival firms may react quickly to catch up or overtake the market share, thus may lose its prospective locations, revenues and/or franchisees to rival firms. Under these circumstances franchisers have to decide whether to delegate the authority of controlling the development schedule to MF/AD or to devote aggressively by setting up subsidiaries to have more control over the development of target markets.

Therefore, RB theory expects that a firm will enter high potential markets with a high resource commitment entry mode that allows more control to effectively penetrate the markets. Financial and managerial commitments will be required to have more control for the swift establishment of outlets. Such investment is rationalized as a high demand condition is expected to pay off invested capital. The same logic expects that a firm will use low resource commitment entry modes in countries where the market potentials are expected to be low. Root (1994) also expected that a low and uncertain sales potential of target markets should attract low commitment entry modes.

Then, the same concern that has been raised for *H12* should be reviewed again. It is to have low resource commitment entry modes (Type 1) for the markets with high demand conditions since contractual modes require a lower financial and managerial commitment than that of equity modes, thus enabling firms to easily penetrate target markets. However, this argument is rejected again due to the lack of the ability to control the expansion schedule.

H24: The more a franchiser emphasizes the market potential, the more likely that the franchiser will use high resource commitment entry modes (Type 3).

III.2.3.6. Psychic distance of the market

Companies in their early period of internationalization tend to target foreign countries that are physically close and culturally similar with their home markets (Root, 1994). The role of psychic distance as a determinant of the entry mode has been studied in terms of cultural differences (Hofstede, 1983; Kogut & Singh, 1988; O Grady & Lane, 1996). Johanson & Vahlne (1977) defined the psychic distance "as the sum of factors preventing the flow of information from and to the market. Examples are differences in language, education, business practices, culture, and industrial development". Linguistic and cultural similarities or dissimilarities of target markets should affect on effectiveness and efficiency of communications with local franchisees. Therefore, firms are expected to pursue psychically close countries, which offer familiar operating conditions that can be easily understood by international franchisers.

Many researchers found that the US franchisers prefer English-speaking countries such as Canada, UK, and Australia that have a similar cultural background (Aydin & Kacker, 1990; Welch, 1989). Many entered Canada before other countries because of the proximity and most similar market conditions (Julian & Castrogiovanni, 1995; Walker 1991). O Grady & Lane (1996), however, found psychically close countries do not always guarantee successful operational results from the research of Canadian retail companies operating in the US.

On the other hand, Benito & Gripsrud (1992) and Engwall & Wallenstal (1988) could not support their hypothesis that firms expand into the countries that are culturally more close. Welch (1989) and Huszagh et al. (1992) found that the recent expansion of US franchisers to Asia and Caribbean countries where culture and political system are

highly diverse from those of the US. Preble (1992) also noticed the growing expansion of US franchisers to Japan and attributed it to the heavy dependency on master franchising, existence of harmonious networking, and enthusiastic assimilation of Western innovations.

As shown, there seem to be mixed signals in relation to the impact of psychic distance on the selection of target countries. Earlier studies tend to stress the impacts of psychic distance more strongly. Recent researchers, however, found more balanced international activities of firms that are expanding in to booming markets. Globalization of the world economy in recent years should has made international managers unaware strong psychic distances from countries that have been stereotyped as culturally different.

Managers, however, may still have a certain degree of psychic distance towards certain countries. Here, we have to make it clear that psychic distance and cultural distance are two different things. Psychic distance is the *managerial perception* about a target country based on the factors mentioned by Johanson & Vahlne. Cultural distance measured by Hofstede (1983) is the differences of national cultures in four criteria.

Therefore, even if two nations have a wide cultural distance based on those four dimensions, a manager from country A may not feel a strong psychic distance towards the country B because of his own personal experience of the country. Since perceptions of managers are the psychic distance about target markets, the validity of using Hofstede's cultural dimensions is questionable. Instead, the psychic distance should be asked directly to the decision-makers of the entry mode.

Managers will prefer to enter markets that are psychically close. Since managers can have confidence about their ability to run operations in foreign countries that are felt

close to their own, they will be more willing to choose high-commitment entry modes than would otherwise be the case (Root, 1994, p32). This logic seems in line with the RB perspective that stresses the utilization of currently possessed knowledge. Based on knowledge reservoirs accumulated in the domestic market, a US franchiser may feel comfortable using such knowledge in foreign markets that seems familiar to its own such as Canada. IT also predicts more involvement of a franchiser in foreign markets, which share similar market knowledge used in the domestic market. A target market recognized as psychically remote by a franchiser should require more efforts/costs to gather market knowledge, thus making the franchiser avoid them. Therefore, the UK firms may target such countries as the US, New Zealand, and Australia that are psychically close as their initial target countries instead of physically close European nations.

> *H25a:* In the initial state of the US international franchisers, Canada will be the most frequently selected target market.
>
> *H25b:* In the initial state of the UK international franchisers, the US, New Zealand, and Australia will be the most frequently selected target markets.

III.2.3.7. Enticement of sub-franchiser, developer, and franchisee

Stopford & Wells (1972, p149) already recognized the importance of qualified partners and associates in the host country. The open ended questionnaire conducted for this thesis revealed that most US franchisers have been contacted by unsolicited foreign sub-franchisers and developers and later on made contracts with them. It was found that many US franchisers take a passive approach in exploring foreign markets, although this finding is yet to be proved with a bigger sample size.

The unsolicited approaches by foreign applicants should be a result of the dominant market position and competent reputation that successful US franchisers have built up in the domestic market over a period of time. Foreign applicants should have approached US franchisers to access US trademarks or brand names that are associated with successful operations in the US market. The right to use famous and US-related trade names will make them easier to advertise, promote, and sell in their domestic markets than starting their own brand names. Therefore, US franchisers who have established their names become the targets of aggressive foreign applicants. As a result, successful franchisers are getting used to make contracts with foreign master franchisees and area developers who pursue international franchisers' brand names or trademarks. Over some period of time, franchisers may develop organizational process to deal with foreign applicants for development of foreign markets. Eventually, the role of unsolicited foreign applicants becomes significant to international franchisers who want to minimize their efforts of developing foreign markets.

H26: The more a franchiser recognizes the importance of unsolicited foreign applicants, the more likely that low resource commitment entry modes will be used.

Following **Figure 3-2** shows a list of the three groups of determinants and three types of entry modes. **Table 3-2** shows summary of hypotheses. It shows the expected relationship between the explanatory variables and the entry modes based on the three underpinning theories.

Figure 3-2: Three Determinants and Three Types of Entry Mode

Industry Determinants

- Technology Level
- Mandatory Investment Level
- Degree of Internationalization
- Goods and Business Types

Firm-specific Determinants

- Global Strategic Motivations
- Individual Firm's Attributes
  1. Financial & Managerial Resources
  2. Start-up Investments of Outlets
  3. Size
  4. Domestic Ownership Structure
  5. Experience
  6. Flexibility of Int'l Marketing Plan
  7. Aggressiveness
- Knowledge-based Attributes
  1. Desire to Control Int'l Operations
  2. Desire to Upgrade Knowledge
  3. Ease of Knowledge-Transferability
  4. Ease of Knowledge-Codifiability
- Nationality

Selection of Entry Modes

Type 1 Entry Modes:
Master Franchising/Area Developer

Type 2 Entry Modes:
Direct Franchising, Licensing

Type 3 Entry Modes:
JVs, M/As, & Company-owned Outlets

Location Determinants

- Overall Perceived Market Risks
- Legal Difference
- Strategic Importance of Target Markets
  1. Foreign Markets as Source of Learning
  2. Foreign Franchisees as Sources of Learning
  3. Competitive Market Structure
- Pressure for Local Responsiveness
- Size & Demand Conditions: Market Potential
- Psychic Distance
- Enticement of foreign applicants

Table 3-2: Hypothesized Effects of Determinants on Entry Mode Selections

Determinants: The higher the level of following factors -	Expected Sign of Investment Level Based on Theories (+ sign for more ownership; - sign for less ownership)			Expected Entry Comtmt Level
	TC Perspective	RB/KB Perspective	IT Perspective	
Industrial factors				
1. Technology level	+	+	.	+
2. Mandatory Investment	+	−	+	−
3. Degree of Internationalization	−	+	+	+
4. Goods & Business Types	+	+	+	+
Firm-specific factors				
1. Global strategic motivations	.	+	.	+
2. Individual firms' attributes				
1. Financial & managerial resources	.	+	+	+
2. Start-up investments of outlets	+	−	+	−
3. Size	+	+	+	+
4. Domestic ownership structure	.	+	.	+
5. Experience	.	+	+	+
6. Flexibility of Int'l Marketing Plan	+	+	.	+
7. Aggressiveness	+	+	+	+
3. Knowledge-based attributes				
1. Desire to control Int'l operations	+	+	.	+
2. Desire to upgrade knowledge	+	+	.	+
3. Ease of knowledge-transferability	+	+	.	+
4. Ease of knowledge-codifiability	.	+	.	+
4. Nationality	.	UK	.	UK
Locational factors				
1. Overall perceived market risks	−	−	−	−
2. Legal difference	+	−	−	−
3. Strategic importance of target mkts				
1. Foreign markets as sources of learning	+	+	.	+
2. Foreign franchisees as sources of learning	+	+	−	+
3. Competitive market structure	+	+	.	+
4. Pressure for local responsiveness	.	−	.	−
5. Size & demand conditions: Market potential	.	+	.	+
6. Psychic distance	.	Canada	.	Canada
7. Enticement of foreign applicants	−	−	−	−

IV. RESEARCH METHODOLOGY

IV.1. Mail Survey

A survey questionnaire was designed based on the previous mail survey conducted in the spring of 1996. Previous survey questionnaires were sent to the three hundred and forty US international franchisers who were recognized as franchisers pursuing foreign operations by the *Entrepreneur* (January 1996) magazine. Thirty-four firms responded from the first mailing. In the second mailing, firms ranked within the top 100 franchisers by the *Entrepreneur* magazine were targeted, and ten more firms responded.

This previous mail survey was stopped after receiving 44 questionnaires due to the two critical findings. First of all, majority of firms did not have various entry modes in line with the specificity of locations. Since the survey was based on the theoretical background of Dunning's (1995) eclectic paradigm, firms were expected to use various foreign market entry modes. In relation to distinct foreign market conditions, firm-specific characteristics, and internalization benefits, firms were expected to use different market entry modes such as company outlets, JVs, licensing, or merger and acquisitions in addition to the frequently used direct franchising or MF/AD entry modes. Surprisingly, most franchisers had only one major foreign market entry mode whenever they entered different foreign markets.

This tendency that US international franchisers use only one major foreign market entry mode was confirmed by *interviews* conducted in the summer of 1998. Several international US franchisers locating in the vicinity of Rutgers Newark Campus were contacted by telephone. Seven firms, which were located in the New York and New

Jersey areas, agreed to participate in the interview. Each of them had only one major foreign market entry mode.

Second, US international franchisers did not seem to mind about the transaction cost which has been the core concept of internalization theory (Buckley, 1988; Casson, 1982; Erramilli & Rugman, 1996; Williamson, 1975 & 1989). Therefore, they ignored the benefits of internalizing foreign operations, and almost all of them did not respond to the questions about internalization of foreign operations in the questionnaire. It is due to the nature of the franchise business. Business format franchising can be understood as a form of the business alliance that a franchiser makes a contract with a franchisee without considering much about transaction costs. In some sense, the transaction cost is built in the franchising business system. That is, a franchiser needs to spend managerial time and efforts/costs to find a qualified franchisee and has to take the risk of opportunistic behaviors by engaging with an exogenous partner. In return, a franchiser receives contract fees and/or royalties without taking the risks of financial investments in and operational results of a specific outlet/location.

The previous research confirmed this tendency of cooperation since forty-two respondents out of forty-four sample firms used either master franchising or direct franchising method to enter foreign markets. These sample franchisers rarely internalized the operation. Open-ended questionnaires were sent to these forty-four firms to understand why they ignored the benefits of internalizing the operations and endured possible future opportunistic behaviors of franchisees. Nineteen firms responded. They emphasized the benefits of reduction in risks in terms of financial investments and operational results by making contracts with local foreign franchisees. Then, most

respondents did not consider much about conceivable opportunistic behaviors of franchisees due to a limited experience of such incidents.

On the whole, the previous mail survey followed by an open-ended questionnaire was very useful as a pilot study. It provided valuable information about the real world situations and suggested a new direction of the research. The background theories were reconsidered, and the key research questions were reviewed accordingly. In addition to the theoretic modification of the research, the overall presentation of the questionnaire was also revised. A professional approach was emphasized in designing the questionnaire to improve the return ratio. A color letterhead, booklet format questionnaires using thicker papers, and self-addressed return envelopes that do not require stamps were mailed in a package to the population firms of this research.

IV.2. Samples

The population of this research is the international franchisers. Therefore, any national franchisers, which operate in overseas, were targeted as the population of this research. Thirty-two National Franchise Associations across the world were contacted via airmail, and sixteen of them replied to my request for the information about their international franchisers. All of them except British Franchise Association had either no information about their international franchisers or a very short list of them. However, British Franchise Association had a list of thirty firms operating outside of the UK. Therefore, only UK franchisers, in addition to the US international franchisers, could be included as the population of the international franchisers. Upon the request of Professor John H. Dunning, Dr. David Kirby, Dean and Pro Vice Chancellor, and his assistant Ms.

Anna Watson of Middlesex University Business School in London England had helped me get the list.

Still, about two fifth of these thirty firms' addresses were missing. I contacted British Consulate General in New York only to find out that they were too busy to inform their corporates' addresses. Therefore, I searched a web site (http://www.yellow.com/) to get the missing addresses. Six UK international franchisers responded after two rounds of mailing from March to May. Then, while Professor Dunning stayed in the UK in June and July of the 1999, he contacted the UK firms and gathered eight more responses. Among them six were usable, making a total of twelve UK sample firms. In the mean time, we also found out two UK firms among the UK population were out of business. As a result, the response rate was 42.86% from the UK international franchisers.

The *Entrepreneur International* (1998) magazine recognized top 200 US international franchisers. They are the population of this survey for the US firms. The US international franchisers in this list are big enough to have operations in the foreign markets. Many firms from the previous pilot survey, however, were not big enough to have international operations in the overseas, although the *Entrepreneur* magazine recognized them having international operations. Each of these top 200 US franchisers were contacted by phone to verify its internationality and to have the information about the person in charge of the international operations. Forty firms were disqualified for this research based on the following reasons: (i) they were not international; (ii) some were out of business; and (iii) several firms were under the same ownership with different franchise brand names and run by the same international manager/director.

Questionnaires were sent three times from February to May of 1999 to an individual in charge of the international operations. A cover letter, a questionnaire, and a return envelope were mailed in a package to individual names with their titles. There was no follow up effort in-between the three mailings. 60 firms responded. The return ratio was 37.5% from the US international franchisers. It is 38.3%, if the US and the UK respondents are all counted. Since almost four tenth of the population has participated in this survey, representitivenss of this research has been enhanced.

IV.3. Data Analyses

IV.3.1. Measurement of Data

The determinants of variables grouped in to three are measured by asking questions to directors of international operations. Therefore, input data of variables are responses of managers who are in charge of international operations. Many entry mode (Agarwal & Ramaswami,1992; Kim & Hwang,1992; Contractor & Kundu, 1998) and international franchising researches (Zietlow & Hennart, 1996; McIntyre & Huszagh, 1995) had to rely on responses of managers because managerial perceptions are the only source of information about firms' strategic motives and experiences.

Researches on franchising are further constrained by the limited information of published data. Since most franchisers are not listed in the public, they do not have to publish their financial data. Even if they have published the information, there is no way of matching the information with the respondents of this survey, since the survey questionnaires were collected anonymously. As a result, each variable in this study was

asked to managers, and those managerial perceptions are measured and analyzed in this study.

IV.3.2. Oneway Analysis of Variance

Analysis of variance requires that all groups come from normal populations with the same variances (Norusis, 1993, p187; Mendenhall & Sincich, 1993, Chapter 11.9). Therefore, independent variables were tested normality and equal variance assumptions by the SPSS *Explore* procedure which includes *histograms*, *stem-and leaf plots*, *boxplots* and *normal probability* and *detrended normal plots* (Norusis, 1993, Chapter 9).

The *histogram* is used to represent data graphically. Each bar in a histogram represents the number of cases with values within the interval. A *stem-and-leaf plot* provides more information about the actual values than a histogram does since a stem-and-leaf plot represents each case with an observed value by dividing it into stem, the leading digit(s), and leaf, the trailing digit.

Instead of plotting the actual values, a *boxplot* displays summary statistics for the distribution. It plots the median, the 25th percentile, the 75th percentile, and values that are outliers and extremes. In the SPSS procedure, outliers are cases with values that are between 1.5 and 3 box-lengths from the upper or lower edge of the box, and extremes are more than 3 box-lengths. From a boxplot, central tendency or location and spread or variability of observations can be viewed. If median is not in the center of the box, we know that the observed values are skewed. Boxplots are particularly useful for ANOVA since boxplots visually compare the distribution of values in several groups.

In a *normal probability plot*, each observed value is paired with its expected value

from the normal distribution: if the sample is from a normal distribution, the points will

fall more or less on a straight line. Assuming that it is realistically difficult to have

samples of perfect normal distributions, a normal probability plot provides us a visual

way of accepting a set of data that slightly deviates from the straight line. Another way

of using a straight line testing the normality of distribution is a *detrended normal plot*. If

the sample is from a normal population, the points should cluster around a horizontal line

through 0, and there should be no pattern.

IV.3.2.1. Evaluating assumptions of ANOVA

Although above methods or plots provide a visual presentation of checking

normality of data, there are statistical tools that compute a test of the hypothesis of

normality (ibid., p384; Conover, 1980). The *Kolmogorov-Smirnov* (K-S) test is used to

determine how well a random sample of data fits particular distribution such as normal,

uniform, and Poisson: K-S test is based on a comparison of the sample cumulative

distribution function to the hypothetical cumulative distribution function. In the SPSS

Explore procedure, the *Lilliefors* test, based on the modification of K-S test, is used when

means and variances are not known but must be estimated from the data. Whenever a

small observed significance level is calculated, the hypothesis of normality is rejected.

There are twenty-nine variables that will be tested the hypothetical relationship

with three different types of entry modes. Therefore, normality of these variables should

be tested before the *oneway ANOVA* is examined. The following **Table 4-1** shows the

abbreviated names of these variables. Hypotheses1 to 4 are regarding to *industry*

determinants on the decision making of the entry mode selection; hypotheses 5 to 16 are about the *firm-specific determinants*; and hypotheses 17 to 25 are about the *locational determinants.*

Table 4-1: Hypotheses and Respective Variable Names

Hypothesis Number	Variable Name	Question Number*	Contents of Hypothesis: These will vary according to Entry Modes
H1	ind.tech	A.10.(1)	Technology level of the industry
H2	ind.ivst	A.10.(2)	Mandatory investment level of the industry
H3	ind.intl	A.10.(3)	Degree of internationalization of the industry
H4a	goods	A.3	Durable goods vs. intangible services/goods
H4b	business	A.4	Retail vs. wholesale business
H5	dmt.comp	B.5.(1)	Gaining competitiveness via int'l operation
H6a	fincap	A.9.(4)	Financial strength of the firm
H6b	mgrlcap	A.9.(5)	Managerial capabilities of the firm
H7	setupcst	A.8	Start-up investment level of the company
H8a	sales	A.7	Size of firm in terms of domestic sales
H8b	dmoutlet	A.5	Size of firm by the number of domestic outlet
H9	ownshp	A.6	Ownership structure of domestic operations
H10	exprnce	A.2	Experience: The year entered a foreign country
H11	mktstgy	A.9.(6)	Flexibility of international marketing strategies
H12	dmt.quic	B.5.(3)	Quickness of the foreign market development
H13	contact	C.7	Number of contacts to control franchisees
H14	upgrd.pt	C.6	Desire to upgrade production knowledge
H15	tnsf.kn	C.3	Easiness of transferring franchise knowledge
H16a	dcmt.fo	C.1	Easiness of codifying franchising operations
H16b	dcmt.pk	C.2	Easiness of codifying production knowledge
H17	natnlty	B.1	Nationality of the firm: US vs. UK
H18	dmt.prsk	B.5.(6)	Overall political risk of the target market
H19	dmt.legl	B.5.(9)	Legal difference bw home and host countries
H20	dmt.knwd	B.5.(10)	Int'l mkts as a source of dynamic learning
H21	ff.source	C.12	Foreign franchisees as a source of learning
H22	dmt.rivl	B.5.(11)	Competitive structure of target market
H23	change	C.8	Pressure to change product features
H24	dmt.dmnd	B.5.(7)	High demand condition: market potential
H25	fcon.no1	B.4	The 1st foreign country selected by firms
H26	dmt.appl	B.5.(12)	Enticement of qualified foreign applicants

*This indicates the question number in the questionnaire sent to the franchisers.
Therefore, refer to the attached questionnaire to look into the actual questions asked.

Each variable that consists of three groups of foreign market entry determinants was tested the normality of distribution by the SPSS *Explore* procedure. From seventy-two sample firms, there were seventy-nine cases of major foreign market entry modes. Most independent variables of this survey showed departures from normality. Following **Tables 4-2** to **4-4** show that we have to reject the null hypothesis that a random sample of data fits particular normal distribution due to a small observed p value.

However, we should remember that "ANOVA, like regression, is robust with respect to the normality assumption. That is, slight departures from normality will have little impact on the validity of the inferences derived from the analysis." (Mendenhall & Sincich, 1993, p 638). "Analysis-of-variance procedures is reasonably robust to departures from strict normality of distributions" (Norusis, 1993, p187). Therefore, it is sufficient that the data are approximately normally distributed since it is almost impossible to find data that are exactly normally distributed (ibid., p191).

Table 4-2: Tests of Normality for Industry Determinants

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Industry-evaluation: Production Technology	.217	78	.000
Industry-evaluation: Madatory Investmt level	.202	78	.000
Industry-evaluation: Level of internationalization	.117	78	.010
Goods produced	.310	78	.000
Retail/Wholesale business	.367	78	.000

[a] Lilliefors Significance Correction

Table 4-3: Tests of Normality for Firm-spcific Determinants

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Determinant: to gain competitiveness	.136	60	.007
Self-evaluation: Financial strength	.271	60	.000
Self-evaluation: Managerial capability	.256	60	.000
Start-up cost	.439	60	.000
Domestic sales in 1998	.203	60	.000
Total outlets in the Domestic Markets	.223	60	.000
Ownership in the Domestic Markets	.303	60	.000
Year that started foreign operation	.117	60	.039
Self-evaluation: F. Mkting strategy	.162	60	.000
Determinant: quick penetration	.228	60	.000
For quality purpose, the frequency of contact with F franchisees	.171	60	.000
Desire to upgrade production technique	.184	60	.000
Ease of transferring franchise/production knowledge	.199	60	.000
Ease of documenting franchise operation	.156	60	.001
Ease of documenting franchise production knowledge	.176	60	.000
Nationality	.518	60	.000

[a] Lilliefors Significance Correction

Table 4-4: Tests of Normality for Locational Determinants

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Determinant: political risk of host country	.099	69	.090
Determinant: legal difference	.158	69	.000
Determinant: F mkt. as a souce of learning/knowledge	.113	69	.028
F franchisees have been a source of:	.164	69	.000
Determinant: aggressive expansion by rival firms	.169	69	.000
F franchisees who changed our product features	.270	69	.000
Determinant: demand condition of target mkt	.116	69	.022
Determinant: enticement of F applicants	.181	69	.000

[a]. Lilliefors Significance Correction

Then, equality of group variances should be also tested. To test the null hypothesis that the groups come from populations with the same variance, the *Levene* test method was used in the SPSS *Oneway ANOVA* procedure. Since analysis-of-variance procedures are reasonably robust to departures from normality, the *Levene* test, which is less dependent on the assumption of normality than most tests, seems useful with analysis of variance (ibid., p187). This test shows that if the significance level (*p* value) is small, the null hypothesis that all variances are equal is rejected. Once the null hypothesis that

all group variances are equal is rejected due to a small observed p value, data should be transformed to make them have equal variances. Following **Tables 4-5 to 4-7** show the results of the test of homogeneity of variances for each group of the determinants.

Table 4-5: Test of Homogeneity of Variances for Industry Determinants

	Levene Statistic	df1	df2	Sig.
Industry-evaluation: Production Technology	.841	2	75	.435
Industry-evaluation: Madatory Investmt level	.012	2	76	.988
Industry-evaluation: Level of internationalization	1.359	2	76	.263
Goods produced	1.783	2	76	.175
Retail/Wholesale business	2.008	2	76	.141

Above test results (**Table 4-5**) show that all variables cannot reject the null hypothesis that all variances are equal due to the large observed p values (significance). Therefore, among the industry determinants, nothing should be transformed to make it have equal variances.

Following test results (**Table 4-6**) show that all firm-specific determinants except start-up cost (**setupcst**), domestic sales (**sales**), domestic ownership structure (**ownshp**), and nationality of the firm (**natnlty**) variables cannot reject the null hypothesis that all variances are equal due to the large observed p values. Among these three variables, **natnlty** is a categorical binary variable (1 = US firms; 2 = UK firms). Despite of the

marginal value of the observed p value of **sales** (.100), it will be also transformed with the rest two variables.

Lastly, following test results (**Table 4-7**) show that all variables except enticement of foreign qualified applicants (**dmt.appl**) variable cannot reject the null hypothesis that all variances are equal due to the large observed p values (significance). Therefore, among the locational determinants, only **dmt.appl** should be transformed to make it have equal variances.

In sum, **setupcst, sales, ownshp, natnlty, and dmt.appl** variables need to be transformed in order to make them have equal variances factored by foreign market entry modes. Two types of transformation have been executed, i.e., natural log transformation (**Table 4-8**) and square root transformation (**Table 4-9**) to shrink the spread of the data. From **Table 4-8**, only log transformed **ln.ownsh** variable showed an improvement in the equality of variances. Therefore, **ln.ownsh** will be used for **ownshp** in the following section of the analysis of variances. Then, the rest four variables will be used as they are, since both methods of transformation did not improve the test statistics of the homogeneity of variances. Therefore, the rest four variables cannot avoid a criticism of violation of the equal variance assumption in the analysis of variance procedure.

Table 4-6: Test of Homogeneity of Variances for Firm-specific Determinants

	Levene Statistic	df1	df2	Sig.
Determinant: to gain competitiveness	1.118	2	68	.333
Self-evaluation: Financial strength	.437	2	76	.648
Self-evaluation: Managerial capability	1.475	2	76	.235
Start-up cost	5.461	2	76	.006
Domestic sales in 1998	2.380	2	73	.100
Total outlets in the Domestic Markets	2.133	2	76	.125
Ownership in the Domestic Markets	7.813	2	75	.001
Year that started foreign operation	.520	2	70	.597
Self-evaluation: F. Mkting strategy	.440	2	76	.646
Determinant: quick penetration	.205	2	73	.815
For quality purpose, the frequency of contact with F franchisees	.419	2	74	.659
Desire to upgrade production technique	.796	2	70	.455
Ease of transferring franchise/production knowledge	.918	2	74	.404
Ease of documenting franchise operation	.331	2	75	.720
Ease of documenting franchise production knowledge	.364	2	71	.696
Nationality	12.877	2	75	.000

Table 4-7: Test of Homogeneity of Variances for
Locational Determinants

	Levene Statistic	df1	df2	Sig.
Determinant: political risk of host country	.133	2	70	.875
Determinant: legal difference	1.820	2	69	.170
Determinant: F mkt. as a souce of learning/knowledge	.618	2	72	.542
F franchisees have been a source of:	.408	2	76	.667
Determinant: aggressive expansion by rival firms	1.299	2	69	.279
F franchisees who changed our product features	2.161	2	75	.122
Determinant: demand condition of target mkt	.336	2	71	.716
Determinant: enticement of F applicants	4.240	2	68	.018

Table 4-8: Test of Homogeneity of
Variances for Log Transformed Variables

	Levene Statistic	df1	df2	Sig.
LN.setup	7.572	2	76	.001
LN.sales	2.724	2	73	.072
LN.ownshp	1.694	2	75	.191
LN.natnlty	12.877	2	75	.000
LN.appl	8.584	2	63	.001

**Table 4-9: Test of Homogeneity of Variances
for SQRT Transformed Variables**

	Levene Statistic	df1	df2	Sig.
SQRT.setupcst	5.995	2	76	.004
SQRT.sales	2.554	2	73	.085
SQRT.own	3.548	2	75	.034
SQRT.natnlty	12.877	2	75	.000
SQRT.appl	5.123	2	68	.008

VI.3.2.2. One-way analysis of variance: Testing the hypotheses

Analysis of variance should be an appropriate method to see the relationship

between the selection of the foreign market entry modes and various variables. *Oneway*

analysis of variance (*Oneway ANOVA*) procedure of the SPSS is used to test hypotheses

since the entry mode variable (**entrymod**) is the only variable, which is used to classify

cases into the three different groups (**group 1** – master franchising and area developers;

group 2 – licensing and direct franchising; and **group 3** – equity modes such as 100 %

company-ownership, joint ventures and merger/ acquisitions). For the treatment of

missing values, the default mode of SPSS, which is the *Exclude cases analysis by*

analysis, is used. Therefore, "a case with a missing value for either the dependent

variable or factor variable for a given analysis is not used (*Norusis*, 1993, Chapter 14:

p279)."

Tables 4-10 to **4-12** show the test results of *Oneway ANOVA*. Among the

industry determinants, **ind.intl** (*H3*), and **business** (*H4b*); among the firm-specific

determinants, **dmt.comp** (*H5*), **setupcst** (*H7*), **ln.ownshp** (*H9*), and **natnlty** (*H17*); and

among locational determinants, **dmt.legl** (*H19*), **dmt.knwd** (*H20*), and **dmt.appl** (*H26*)

showed significant *p* values.   Hence they could reject the null hypothesis that each variable has the same mean for three types of entry modes.

However, we should always remember that a significant F value tells us only that the population means are probably not all equal (Norusis, 1993, Chapter 14). That is, we can still reject the null hypothesis that all population means are equal if only any two means are unequal. We don't know which pairs of groups have different means, even if we reject the null hypothesis that all group means are equal. Therefore, there is a special test called *multiple comparison procedures* in SPSS to determine which means are significantly different from each other. However, *Oneway ANOVA* satisfies our purpose of analysis since we are more or less interested in whether all group means are equal or not. Since the focus of analysis is not bi-relationship between entry modes but the presence of differences among three types of entry modes regarding to various factors, the *Oneway ANOVA* procedure satisfies the goal of this research.

Therefore, a table of separate descriptive statistics that shows the group means of various variables should be enough for our purpose. The table of group means will be presented in the following chapter of *Descriptive Statistics: Analysis of hypotheses*. It will present mean statistics of the thirty variables (26 *hypotheses*) by the three types of entry modes.

Table 4-10: Oneway ANOVA for Industry Determinants

		Sum of Squares	df	Mean Square	F	Sig.
Industry-evaluation: Production Technology	Between Groups	8.965	2	4.483	1.216	.302
	Within Groups	276.368	75	3.685		
	Total	285.333	77			
Industry-evaluation: Madatory Investmt level	Between Groups	2.120	2	1.060	.554	.577
	Within Groups	145.424	76	1.913		
	Total	147.544	78			
Industry-evaluation: Level of internationalization	Between Groups	14.868	2	7.434	2.410	.097
	Within Groups	234.474	76	3.085		
	Total	249.342	78			
Goods produced	Between Groups	1.151	2	.575	.683	.508
	Within Groups	64.039	76	.843		
	Total	65.190	78			
Retail/Wholesale business	Between Groups	5.254	2	2.627	2.788	.068
	Within Groups	71.607	76	.942		
	Total	76.861	78			

Table 4-11.1: Oneway ANOVA for Firm-specific Determinants

		Sum of Squares	df	Mean Square	F	Sig.
Determinant: to gain competitiveness	Between Groups	84.439	2	42.220	4.144	.020
	Within Groups	692.800	68	10.188		
	Total	777.239	70			
Self-evaluation: Financial strength	Between Groups	3.391	2	1.696	.944	.394
	Within Groups	136.577	76	1.797		
	Total	139.968	78			
Self-evaluation: Managerial capability	Between Groups	3.642	2	1.821	1.618	.205
	Within Groups	85.529	76	1.125		
	Total	89.171	78			
Start-up cost	Between Groups	13.407	2	6.703	2.728	.072
	Within Groups	186.745	76	2.457		
	Total	200.152	78			
Domestic sales in 1998	Between Groups	7.778	2	3.889	1.136	.327
	Within Groups	249.907	73	3.423		
	Total	257.684	75			
Total outlets in the Domestic Markets	Between Groups	.912	2	.456	.112	.894
	Within Groups	309.468	76	4.072		
	Total	310.380	78			
LN.ownshp	Between Groups	7.859	2	3.929	12.613	.000
	Within Groups	23.365	75	.312		
	Total	31.224	77			
Year that started foreign operation	Between Groups	7.593	2	3.796	.056	.946
	Within Groups	4778.928	70	68.270		
	Total	4786.521	72			

Table 4-11.2: Oneway ANOVA for Firm-specific Determinants

		Sum of Squares	df	Mean Square	F	Sig.
Self-evaluation: F. Mkting strategy	Between Groups	4.403	2	2.202	.714	.493
	Within Groups	234.439	76	3.085		
	Total	238.842	78			
Determinant: quick penetration	Between Groups	3.520	2	1.760	.295	.745
	Within Groups	434.835	73	5.957		
	Total	438.355	75			
For quality purpose, the frequency of contact with F franchisees	Between Groups	12.824	2	6.412	1.573	.214
	Within Groups	301.695	74	4.077		
	Total	314.519	76			
Desire to upgrade production technique	Between Groups	4.689	2	2.344	.648	.526
	Within Groups	253.339	70	3.619		
	Total	258.027	72			
Ease of transferring franchise/production knowledge	Between Groups	4.152	2	2.076	1.138	.326
	Within Groups	134.939	74	1.823		
	Total	139.091	76			
Ease of documenting franchise operation	Between Groups	4.454	2	2.227	.986	.378
	Within Groups	169.341	75	2.258		
	Total	173.795	77			
Ease of documenting franchise production knowledge	Between Groups	4.317	2	2.159	.974	.382
	Within Groups	157.318	71	2.216		
	Total	161.635	73			
Nationality	Between Groups	2.948	2	1.474	12.061	.000
	Within Groups	9.167	75	.122		
	Total	12.115	77			

Table 4-12: Oneway ANOVA for Locational Determinants

		Sum of Squares	df	Mean Square	F	Sig.
Determinant: political risk of host country	Between Groups	27.049	2	13.525	1.564	.217
	Within Groups	605.389	70	8.648		
	Total	632.438	72			
Determinant: legal difference	Between Groups	44.356	2	22.178	3.279	.044
	Within Groups	466.755	69	6.765		
	Total	511.111	71			
Determinant: F mkt. as a souce of learning/knowledge	Between Groups	107.901	2	53.951	8.321	.001
	Within Groups	466.845	72	6.484		
	Total	574.747	74			
F franchisees have been a source of:	Between Groups	8.665	2	4.333	2.024	.139
	Within Groups	162.708	76	2.141		
	Total	171.373	78			
Determinant: aggressive expansion by rival firms	Between Groups	14.096	2	7.048	.989	.377
	Within Groups	491.849	69	7.128		
	Total	505.944	71			
F franchisees who changed our product features	Between Groups	1.613	2	.806	.365	.696
	Within Groups	165.836	75	2.211		
	Total	167.449	77			
Determinant: demand condition of target mkt	Between Groups	8.162	2	4.081	.776	.464
	Within Groups	373.621	71	5.262		
	Total	381.784	73			
Determinant: enticement of F applicants	Between Groups	123.822	2	61.911	9.334	.000
	Within Groups	451.051	68	6.633		
	Total	574.873	70			

IV.3.3. Nonparametric Tests

There are many statistical procedures such as the *Mann-Whitney* test, also known

as *Wilcoxon* test, and the *Kruskal-Wallis one-way of analysis of variance* procedure that

require limited assumptions about the distribution of the data, and these procedures are

called *distribution-free* or *nonparametric* tests (Norusis, 1993, Chapter 20).

> "They are most useful in situations where parametric procedures are not
> appropriate – for example, when the data are nominal or ordinal, or when the
> interval data are from markedly non-normal distribution" (ibid., p380).

Accordingly, I had to consider statistical procedures that do not require assumptions

about the shape of the distribution due to the following characteristics of my data set:

1. most independent variables in this survey do not have normal distributions,

2. each group of the dependent variable (entry modes) has small number of cases,

3. some independent variables are nominal, and

4. many independent variables with the seven-point Likert (1932) scale have non-

   normal distributions.

The *Mann-Whitney test* tests the hypothesis that two independent samples come

from populations having the same distribution. "To compute the test, the observations

from both samples are first combined and ranked from smallest to largest value" (ibid.,

p378). The *Kruskal-Wallis one-way of analysis of variance* (*K-W*) procedure is similar to

the procedure used in the *Mann-Whitney test*.

> "*K-W* procedure ranks all cases from the specified range in a single series,
> computes the rank sum for each group, and computes the K-W statistics, which
> has approximately a chi-square distribution" (ibid., p402).

This is the default statistics of the SPSS for the analysis of variances more than two groupings. For missing values, *exclude cases test-by-test* procedure is set as the default procedure: each test is evaluated separately for cases with missing values when several tests are specified. Therefore, *K-W* procedure of the SPSS has been used in this research to compare three groups of cases by the entry modes.

The test results are shown in the **Tables 4-13** to **4-15.2**. The small observed significance *p* value suggests that each of the three groups of entry mode have different distributions for the variables tested. For the industry determinants, **ind.intl** and **business** variables; and for the firm-specific determinants **dmt.comp, setupcst, ln.ownshp**, and **natnlty** have different average ranks according to the different groups of entry modes. This test result is exactly the same as that of the *one-way ANOVA*.

Then, among the locational determinants, **ff.sorce** has been added to the list (i.e., **dmt.legl, dmt.knwd**, and **dmt.appl**) that showed significant *p* values, and thus could reject the null hypothesis that each variable has the same distribution for the three types of entry modes. Therefore, the *K-W* procedure has produced almost an identical test result compared to that of the *one-way ANOVA*. The test result of the mean rank for the above 10 variables is shown **Table 4-16s**.

The next and pinnacle of this methodology chapter is to prepare statistical models that can explain the relationship between the three types of entry mode and various independent variables. Based on the findings of the *one-way ANOVA* and *K-W* test, only those variables, which showed significant differences in their distributions according to the three types of entry mode, will be included in the model. Since the dependent variable is categorical and all independent variables except the nationality (**natnlty**) and

type of business (**business**) are continuous, multiple discriminant analysis method is used

to explain the relationship between the mode of foreign market entry and various factors.

The, multiple ordinal logistic regression will be also used to test the relationships.

Table 4-13: K-W Test Statistics for Industry Determinants

	Industry-evaluation: Production Technology	Industry-evaluation: Madatory Investmt level	Industry-evaluation: Level of internationalization	Goods produced	Retail/Wholesale business
Chi-Square	2.047	1.762	4.840	1.300	5.591
df	2	2	2	2	2
Asymp. Sig.	.359	.414	.089	.522	.061

a. Kruskal Wallis Test

b. Grouping Variable: Foreign Mkt Entry Mode

Table 4-14.1: K-W Test Test Statistics for Firm-specific Determinants[a,b]

	Determinant: to gain competitiveness	Self-evaluation: Financial strength	Self-evaluation: Managerial capability	Start-up cost	Domestic sales in 1998
Chi-Square	7.293	2.343	3.392	6.650	1.789
df	2	2	2	2	2
Asymp. Sig.	.026	.310	.183	.036	.409

a. Kruskal Wallis Test

b. Grouping Variable: Foreign Mkt Entry Mode

Table 4-14.2: K-W Test Statistics for Firm-specific Determinants[a,b]

	LN.ownshp	Year that started foreign operation	Self-evaluation: F. Mkting strategy	Determinant: quick penetration	For quality purpose, the frequency of contact with F franchisees
Chi-Square	18.856	.078	1.365	1.158	3.749
df	2	2	2	2	2
Asymp. Sig.	.000	.962	.505	.560	.153

a. Kruskal Wallis Test

b. Grouping Variable: Foreign Mkt Entry Mode

Table 4-14.3: K-W Test Statistics for Firm-specific Determinants[a,b]

	Desire to upgrade production technique	Ease of transferring franchise/production knowledge	Ease of documenting franchise operation	Ease of documenting franchise production knowledge	Nationality
Chi-Square	1.473	2.126	1.818	1.783	18.739
df	2	2	2	2	2
Asymp. Sig.	.479	.346	.403	.410	.000

[a.] Kruskal Wallis Test

[b.] Grouping Variable: Foreign Mkt Entry Mode

Table 4-15.1: K-W Test Statistics for Locational Determinants[a,b]

	Determinant: political risk of host country	Determinant: legal difference	Determinant: F mkt. as a souce of learning/knowledge	F franchisees have been a source of:
Chi-Square	2.403	6.279	12.150	4.662
df	2	2	2	2
Asymp. Sig.	.301	.043	.002	.097

[a.] Kruskal Wallis Test

[b.] Grouping Variable: Foreign Mkt Entry Mode

Table 4-15.2: K-W Test Statistics for Locational Determinants[a,b]

	Determinant: aggressive expansion by rival firms	F franchisees who changed our product features	Determinant: demand condition of target mkt	Determinant: enticement of F applicants
Chi-Square	1.263	.154	1.354	14.191
df	2	2	2	2
Asymp. Sig.	.532	.926	.508	.001

[a.] Kruskal Wallis Test

[b.] Grouping Variable: Foreign Mkt Entry Mode

Table 4-16.1: K-W Test of Ranks

	Foreign Mkt Entry Mode	N	Mean Rank
Industry-evaluation: Level of internationalization	Master franchising / Area developer	43	39.70
	Licensing or Direct franchising	23	34.13
	Equity Ownership (M/A, JVs, FDI)	13	51.38
	Total	79	
Retail/Wholesale business	Master franchising / Area developer	43	44.84
	Licensing or Direct franchising	23	33.52
	Equity Ownership (M/A, JVs, FDI)	13	35.46
	Total	79	
Determinant to gain competitiveness	Master franchising / Area developer	42	36.90
	Licensing or Direct franchising	20	27.92
	Equity Ownership (M/A, JVs, FDI)	9	49.72
	Total	71	
Start-up cost	Master franchising / Area developer	43	35.26
	Licensing or Direct franchising	23	46.61
	Equity Ownership (M/A, JVs, FDI)	13	44.00
	Total	79	

Table 4-16.2: K-W Test of Ranks

	Foreign Mkt Entry Mode	N	Mean Rank
LN.ownshp	Master franchising / Area developer	43	30.73
	Licensing or Direct franchising	22	44.93
	Equity Ownership (M/A, JVs, FDI)	13	59.31
	Total	78	
Nationality	Master franchising / Area developer	42	34.79
	Licensing or Direct franchising	23	38.78
	Equity Ownership (M/A, JVs, FDI)	13	56.00
	Total	78	
Determinant: legal difference	Master franchising / Area developer	41	41.24
	Licensing or Direct franchising	19	26.89
	Equity Ownership (M/A, JVs, FDI)	12	35.50
	Total	72	
Determinant: F mkt. as a souce of learning/knowledge	Master franchising / Area developer	42	36.61
	Licensing or Direct franchising	21	30.00
	Equity Ownership (M/A, JVs, FDI)	12	56.88
	Total	75	

Table 4-16.3: K-W Test of Ranks

	Foreign Mkt Entry Mode	N	Mean Rank
F franchisees have been a source of:	Master franchising / Area developer	43	44.23
	Licensing or Direct franchising	23	38.17
	Equity Ownership (M/A, JVs, FDI)	13	29.23
	Total	79	
Determinant: enticement of F applicants	Master franchising / Area developer	41	42.77
	Licensing or Direct franchising	19	32.13
	Equity Ownership (M/A, JVs, FDI)	11	17.45
	Total	71	

IV.4. Multiple Discriminant Analysis (MDA)

IV.4.1. Evaluations of the Assumptions

An appropriate way of building a model based on the MDA should start from checking the underlying assumptions of discriminant analysis (Eisenbeis & Avery, 1972). They are

1. the groups being investigated are distinctive (i.e., discrete and identifiable),

2. each observation in each group can be described by a set of measurement on characteristics or variables, and

3. these variables are assumed to have a multivariate normal distribution in each population.

Therefore, for the proper use of MDA, the sample data set should be very carefully and rigorously checked and reviewed according to these three assumptions.

First of all, there should be distinctiveness or distinctive groups in a body of data. One of the traditional examples of this type of data is about firms which had and had not bankrupt (Altman, 1968). Since a firm could belong to only one of two groups and no others, the grouping is non-overlapping and exhaustive. For our data set, it seems reasonably discrete since the cutoff boundaries are based on the type of entry mode. Surely, my sample set has a little problem in perfectly satisfying this assumption since firms can change the mode of entry in their life time and can have more than one type of foreign market entry mode. Concerning about the former issue, it has been proved by this and the previous pilot surveys that franchisers do not usually change their major foreign market entry mode. Only nine firms (12.7% of total) among the seventy-two sample firms responded that they have changed it. That's why the unit of analysis of this

study is the *major* foreign market entry mode, and only seven firms (9.7%) out of the total samples have used two groups of major entry modes, resulting in 79 cases of major foreign market entry. Despite the imperfect grouping of the samples, it seems acceptable since the purpose of the study is to describe the groups rather than to predict group membership (Eisenbeis & Avery, 1972, p36). Then, the grouping of this study is exhaustive since any international franchiser can be identified as and should have one of the three groups of foreign entry mode as their major foreign market entry mode.

Regarding to the second assumption, there is no problem since each group of entry modes can be described by a set of measurement on characteristics or variables. Now, the third assumption seems unforgiving to my data set since in the previous section, the *Kolmogorov-Smirnov (K-S)* test showed my random samples do not fit the normal distribution. However, there are some evidences that nonmultivariate normal data may be used in a discriminant analysis without significantly biasing the result (Gilbert, 1968; Press & Wilson, 1978; Efron, 1975). For the two group case, for example, Gilbert (1968) compared the performance of linear classification rules (estimated using only dichotomous variables) with two rules based on a logistic model and a rule upon the assumption of mutual independence of variables. The results implied that the performance loss using a linear rule "for classification as opposed to any other procedure is too small to be of much importance" (ibid., p1410). Then,

> "as the number of variables increase, the Central Limit Theorem implies that the distribution of the discriminant scores for each group approaches a normal distribution. Hence, classification can be performed in the reduced discriminant space" (Eisenbeis & Avery, 1972, p37).

In conclusion, the sample set of this study is not flawless, nonetheless, is good enough to test the relationship between variables.

In addition, both multivariate extensions of the univariate analysis of variance tests of significance and linear classification procedure may be used unambiguously (ibid.) since most of the variables in this data have equal dispersions. Holloway & Dunn (1967) shows for the two-group case the importance of equality of dispersion by indicating the bias in the significance test that the null hypothesis would be accepted more frequently when the dispersions were unequal. They further stated the bias increases with the number of variables, the degree of inequality of the dispersions, and a decrease in sample size. As a result, the power of the test may be very low. For this study, however, the *Levene* test of the SPSS *Oneway ANOVA* procedure in the previous section showed that most independent variables have the equality of dispersions, hence will reduce the test biases. In addition, SPSS multiple discriminant analysis procedure can test the equality of covariance, which is one of necessary assumptions for DA, using *Box's multivariate M statistic*. Despite of the skeptical perception of the *Box's M test* by data analysts due to its sensitivity about the mild departures from multivariate normality and large sample size (SPSS 7.5, p231), it will be used to test the null hypothesis that the covariance matrices are equal (**MDA Output 6**).

IV.4.2. Discriminant Analysis

Discriminant analysis (DA) has been chosen as a principal model of this study since it encompasses traits of both predictive and inferential multivariate statistical techniques (Eisenbeis & Avery, 1972). It means that if the purposes of a study are (1) "to test for mean group differences and to describe the overlaps among groups and (2) to

construct classification schemes based upon the set of *m* variables..." (ibid.), DA can be an appropriate tool to analyze the data.

Hair *et al.* (1995) also explained in detail about the research questions that DA can address:

1. To determine whether statistically significant differences exist between the average score profiles on a set of variables for two or more *a priori* defined groups.

2. To determine which of the independent variables account the most for the differences.

3. To establish the number and composition of the dimensions of discrimination between groups formed from the set of independent variables.

Since the goals of this study fit exactly to these explanations, DA has been used as a primary model of this study.

In the beginning of the research, however, the simple reason of selecting the MDA to build the final and major statistical model of this study was attributable to the characteristics of the data set: There are a categorical dependent variable (with more than two groupings) and many continuous independent variables. Then, a few overlooked reasons of using the DA enhanced the decision to use DA as the model of a key statistical tool to analyze this survey. *SPSS Base 7.5* (1997) explains the overlooked reasons for using DA as following:

> "The DA procedure can be used not only to build functions for classifying new cases or to test multivariate differences among groups, but also to explore or describe:
> 1. which variables among many are most useful for discriminating among groups,
> 2. if one set of variables performs equally as well as another,
> 3. which groups are most alike, and
> 4. which cases are outliers (differ markedly from others in their groups)" (p216).

Several reasons mentioned in the above should explain when one should consider the usage of DA.

DA uses the discriminant procedure to identify a linear combination of quantitative predictor variables that best characterizes the differences among the groups (SPSS 7.5, 1997, Chapter 14).

> "The linear combination of variables (or **discriminant function**) looks like the right side of a multiple regression equation because it sums the products of variables multiplied by coefficients. The procedure estimates the coefficients, and the resulting function can be used to classify new cases " (ibid., p211: emphasis in the original)

because DA determines a direction in which to project the plot points of each variable that maximizes the difference between groups.

In sum, discriminant function is a linear combination of metric measurement for two or more independent variables to describe or predict a single dependent variable (Hair *et al.*, 1995). The key difference between regression and discriminant analysis is that the latter is appropriate for research problems in which the dependent variable is categorical (nominal or nonmetric), whereas the former is utilized when the dependent variable is metric.

Then, there is "a specialized form of regression known as logistic regression, which has the same basic properties as regression" since "the variate represent a single multivariate relationship with regressionlike coefficients indicating the relative impact of each predictor variable" (ibid., p183). In addition, logistic regression has advantage over DA since it is less affected when the basic assumptions, particularly normality of the variables, are not met (Efron, 1975). However, a plain logistic regression is not appropriate for this study since it can only predict a two-group dependent measure. Therefore, the multiple ordinal logistic regression will be used to test this data set that has a dependent variable with an ordinal concept, i.e. commitment level of entry modes.

IV.4.3. Discriminant Analysis: Number of Groups

IV.4.3.1. Two-group case

For the two-group model, Fisher (1936) introduced the *linear discriminant function*, or *Fisher discriminant function*, which solved the problem of testing mean vectors of two samples of sizes N_1 and N_2. In vector notation the nth observation can be represented as an $m \times 1$ column vector of the form

$$X'_n = (x_{1n}, x_{2n}, \ldots, x_{mn})$$

where $\qquad n = 1, \ldots, N_1 \quad$ or $\quad n = 1, \ldots, N_2$.

Fisher developed a single measure that considered the multidimensional nature of each observation and characterized the degree of separation between the two groups. Fisher formed the *linear discriminant function* as the combination of the m variables:

$$y = X' \mathbf{B} = b_1 x_1 + b_2 x_2 + \cdots + b_m x_m$$

The bs were then chosen to maximize the ratio of the weighted between groups variance to the pooled within-group variance of y.[1] Ladd (1966) derived the variance ratio maximized

$$E = \cfrac{\cfrac{N_1 N_2}{N_1 + N_2} \cdot B' dd' B}{B' S_w B}$$

where $\overline{X}_1$ and $\overline{X}_2$ are the respective group mean vectors and $d = (\overline{X}_1 - \overline{X}_2)$. S_w is the pooled within-groups dispersion matrix. Ladd explored several methods of deriving proportional coefficients mostly based on the familiar result from analysis of variance:

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[1] See Fisher (1936) and Eisenbeis & Avery (1972, Chapter 1) for the further explanation of the calculation of variance ratio, etc.

$$T = W + \frac{N_1 N_2}{N_1 + N_2} \, dd'$$

where T is the total deviation sums of squares matrix and W is the pooled within-groups deviation sums of squares. Since there is a fixed relationship between T, W, and dd', Ladd showed the proportional coefficients can be derived using any two of these three matrices[2].

IV.4.3.2. k-group case

"The two-group theory can be extended quite readily to the general k-group case" (Eisenbeis & Avery, 1972). Now, the there are k samples ($g = 1, \ldots, k$) of sizes N_g. The k group analogy to the two-group case of maximizing the ratio E is to find the set of $(m \times 1)$ vectors $V_1, V_2, \ldots, V_r$ which maximize the ratio E_2 (Cooley & Lohnes, 1971).

$$E_2 = \frac{| V'' Q V |}{| V'' Q V |}$$

where
$$V = [\underset{m \times 1}{V_1}, \underset{m \times 1}{V_2}, \ldots, \underset{m \times 1}{V_r}].$$
$$\underset{m \times r}{V} =$$

Q is the matrix of the weighted among-groups deviation sums of squares of X, and W is the matrix of pooled within-groups deviation sums of squares. Then, the solution to this maximization problem can be reduced to find the eigenvectors (Eisenbeis & Avery, 1972).

A detailed statistical analysis of MDA stops here for this study. Since the purpose of this research is not to review and construct the MDA but to implement its technique using a statistical software, the detailed statistical/mathematical elaboration of MDA is

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[2] See Ladd (1966) and Johnston (1963) for the calculation of proportional coefficients.

not rigorously pursued here. For this study, however, the interpretation of the test results of the SPSS is highlighted.

IV.4.3.3. Testing differences among groups

The main application of the DA to our statistical inference is to test for the significance of differences among group means. Then, how do we decide that two or more group of the means or centroids are separated from each other?

> "**Wilks' lambda**, also called U statistics, is available for testing the equality of group centroids. It is a multivariate analysis of variances test statistics that varies between 0 and 1. Small values indicate that the group means differ" (SPSS 7.5, p214).

For an example, if *Wilks' lambda is* 0.589 with an associated probability less than .0005, there is a highly significant difference between the centroids of the groups.

Wilks' lambda test assumes the samples have multivariate normal populations with equal dispersion matrices, and can be calculated as following (Eisenbeis & Avery, 1972):

$$\text{Wilks' lambda} = \frac{|W|}{|T|}$$

where T is the total deviation sums of squares matrix and W is the pooled within-groups deviation sums of squares as mentioned in the above.

IV.4.4. Building the Multiple Discriminant Analysis (MDA)

The linear combination of DA, also known as the discriminant function is derived from an equation of

$$Z = b_1 x_1 + b_2 x_2 + \cdots + b_n x_n$$

where Z is the discriminant score; b_i is the discriminant weight for variable i; and x_i is the independent predictor variable i.

Nine independent variables plus one variable which have been recognized significantly different in group means by the *one-way ANOVA* procedure and the nonparametric test respectively are included as the independent variables. They are **ind.intl** and **business** variables among the industry determinants; **dmt.comp, setupcst, ln.ownshp,** and **natnlty** among the firm-specific determinants; and **dmt.legl, dmt.knwd,** and **dmt.appl** from the locational determinants. Then, **ff.sorce** is added to the list.

Since the above independent variables, except **natnalty** and **business**, are continuous metric measures, this set of independent variables seems consistent with the condition necessary for the DA. For the **natnalty** variable, which is a dichotomous variable, can be still added to the function since researches have shown that dummy variables (for example, codes 0 and 1 for the sex variable in a regression analysis) can add to the success of a classification function (SPSS 7.5, p217). Therefore, as in a regression analysis, the **natnalty** variable is treated as a dummy variable and coded 0 for the US firms and 1 for the UK firms. Or, the number of codes can be reversed only to result in the reversed weight of the variable by the nationality of the firm.

For **business** variable, which estimates nominal measures (i.e., 1 = retail business; 2 = wholesale business; and 3 = both), can be regarded as an extension of a dichotomous

variable. In this case, only two steps or dichotomous variables are required. For **business1**, 1 is coded for retail business and 0 is coded if otherwise; and for **business2**, 1 for both retail and wholesale business and 0 if otherwise. As a result, there are eleven independent variables (**MDA Output 1**).

One more test, however, has to be reviewed before the final set of independent variables is decided. It is the *tests of equality of group means* in the DA procedure of the SPSS. **MDA Output 1** shows the statistics DA procedure borrowed from the *ANOVA* (SPSS 7.5, p220). The F statistics and significance values in the table are from a *one-way ANOVA*. Based on this test, one variable, **ff.sorce** cannot reject the null hypothesis that group means are equal. The significant level, which is .142, may indicate that this variable will not play a key role in discriminating the three groups. However, it should be reminded that relationships among variables are incorporated in multivariate procedures like DA. It means variables are considered simultaneously, not individually (SPSS 7.5, p221), and the strength of the intercorrelations among the variables is important. Therefore, inclusion of the variable **ff.sorce** in the final discriminant function will be decided later after testing its role in a MDA.

In sum, the possible number of independent variables to be included in the final multiple discriminant function ranges from eight to ten. This number of independent variables that will discriminate the types of entry modes seems small since there were thirty independent variables that have been tested. In hindsight, however, twelve independent variables should be about the maximum number that can be incorporated by this data set. It is due to the small number of sample size for Group 3 type of entry mode. There are only thirteen samples as shown in the **MDA Output 2**. As a practical

guideline, each group should have at least twenty observations, and at a minimum, the smallest group size must exceed the number of independent variables (Hair *et al.*, 1995, p195). Therefore, due to the small sample size of the type 3 entry modes, this MDA function could have only a limited number of independent variables.

Finally, the dependent variable is the entry mode types that are categorized into three groups. **Group 1** includes the master franchising/area developers; **Group 2** includes licensing and direct franchising mode; and **Group 3** includes all equity modes such as equity joint venture, merger and acquisition, and direct foreign investment or 100% company owned outlets.

MDA Output 1: Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
ln.ownsh	.739	12.877	2	73	.000
setupcst	.933	2.603	2	73	.081
ind.intl	.932	2.643	2	73	.078
dmt.comp	.906	3.770	2	73	.028
dmt.legl	.881	4.916	2	73	.010
dmt.knwd	.827	7.652	2	73	.001
dmt.appl	.743	12.592	2	73	.000
natnlty	.756	11.786	2	73	.000
business1	.903	3.910	2	73	.024
business2	.908	3.708	2	73	.029
ff.sorce	.948	2.006	2	73	.142

MDA Output 2: Prior Probabilities for Groups

Foreign Mkt Entry Mode	Prior	Cases Used in Analysis	
		Unweighted	Weighted
Master franchising / Area developer	.333	42	42.000
Licensing or Direct franchising	.333	21	21.000
Equity Ownership (M/A, JVs, FDI)	.333	13	13.000
Total	1.000	76	76.000

IV.4.5. Explaining the SPSS Outputs

IV.4.5.1. Classification matrix

Hair *et al.* (1995) downgrade statistical tests of assessing the significance of the discriminant function because they do not tell how well the function predicts. They point out that with sufficiently large sample sizes, the group means (centroids) could be virtually identical, and the two groups could have significantly different beyond the .01 level. Therefore they conclude that "the level of significance of these statistics is a very poor indication of the function's ability to discriminate between the two groups" (ibid., p199). Then, they suggest constructing classification matrices to determine the predictive ability of a discriminant function.

To understand the usefulness of the classification matrix, the concept of an R^2 in regression analysis should be associated. For example, $R^2 = .10$ means a regression has explained only 10 percent (or less) of the variance in a statistical relationship. In a MDA, the hit ratio (percentage correctly classified) is analogous to a regression's R^2

(ibid.). The hit ratio reveals how well the discriminant function classified the statistical units, whereas the R^2 indicates how much variance the regression equation has explained. Then, the F test for statistical significant of the R^2 is analogous to the *Chi-square* test of significance in MDA.

MDA Output 3: Classification Results - With 11 independent Vairables[a]

		Predicted Group Membership			
	Foreign Mkt Entry Mode	Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Original	Count	Master franchising / Area developer	36	5	1	42
		Licensing or Direct franchising	4	13	4	21
		Equity Ownership (M/A, JVs, FDI)	2	2	9	13
	%	Master franchising / Area developer	85.7	11.9	2.4	100.0
		Licensing or Direct franchising	19.0	61.9	19.0	100.0
		Equity Ownership (M/A, JVs, FDI)	15.4	15.4	69.2	100.0

[a]. 76.3% of original grouped cases correctly classified.

MDA Output 4: Classification Results - without ff.sorce [a]

		Foreign Mkt Entry Mode	Predicted Group Membership			
			Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Original	Count	Master franchising / Area developer	35	6	1	42
		Licensing or Direct franchising	4	13	4	21
		Equity Ownership (M/A, JVs, FDI)	2	2	9	13
	%	Master franchising / Area developer	83.3	14.3	2.4	100.0
		Licensing or Direct franchising	19.0	61.9	19.0	100.0
		Equity Ownership (M/A, JVs, FDI)	15.4	15.4	69.2	100.0

[a.] 75.0% of original grouped cases correctly classified.

Two SPSS outputs of classification matrix are shown in the above. The classification results of **MDA Output 3** and **MDA Output 4** are 76.3% and 74.0% respectively. In the **MDA Output 3**, eleven variables mentioned in the above are included. Then, in the **MDA Output 4, ff.sorce** variable is excluded from the MDA. From the above two test results, the final MDA should include **11 independent variables.**

IV.4.5.2. Cross validation: Assessing overall fit of the MDA

The multiple discriminant functions with the eleven variables should be checked whether they are valid predictors before we interpret the functions. Due to the limited number of samples, there was no holdout samples, and the correct classification (hit ratio) was tested using the same samples used to estimate coefficients of the functions. Naturally an overly optimistic estimation of the successful classification should be generated. To help diminish this optimistic bias, SPSS provides a *leave-one-out cross-validation method* (SPSS 7.5, p228).

MDA Output 5: Cross-Validation Classification Results

			Predicted Group Membership		
		Foreign Mkt Entry Mode	Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Original	Count	Master franchising / Area developer	36	5	1	42
		Licensing or Direct franchising	4	13	4	21
		Equity Ownership (M/A, JVs, FDI)	2	2	9	13
	%	Master franchising / Area developer	85.7	11.9	2.4	100.0
		Licensing or Direct franchising	19.0	61.9	19.0	100.0
		Equity Ownership (M/A, JVs, FDI)	15.4	15.4	69.2	100.0
Cross-validated[a]	Count	Master franchising / Area developer	33	7	2	42
		Licensing or Direct franchising	4	11	6	21
		Equity Ownership (M/A, JVs, FDI)	3	2	8	13
	%	Master franchising / Area developer	78.6	16.7	4.8	100.0
		Licensing or Direct franchising	19.0	52.4	28.6	100.0
		Equity Ownership (M/A, JVs, FDI)	23.1	15.4	61.5	100.0

[a]. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

[b]. 76.3% of original grouped cases correctly classified.

[c]. 68.4% of cross-validated grouped cases correctly classified.

Since each case is classified into a group according to the classification functions computed from all the data except the case being classified, it is *leave-one-out cross-validation* method. Therefore, the proportion of misclassified cases after removing the effect of each case one at a time is the leave-one-out estimate of misclassification. **MDA Output 5** shows that 76.3% of samples is correctly classified by multiple discriminant function using the whole samples, whereas 68.4% of samples is correctly classified by a cross-validation method using the leave-one-out procedure.

Although these ratios seem high, they must be compared with the maximum chance and proportional chance criterion to assess their true effectiveness (Hair *et al.*, 1995, p227-8). The maximum chance criterion is simply the ratio obtained if we assign all the observations to the group with the highest probability of occurrence. In this sample, it is 55.26%. The proportional chance criterion is calculated by squaring the proportions of each group, and it is about 41.1%. Since the correct classification ratios are better than these two criteria, it can be concluded that this discriminant model is an effective predictor.

Maximum Chance Criteria	
Group 1	21/76 = 27.63%
Group 2	42/76 = 55.26%
Group 3	13/76 = 17.10%

Proportional Chance Criteria
$.28^2 + .55^2 + .17^2 = 41.095\%$

IV.4.5.3. Checking assumption: Equality of group covariance matrices

The population variances of individual variables' have been tested and shown in

Tables 4-5 to **4-7**. Since DA requires equality not only in the population variances of

variables but also in the population covariances between variables for the groups, *Box's*

multivariate M statistic procedure was used to test the null hypothesis that the covariance

matrices are equal. As shown in the following **MDA Output 6**, the hypothesis of equal

group covariance matrices among the eleven independent variables used in the final

model is not rejected due to the high significant *p* value (.669). This test result

diminishes the concern that there might be biases in the group means of MDA due to the

unequal covariance matrices.

MDA Output 6: Test Results

Box's M		78.798
F	Approx.	.916
	df1	66
	df2	5431.272
	Sig.	.669

Tests null hypothesis of equal
population covariance matrices.

a. Some covariance
matrices are singular
and the usual
procedure will not work.
The non-singular
groups will be tested
against their own
pooled within-groups
covariance matrix. The
log of its determinant
is -.500.

IV.4.5.4. Canonical discriminant functions

In the above, the hit ratios of correct classification of cases prove that the MDA

with eleven independent variables is a valid function explaining the relationship between

the dependent and independent variables. In addition to these, there are other statistics

that show the percentage of variances explained by discriminant linear functions

(*eigenvalues* table) and that show differences of group means (*Wilks' lambda*) by

different linear combinations of variables. Then, these are called *canonical variables* in

the output of the SPSS MDA procedure; hence we need to understand *canonical*

variables prior to understand such statistics.

For two group cases, discriminant analysis finds the best projection of the plot

points to separate groups and generates a Fisher's linear discriminant function (SPSS 7.5,

p 214). Then, if there are more than two groups, *canonical variables* become the focus of

the analysis.

> "The first **canonical variable** is the linear combination of the variables that
> maximizes the differences between the means of the k groups in one dimension.
> The second canonical variable present the maximum dispersion of the means in a
> direction orthogonal (perpendicular) to the first direction, and the third represents
> the dispersion in a dimension independent of the first two dimensions, and so on.
> Another way to describe canonical variables is as factors that discriminate
> optimally among the group centroids relative to the dispersion within the groups"
> (ibid.).

The number of canonical variables is the smaller of either k-1 (where k is the

number of groups) or p (the number of variables) (ibid., p245): so, we have two in this

study (**MDA Output 7**). Since variables are measured in different units (for example,

some are measured one to seven, whereas others one to ten), the magnitude of

unstandardized coefficient provides little indication of the relative contribution of the

variable to the overall discriminant function (ibid., 224). Therefore, the SPSS MDA

procedure generates a structured canonical discriminant function coefficient as shown

below in **MDA Output 8.**

MDA Output 7 : Canonical Discriminant Function Coefficients

	Function	
	1	2
ln.ownsh	2.132	-.853
setupcst	.128	-.251
ind.intl	.029	.160
dmt.comp	.090	.022
dmt.legl	-.027	.151
dmt.knwd	.001	.170
dmt.appl	-.205	.052
natnlty	1.518	1.374
business1	2.086	.928
business2	1.619	.894
ff.sorce	-.040	.037
(Constant)	-2.269	-3.019

Unstandardized coefficients

MDA Output 8: Standardized Canonical Discriminant Function Coefficients

	Function	
	1	2
ln.ownsh	.510	-.204
setupcst	.204	-.398
ind.intl	.051	.278
dmt.comp	.311	.076
dmt.legl	-.072	.405
dmt.knwd	.004	.456
dmt.appl	-.584	.149
natnlty	.536	.485
business1	1.003	.446
business2	.769	.425
ff.sorce	-.060	.056

IV.4.5.5. Structure matrix

Following **MDA Output 9** shows the correlation between each variable and one

of the two canonical variables (functions). For each variable, an asterisk shows its largest

absolute correlation with one of the canonical functions (SPSS 7.5, p245). With each

function, these marked variables are then ordered by the size of the correlation. Variables

ln.ownsh, dmt.appl, and **natnlty** have their strong correlations with function 1. Then,

the strongest correlation for **dmt.knwd** appears with function 2.

MDA Output 9: Structure Matrix

	Function	
	1	2
ln.ownsh	.565*	-.099
dmt.appl	-.546*	.234
natnlty	.519*	.285
ff.sorce	-.224*	.018
dmt.knwd	.188	.704*
dmt.comp	-.128	.497*
dmt.legl	-.216	.493*
ind.intl	.099	.423*
business2	-.225	.366*
business1	.253	-.327*
setupcst	.192	-.300*

Pooled within-groups
correlations between
discriminating variables
and standardized canonical
discriminant functions
Variables ordered by
absolute size of correlation
within function.

*.

Largest absolute
correlation between
each variable and
any discriminant
function

IV.4.5.6. Eigenvalues

Eigenvalues correspond to the eigenvector (canonical variable or canonical

discriminant function) in the direction of the spread of the group means (SPSS 7.5, p244)

and show the percentage of dispersion caused by the canonical variable. It means that

the largest eigenvalue 1.095 corresponds to the canonical discriminant function in the

direction of maximum spread of group mean and the second eigenvalue 0.345

corresponds to the eigenvector in the direction that has the next largest spread. From

MDA Output 10, we can see that the first canonical variable (or canonical discriminant

function) accounts for 76.1% of total dispersion and that the second one accounts for the

rest. The canonical correlation measures the association between the discriminant scores

and the groups (SPSS 7.5, p223).

MDA Output 10: Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.095[a]	76.1	76.1	.723
2	.345[a]	23.9	100.0	.506

[a]. First 2 canonical discriminant functions were used in the analysis.

IV.4.5.7. Wilks' lambda

In the following table of *Wilks' lambda* (**MDA Output 11**), the test of functions

labeled 1 through 2 tests the hypothesis that the means (centroids) of the two functions

(canonical variables) are equal for the three groups (SPSS 7.5, p244). Then a chi-square

transformation of *Wilks' Lambda* is used to determine the significance. The *p* value or

observed significance level (Sig.) is less than 0.0005, hence the hypothesis of equality is

rejected. The test labeled 2 is a successive test to identify whether or not this additional function reflects population differences or simply random variation. *Wilks' lambda* of .744 at the .028 significant level shows that it is worth keeping both functions.

MDA Output 11: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.355	70.419	22	.000
2	.744	20.136	10	.028

IV.4.5.8. Classification function coefficients

MDA procedure projects functions that are used to assign or classify cases into groups; "a case is predicted as being a member of the group in which the value of its classification function is largest" (SPSS 7.5, p221). Thus the coefficients are computed to maximize the distance between the groups. The procedure sets cases with missing values are not used to estimate these coefficient as a default mode in the SPSS (otherwise, mean values can be applied).

MDA Outputs 12 shows the Fisher's linear discriminant functions. For each group, the procedure multiplies each coefficient by the value of the corresponding variable, sums the products, and adds the constant to get a score.

The estimate of the classification function for Group 1 type (licensing or direct franchising) of entry modes is [− .163ln.ownshp + 1.196setupcst + 2.209ind.intl + .276dmt.comp + .241dmt.legl − .195dmt.knwd + .329dmt.appl + 12.372natnlty + 31.685business1 + 30.590business2 + 3.680ff.sorce − 32.893].

The estimate of the classification function for Group 2 type (master franchising / area developer) of entry modes is [3.518ln.ownshp + 1.643setupcst + 1.885ind.intl + .365dmt.comp + .03556dmt.legl − .386dmt.knwd + .009389dmt.appl + 12.744natnlty + 33.287business1 + 31.637business2 + 3.587ff.sorce − 32.497].

The estimate of the classification function for Group 3 type (equity ownership) of entry modes is [5.283ln.ownshp + 1.437setupcst + 2.178ind.intl + .530dmt.comp + .234dmt.legl − .117dmt.knwd − .207dmt.appl + 17.113natnlty + 37.782business1 + 35.398business2 + 3.587ff.sorce − 42.089].

MDA Output 12: Classification Function Coefficients

	Foreign Mkt Entry Mode		
	Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)
ln.ownsh	-.163	3.518	5.283
setupcst	1.196	1.643	1.437
ind.intl	2.029	1.885	2.178
dmt.comp	.276	.365	.530
dmt.legl	.241	3.556E-02	.234
dmt.knwd	-.195	-.386	-.117
dmt.appl	.329	9.389E-03	-.207
natnlty	12.372	12.744	17.113
business1	31.685	33.287	37.782
business2	30.590	31.637	35.398
ff.sorce	3.680	3.587	3.587
(Constant)	-32.893	-32.497	-42.089

Fisher's linear discriminant functions

IV.4.5.9. Group centroids

"DA is the appropriate statistical technique for testing the hypothesis that the group means of a set of independent variables for two or more groups are equal. To do so, DA multiplies each independent variable by its corresponding weight and adds these products together. The result is the single composite discriminant score for each individual in the analysis. By averaging the discriminant scores for all the individuals within a particular group, we arrive at the group mean. This group mean is referred to as a *centroid*. When the analysis involves two groups, there are two centroids; with three groups, there are three centroids, and so forth. The centroids indicate the most typical location of any individual from a particular group, and a comparison of the group centroids shows how far apart the groups are along the dimension being tested" (Hair *et al.*, 1995, p182).

Simply put, centroid is a mean value for the discriminant Z scores of a particular category of group.

Within group means are computed for each canonical variable. There are two group means in this case since we have three groups and two canonical variables. From the **MDA Output 13**, there are two canonical variables and each of them produces the average discriminant or canonical variable score of the three types of entry mode. This is the canonical variable means by group. **MDA Output 14** shows the canonical variable plot, showing the centroids of each group. Following **MDA Output 15** shows the regions into which each group is classified.

MDA Output 13: Functions at Group Centroids

Foreign Mkt Entry Mode	Function	
	1	2
Master franchising / Area developer	-.818	.239
Licensing or Direct franchising	.454	-.896
Equity Ownership (M/A, JVs, FDI)	1.910	.675

Unstandardized canonical discriminant functions evaluated at group means

MDA Output 14: Group Centroids

Frgn Mkt Entry Modes

☐ Group Centroids

▫ Equity Ownership

▫ Licsing/Dirct Frnchg

▫ M.Frg/Area Devlpers
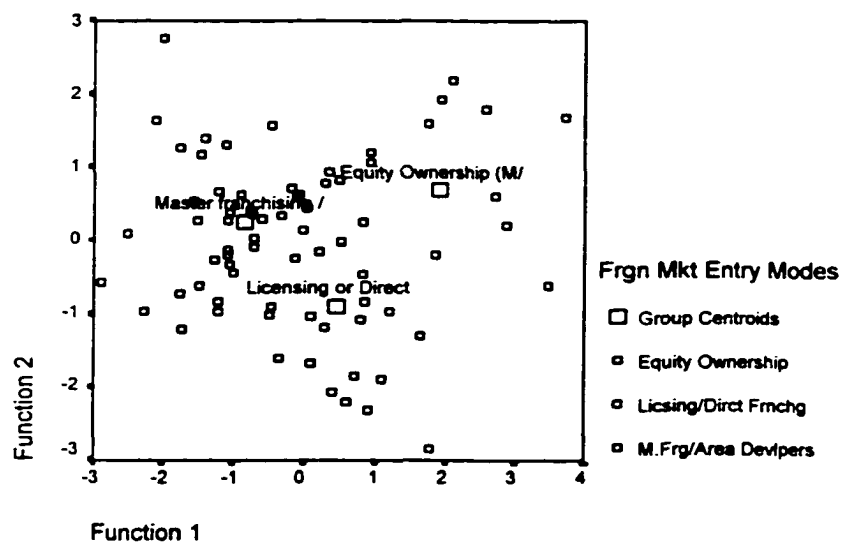
MDA Output 15: Territorial Map
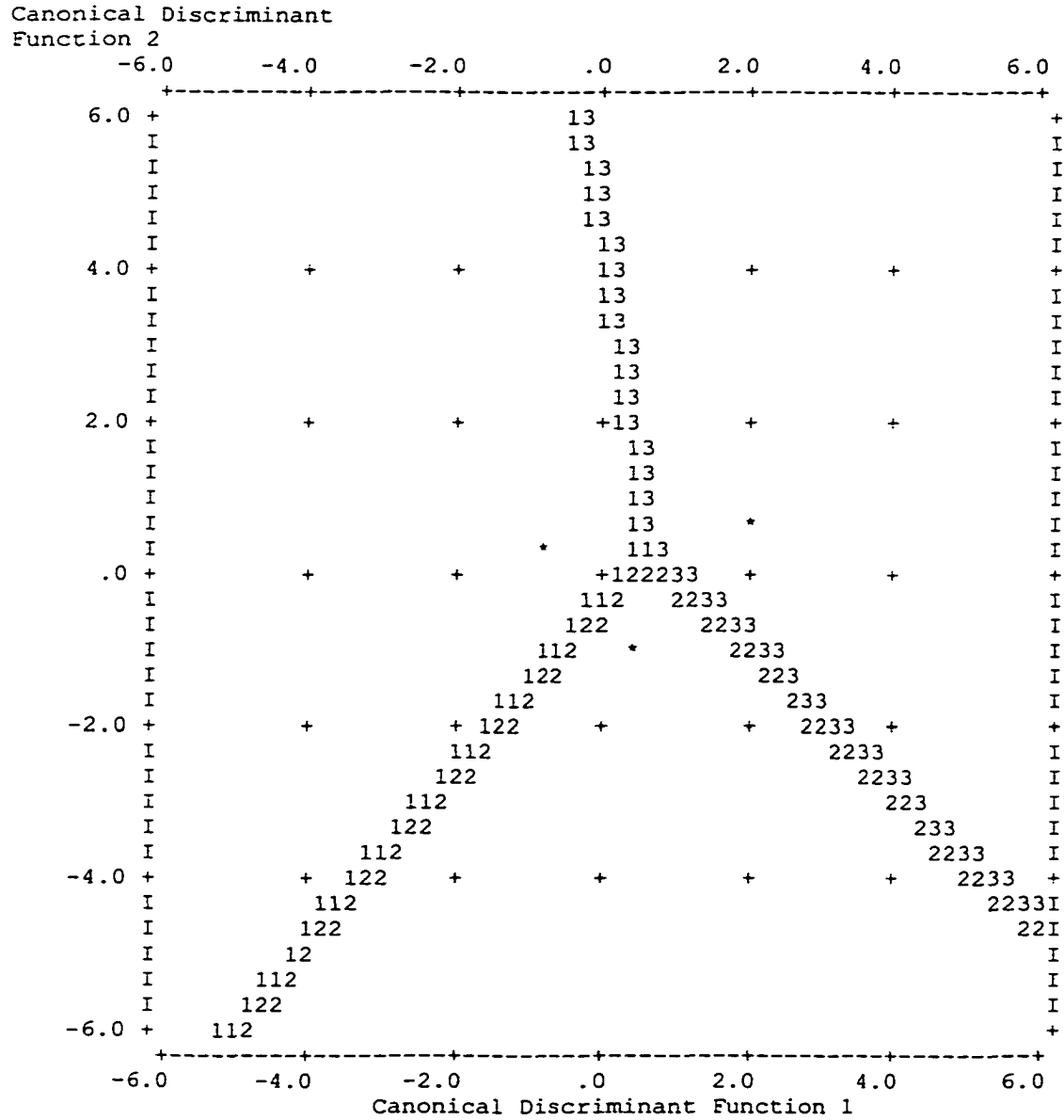
```
Canonical Discriminant
Function 2
           -6.0        -4.0        -2.0         .0         2.0         4.0         6.0
           +---------+---------+---------+---------+---------+---------+
      6.0 +                                  13                                          +
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
      4.0 +          +           +           13          +           +                   +
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
      2.0 +          +           +          +13          +           +                   +
        I                                    13                                          I
        I                                    13                                          I
        I                                    13                                          I
        I                                    13         *                                I
        I                         *          113                                         I
       .0 +          +           +         +122233      +           +                    +
        I                                 112     2233                                   I
        I                                 122     2233                                   I
        I                             112     *    2233                                  I
        I                              122        223                                    I
        I                            112           233                                   I
     -2.0 +          +          + 122    +          +   2233 +                           +
        I                        112                    2233                             I
        I                        122                    2233                             I
        I                      112                        223                            I
        I                       122                        233                           I
        I                     112                          2233                          I
     -4.0 +          +  122    +          +          +          +  2233 +                +
        I              112                                        2233I
        I              122                                        22I
        I              12                                               I
        I             112                                              I
        I             122                                              I
     -6.0 +        112                                               +
           +---------+---------+---------+---------+---------+---------+---------+
           -6.0        -4.0        -2.0         .0         2.0         4.0         6.0
                           Canonical Discriminant Function 1
```

Symbols used in territorial map

Symbol	Group	Label
1	1	Master franchising / Area Developers
2	2	Licensing or Direct Franchising
3	3	Equity Ownership (JVs, M/A, Comnpany-Owned Outlets)
*		Indicates a group centroid

IV.4.6. Multicollinearity

One of the chief culprits of misinterpretation and misuse of regression is

multicollinearity. However, its presence is common and even inevitable in much of data

in fields like sociology, economics, business, and geography, (Wesolowsky, 1976).

> "*Multicollinearity* is said to exist when any independent (sometimes called
> *exogenous*) variable X_j is correlated with another independent variable or with a
> linear combination of other independent variables" (ibid., p49: emphasis in
> original).

Wesolowsky recognized three main problems caused by the correlation in the

independent variables (ibid.):

1. The standard errors of the regression coefficients are increased.

2. As the extreme case above is approached, computational difficulties arise.

3. The omission of variables may result in biased estimators or the regression

   parameters of the remaining variables if the missing variables are correlated with

   those remaining.

As Wesolowsky acknowledged "it is not generally possible to choose values for

the independent variables; one must use the data available" (ibid.), hence the ten

independent variables are analyzed despite of a possible presence of multicollinearity.

Then, as shown in the following **Table 4-17**, *Pearson coefficients* of correlation show

that several variables have significant linear relationships.

Therefore, a model that limits the number of independent variables via stepwise

selection is presented in the following **Appendix IV.1.** to complete the multiple

discriminant analysis.

Table 4-17: Pearson Correlations among the 11 Independent Variables

		ln.ownsh	setupcst	ind.intl	dmt.comp	dmt.legl	dmt.knwd	dmt.appl	natnity	business1	business2	ff.sorce
Pearson Correlatio	ln.ownsh	1.000	.173	.095	-.144	-.061	.169	-.196	.328*	.242*	-.235*	-.075
	setupcst	.173	1.000	.185	-.117	.083	.150	-.075	-.128	.342*	-.307*	-.288*
	ind.intl	.095	.185	1.000	.177	.350*	.453*	.032	-.034	.055	-.032	-.258*
	dmt.comp	-.144	-.117	.177	1.000	.401*	.516*	.438*	-.148	-.225*	.217	.199
	dmt.legl	-.061	.083	.350*	.401*	1.000	.383*	.349*	-.361*	-.196	.259*	.039
	dmt.knwd	.169	.150	.453*	.516*	.383*	1.000	.097	.208	-.142	.151	-.112
	dmt.appl	-.196	-.075	.032	.438*	.349*	.097	1.000	-.430*	-.170	.231*	.235*
	natnity	.328*	-.128	-.034	-.148	-.361*	.208	-.430*	1.000	-.170	.078	-.168
	business	.242*	.342*	.055	-.225*	-.196	-.142	-.170	-.170	1.000	-.923*	-.122
	business	-.235*	-.307*	-.032	.217	.259*	.151	.231*	.078	-.923*	1.000	.077
	ff.sorce	-.075	-.288*	-.258*	.199	.039	-.112	.235*	-.168	-.122	.077	1.000
Sig. (2-tailed)	ln.ownsh	.	.129	.410	.208	.597	.139	.085	.004	.034	.040	.511
	setupcst	.129	.	.103	.305	.467	.186	.513	.263	.002	.006	.010
	ind.intl	.410	.103	.	.118	.002	.000	.779	.765	.634	.782	.022
	dmt.comp	.208	.305	.118	.	.000	.000	.000	.196	.048	.057	.078
	dmt.legl	.597	.467	.002	.000	.	.000	.002	.001	.085	.022	.736
	dmt.knwd	.139	.186	.000	.000	.000	.	.396	.067	.215	.187	.325
	dmt.appl	.085	.513	.779	.000	.002	.396	.	.000	.136	.042	.037
	natnity	.004	.263	.765	.196	.001	.067	.000	.	.138	.502	.143
	business	.034	.002	.634	.048	.085	.215	.136	.138	.	.000	.286
	business	.040	.006	.782	.057	.022	.187	.042	.502	.000	.	.501
	ff.sorce	.511	.010	.022	.078	.736	.325	.037	.143	.286	.501	.
N	ln.ownsh	78	78	78	78	78	78	78	77	77	77	78
	setupcst	78	79	79	79	79	79	79	78	78	78	79
	ind.intl	78	79	79	79	79	79	79	78	78	78	79
	dmt.comp	78	79	79	79	79	79	79	78	78	78	79
	dmt.legl	78	79	79	79	79	79	79	78	78	78	79
	dmt.knwd	78	79	79	79	79	79	79	78	78	78	79
	dmt.appl	78	79	79	79	79	79	79	78	78	78	79
	natnity	77	78	78	78	78	78	78	78	77	77	78
	business	77	78	78	78	78	78	78	77	78	78	78
	business	77	78	78	78	78	78	78	77	78	78	78
	ff.sorce	78	79	79	79	79	79	79	78	78	78	79

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

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

IV.4.7. Multiple Discriminant Analysis: Stepwise Selection

We can have a parsimonious model that *limits* the number of explanatory variables utilizing a stepwise selection method. Among the various methods of controlling the entry or removal of predictor variables from the discriminant function, **Wilks' Lambda** method was used. The *Wilks' Lambda* method calculates F statistic that measures the change in Wilks' lambda for each candidate variable when the variable is added to the model (SPSS 7.5, p236). Then the variable with the largest F (or smallest value of Wilks' lambda) enters the model.

The testing results are presented in the following to show the whole procedure of the *Wilks' Lambda* stepwise selection. Since most outputs of the SPSS MDA have been explained in the above, additional explanation seems unnecessary.

Based on the statistics of [Variables Not in the Analysis] (p.157), we can see that **ln.ownshp** has the smallest Wilks' lambda at step 0. At step 1, 2 and 3, **dmt.appl**, **dmt.knwd**, and **natnlty** have the smallest Wilks' lambda, respectively. Therefore, variables **ln.ownshp**, **dmt.appl**, and **dmt.knwd** were selected in the final model of MDA as each of them minimizes the overall Wilks' lambda at the each step they were entered.

Then, [Pairwise Group Comparisons] (p.158) shows F statistics testing the equality of group means (centroids) for each pair of groups (SPSS 7.5, p246). Since the F statistics for each pair of groups is proportional to *Hotelling's* T^2 (Holloway & Dunn, 1967) statistic and the *Mahalanobis* D^2, both of which measure the distance and difference of variables, each value of F can be viewed as a measure of the distance between each pair.

MDA Output 16: Stepwise Selection

Discriminant Analysis

Analysis Case Processing Summary

Unweighted Cases		N	Percent
Valid		76	96.2
Excluded	Missing or out-of-range group codes	0	.0
	At least one missing discriminating variable	3	3.8
	Both missing or out-of-range group codes and at least one missing discriminating variable	0	.0
	Total	3	3.8
Total		79	100.0

Group Statistics

Foreign Mkt Entry Mode		Mean	Std. Deviation	Valid N (listwise) Unweighted	Weighted
Master franchising / Area developer	ln.ownsh	.2263	.2236	42	42.000
	setupcst	1.4524	1.2533	42	42.000
	ind.intl	4.2857	1.7006	42	42.000
	dmt.comp	6.0000	3.0604	42	42.000
	dmt.legl	4.6190	2.8878	42	42.000
	dmt.knwd	4.6429	2.4774	42	42.000
	dmt.appl	6.8810	2.5008	42	42.000
	natnlty	7.143E-02	.2607	42	42.000
	business1	.4286	.5009	42	42.000
	business2	.5238	.5055	42	42.000
	ff.sorce	5.0476	1.4972	42	42.000
Licensing or Direct franchising	ln.ownsh	.4253	.2777	21	21.000
	setupcst	2.3810	1.9869	21	21.000
	ind.intl	3.6667	1.9579	21	21.000
	dmt.comp	3.4762	3.6141	21	21.000
	dmt.legl	2.3810	2.5194	21	21.000
	dmt.knwd	3.1429	2.7800	21	21.000
	dmt.appl	4.1429	3.5817	21	21.000
	natnlty	.1905	.4024	21	21.000
	business1	.7619	.4364	21	21.000
	business2	.1905	.4024	21	21.000
	ff.sorce	4.5952	1.5622	21	21.000
Equity Ownership (M/A, JVs, FDI)	ln.ownsh	.5850	.2222	13	13.000
	setupcst	2.0769	1.8467	13	13.000
	ind.intl	5.0769	1.4979	13	13.000
	dmt.comp	5.5385	4.4086	13	13.000
	dmt.legl	3.6154	2.1809	13	13.000
	dmt.knwd	6.8462	3.1582	13	13.000
	dmt.appl	2.9231	2.5968	13	13.000
	natnlty	.6154	.5064	13	13.000
	business1	.6923	.4804	13	13.000
	business2	.3077	.4804	13	13.000
	ff.sorce	4.1538	1.2810	13	13.000
Total	ln.ownsh	.3426	.2747	76	76.000
	setupcst	1.8158	1.6224	76	76.000
	ind.intl	4.2500	1.7823	76	76.000
	dmt.comp	5.2237	3.5948	76	76.000
	dmt.legl	3.8289	2.8208	76	76.000
	dmt.knwd	4.6053	2.9124	76	76.000
	dmt.appl	5.4474	3.2635	76	76.000
	natnlty	.1974	.4007	76	76.000
	business1	.5658	.4989	76	76.000
	business2	.3947	.4920	76	76.000
	ff.sorce	4.7697	1.5021	76	76.000

Tests of Equality of Group Means

	Wilks' Lambda	F	df1	df2	Sig.
ln.ownsh	.739	12.877	2	73	.000
setupcst	.933	2.603	2	73	.081
ind.intl	.932	2.643	2	73	.078
dmt.comp	.906	3.770	2	73	.028
dmt.legl	.881	4.916	2	73	.010
dmt.knwd	.827	7.652	2	73	.001
dmt.appl	.743	12.592	2	73	.000
natnlty	.756	11.786	2	73	.000
business1	.903	3.910	2	73	.024
business2	.908	3.708	2	73	.029
ff.sorce	.948	2.006	2	73	.142

Pooled Within-Groups Matrices

		ln.ownsh	setupcst	ind.intl	dmt.comp	dmt.legl	dmt.knwd	dmt.appl	natnlty	business1	business2	ff.sorce
Correlatio	ln.ownsh	1.000	.065	.045	-.090	.025	.102	.044	.122	.150	-.155	.040
	setupcst	.065	1.000	.218	-.053	.172	.189	.028	-.232	.288	-.250	-.272
	ind.intl	.045	.218	1.000	.097	.324	.373	.015	-.137	.106	-.087	-.252
	dmt.com	-.090	-.053	.097	1.000	.344	.492	.395	-.148	-.143	.132	.201
	dmt.legl	.025	.172	.324	.344	1.000	.360	.252	-.380	-.093	.165	-.018
	dmt.knwd	.102	.189	.373	.492	.360	1.000	.128	.097	-.132	.128	-.094
	dmt.appl	.044	.028	.015	.395	.252	.128	1.000	-.280	-.024	.115	.151
	natnlty	.122	-.232	-.137	-.148	-.380	.097	-.280	1.000	-.313	.180	-.072
	business	.150	.288	.106	-.143	-.093	-.132	-.024	-.313	1.000	-.914	-.082
	business	-.155	-.250	-.087	.132	.165	.128	.115	.180	-.914	1.000	.038
	ff.sorce	.040	-.272	-.252	.201	-.018	-.094	.151	-.072	-.082	.038	1.000

Analysis 1
Box's Test of Equality of Covariance Matrices

Log Determinants

Foreign Mkt Entry Mode	Rank	Log Determinant
Master franchising / Area developer	3	.580
Licensing or Direct franchising	3	1.981
Equity Ownership (M/A, JVs, FDI)	3	1.085
Pooled within-groups	3	1.184

The ranks and natural logarithms of determinants printed are those of the group covariance matrices.

Test Results

Box's M		9.966
F	Approx.	.766
	df1	12
	df2	6592.511
	Sig.	.687

Tests null hypothesis of equal population covariance matrices.

Stepwise Statistics

Variables Entered/Removed[a,b,c,d]

		Wilks' Lambda							
						Exact F			
Step	Entered	Statistic	df1	df2	df3	Statistic	df1	df2	Sig.
1	ln.ownsh	.739	1	2	73.000	12.877	2	73.000	.000
2	dmt.appl	.577	2	2	73.000	11.377	4	144.000	.000
3	dmt.knwd	.480	3	2	73.000	10.482	6	142.000	.000

At each step, the variable that minimizes the overall Wilks' Lambda is entered.

[a] Maximum number of steps is 22.

[b] Minimum partial F to enter is 3.84.

[c] Maximum partial F to remove is 2.71.

[d] F level, tolerance, or VIN insufficient for further computation.

Variables in the Analysis

Step		Tolerance	F to Remove	Wilks' Lambda
1	ln.ownsh	1.000	12.877	
2	ln.ownsh	.998	10.356	.743
	dmt.appl	.998	10.089	.739
3	ln.ownsh	.989	9.327	.606
	dmt.appl	.983	10.255	.619
	dmt.knwd	.974	7.176	.577

Variables Not in the Analysis

Step		Tolerance	Min. Tolerance	F to Enter	Wilks' Lambda
0	ln.ownsh	1.000	1.000	12.877	.739
	setupcst	1.000	1.000	2.603	.933
	ind.intl	1.000	1.000	2.643	.932
	dmt.comp	1.000	1.000	3.770	.906
	dmt.legl	1.000	1.000	4.916	.881
	dmt.knwd	1.000	1.000	7.652	.827
	dmt.appl	1.000	1.000	12.592	.743
	natnlty	1.000	1.000	11.786	.756
	business1	1.000	1.000	3.910	.903
	business2	1.000	1.000	3.708	.908
	ff.sorce	1.000	1.000	2.006	.948
1	setupcst	.996	.996	1.726	.705
	ind.intl	.998	.998	2.462	.692
	dmt.comp	.992	.992	3.110	.680
	dmt.legl	.999	.999	4.454	.658
	dmt.knwd	.990	.990	6.988	.619
	dmt.appl	.998	.998	10.089	.577
	natnlty	.985	.985	7.276	.615
	business1	.977	.977	2.022	.700
	business2	.976	.976	2.068	.699
	ff.sorce	.998	.998	1.777	.704
2	setupcst	.995	.994	1.597	.553
	ind.intl	.998	.996	2.431	.540
	dmt.comp	.833	.833	3.080	.531
	dmt.legl	.937	.935	2.507	.539
	dmt.knwd	.974	.974	7.176	.480
	natnlty	.903	.903	4.217	.516
	business1	.976	.975	1.540	.553
	business2	.961	.961	1.339	.556
	ff.sorce	.976	.976	.619	.568
3	setupcst	.962	.942	2.269	.451
	ind.intl	.860	.840	.331	.476
	dmt.comp	.623	.623	.213	.477
	dmt.legl	.827	.827	1.125	.465
	natnlty	.889	.889	2.645	.447
	business1	.955	.953	1.161	.465
	business2	.944	.944	.766	.470
	ff.sorce	.962	.956	.469	.474

Wilks' Lambda

| Step | Number of Variables | Lambda | df1 | df2 | df3 | Exact F | | | |
						Statistic	df1	df2	Sig.
1	1	.739	1	2	73	12.877	2	73.000	1.622E-05
2	2	.577	2	2	73	11.377	4	144.000	4.734E-08
3	3	.480	3	2	73	10.482	6	142.000	1.283E-09

Pairwise Group Comparisons[a,b,c]

Step	Foreign Mkt Entry Mode		Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)
1	Master franchising / Area developer	F		9.676	22.294
		Sig.		.003	.000
	Licensing or Direct franchising	F	9.676		3.575
		Sig.	.003		.063
	Equity Ownership (M/A, JVs, FDI)	F	22.294	3.575	
		Sig.	.000	.063	
2	Master franchising / Area developer	F		11.641	21.357
		Sig.		.000	.000
	Licensing or Direct franchising	F	11.641		2.591
		Sig.	.000		.082
	Equity Ownership (M/A, JVs, FDI)	F	21.357	2.591	
		Sig.	.000	.082	
3	Master franchising / Area developer	F		8.913	16.418
		Sig.		.000	.000
	Licensing or Direct franchising	F	8.913		6.707
		Sig.	.000		.000
	Equity Ownership (M/A, JVs, FDI)	F	16.418	6.707	
		Sig.	.000	.000	

[a.] 1, 73 degrees of freedom for step 1.

[b.] 2, 72 degrees of freedom for step 2.

[c.] 3, 71 degrees of freedom for step 3.

Summary of Canonical Discriminant Functions

Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	.754[a]	80.1	80.1	.656
2	.187[a]	19.9	100.0	.397

a. First 2 canonical discriminant functions were used in the analysis.

Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	df	Sig.
1 through 2	.480	52.799	6	.000
2	.842	12.343	2	.002

Standardized Canonical Discriminant Function Coefficients

	Function 1	Function 2
ln.ownsh	.693	-.165
dmt.knwd	.223	.980
dmt.appl	-.724	.126

Structure Matrix

	Function	
	1	2
In.ownsh	.683*	-.059
dmt.appl	-.665*	.245
natnlty[a]	.309*	.040
ff.sorce[a]	-.103*	-.079
dmt.knwd	.201	.979*
dmt.comp[a]	-.239	.547*
dmt.legl[a]	-.085	.380*
ind.intl[a]	.103	.360*
setupcst[a]	.067	.178*
business2 [a]	-.162	.165*
business1 [a]	.092	-.158*

Pooled within-groups
correlations between
discriminating variables
and standardized canonical
discriminant functions
Variables ordered by
absolute size of correlation
within function.

*.

   Largest absolute
   correlation between
   each variable and
   any discriminant
   function

[a]. This variable not
   used in the
   analysis.

**Functions at Group
Centroids**

Foreign Mkt Entry Mode	Function 1	Function 2
Master franchising / Area developer	-.698	.157
Licensing or Direct franchising	.449	-.648
Equity Ownership (M/A, JVs, FDI)	1.528	.540

Unstandardized canonical
discriminant functions
evaluated at group means

Classification Statistics

Classification Processing Summary

Processed		79
Excluded	Missing or out-of-range group codes	0
	At least one missing discriminating variable	1
Used in Output		78

Prior Probabilities for Groups

Foreign Mkt Entry Mode	Prior	Cases Used in Analysis	
		Unweighted	Weighted
Master franchising / Area developer	.333	42	42.000
Licensing or Direct franchising	.333	21	21.000
Equity Ownership (M/A, JVs, FDI)	.333	13	13.000
Total	1.000	76	76.000

Classification Function Coefficients

	Foreign Mkt Entry Mode		
	Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)
In.ownsh	2.957	6.828	9.134
dmt.knwd	.512	.313	.837
dmt.appl	.773	.446	.225
(Constant)	-5.282	-3.967	-6.963

Fisher's linear discriminant functions

Canonical Discriminant Functions
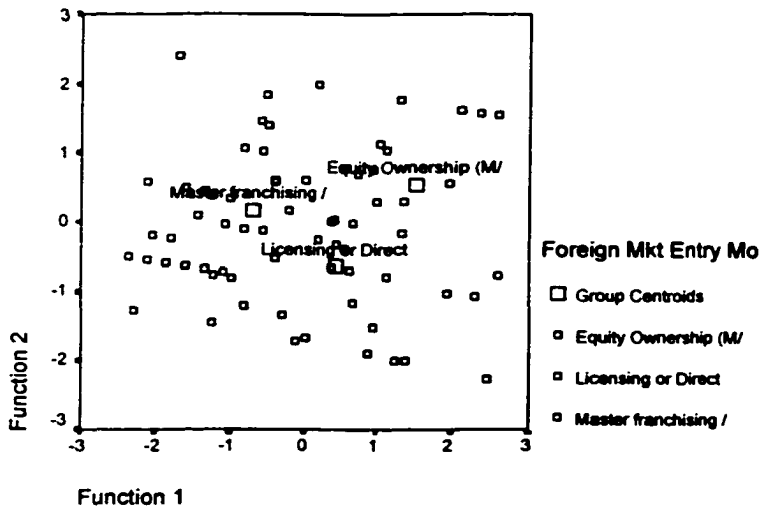
Territorial Map

```
Canonical Discriminant
Function 2
        -6.0      -4.0      -2.0       .0       2.0       4.0       6.0
         +---------+---------+---------+---------+---------+---------+
   6.0 +                               13                              +
     I                                 13                              I
     I                                 13                              I
     I                                 13                              I
     I                                 13                              I
     I                                 13                              I
   4.0 +         +         +           13         +         +          +
     I                                 13                              I
     I                                 13                              I
     I                                  13                             I
     I                                  13                             I
     I                                  13                             I
   2.0 +         +         +          +13         +         +          +
     I                                 13                              I
     I                                 13                              I
     I                                 13                              I
     I                                   13      *                     I
     I                                  133                            I
    .0 +         +         +       *  +122233     +         +          +
     I                                112    223                       I
     I                             122  *    233                       I
     I                              12        2233                      I
     I                              12         2233                     I
     I                             12           2233                    I
  -2.0 +         +         +    12  +        +   2233 +                 +
     I                         112               223                   I
     I                       122                  233                  I
     I                        12                   2233                 I
     I                       12                     2233                I
     I                      12                        2233             I
  -4.0 +         +       12  +         +         +    2233 +            +
     I                 112                              223  I
     I               122                                  231 I
     I              12                                      2I
     I             12                                        I
     I            12                                         I
  -6.0 +          12                                         +
         +---------+---------+---------+---------+---------+---------+
        -6.0      -4.0      -2.0       .0       2.0       4.0       6.0
                      Canonical Discriminant Function 1
```

—
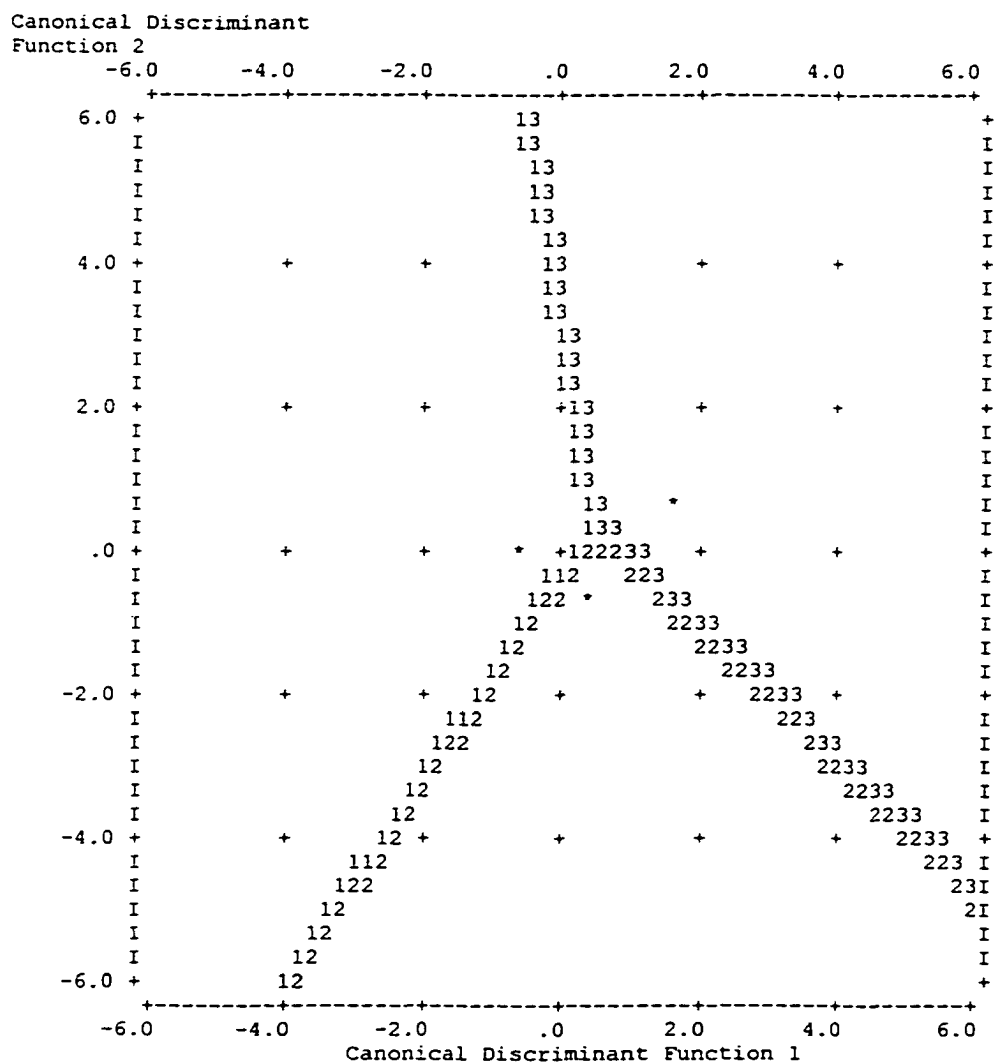
Symbols used in territorial map

Symbol	Group	Label
1	1	Master franchising /
2	2	Licensing or Direct
3	3	Equity Ownership (M/
*		Indicates a group centroid

Classification Results[b,c]

		Foreign Mkt Entry Mode	Predicted Group Membership			Total
			Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	
Original	Count	Master franchising / Area developer	32	8	3	43
		Licensing or Direct franchising	5	12	5	22
		Equity Ownership (M/A, JVs, FDI)	1	1	11	13
	%	Master franchising / Area developer	74.4	18.6	7.0	100.0
		Licensing or Direct franchising	22.7	54.5	22.7	100.0
		Equity Ownership (M/A, JVs, FDI)	7.7	7.7	84.6	100.0
Cross-validated[a]	Count	Master franchising / Area developer	32	8	3	43
		Licensing or Direct franchising	5	11	6	22
		Equity Ownership (M/A, JVs, FDI)	1	3	9	13
	%	Master franchising / Area developer	74.4	18.6	7.0	100.0
		Licensing or Direct franchising	22.7	50.0	27.3	100.0
		Equity Ownership (M/A, JVs, FDI)	7.7	23.1	69.2	100.0

a. Cross validation is done only for those cases in the analysis. In cross validation, each case is classified by the functions derived from all cases other than that case.

b. 70.5% of original grouped cases correctly classified.

c. 66.7% of cross-validated grouped cases correctly classified.

IV.5. Multiple Logistic Regression (MLR) with an Ordinal Response

Since the goal of this research is to classify observations into one of populations (entry modes), discriminant analysis is used. Then, discriminant analysis is very strict on assumptions as discussed in detail in section IV.4.1. Discriminant analysis estimators are very robust if populations of predictor variables are normal with identical covariance matrices. Under such conditions, discriminant analysis is preferred (or more efficient) to logistic regression for classification problems (Efron, 1975; Press & Wilson, 1978; Bull & Donner, 1987). However, there were two qualitative variables (**natnlty**, and **business**) in the final model of MDA for this research, ruling out multivariate normality assumption.

Under nonnormality (i.e., when explanatory variables are nonnormal), the logistic regression model with maximum likelihood estimatetor is preferred for solving classification problem (Press & Wilson, 1978). For example, multinomial logistic regression, also referred to as polychotomous logistic regression, has been frequently used for the analysis of categorical/ordinal response data in relation to continuous and/or categorical (involving qualitative) explanatory variables (Bull & Donner, 1987).

The *Logistic* procedure in SAS fits linear logistic regression models for binary or ordinal response data by the method of maximum likelihood (SAS Institute Inc., 1989, Chapter 27). For a *binary response* model, the linear logistic model has the form of

$$\text{logit}(p) = \log(p / 1 - p) = \alpha + \beta'x$$

where α is the intercept parameter, and β is the vector of slope parameters. In case of a *ordinal response* case, where the response Y has ordinal values and denoted for convenience by $1, \ldots, k, k+1$, the model has the form of

$$g\ (Pr(Y \le i \mid \mathbf{x})) = \alpha_i + \beta' \mathbf{x}, \quad 1 \le i \le k$$

where $\alpha_1, \ldots, \alpha_k$ are k intercept parameters, and β is the vector of slope parameters.

Since my data Y has ordinal implication in terms of the level of financial and managerial

commitments, using the *Logistic* procedure of SAS seems valid. Therefore, the *Logistic*

procedure of SAS will be used to fit a model with an ordinal response variable.

IV.5.1. SAS *Logistic* Procedure Outputs

For an ordinal response, *Logistic* procedure tests the parallel lines assumption and

labels [Score Test for the Proportional Odds Assumptions] in the output when

LINK=LOGIT[3].

In the [Model Fit Statistics], there are Akaike Information Criterion (AIC), the

Schwartz Criterion (SC), and -2 LOG L statistics[4]. AIC and SC statistics are primarily

used for comparing different models for the same data. Lower values of those indicate a

better model. -2 LOG L shows fitting of a model with an intercept only and with

intercepts and explanatory variables based on -2 Log Likelihood. The Score criterion,

however, is missing here for the model is identified by the first two columns of the table.

There are Likelihood ratio chi-squared, Score, and Wald test statistics in the items

of [Testing Global Null Hypothesis: BETA=0]. They all test whether all the coefficients

(β) in the model are different from 0 in the population.

The [Analysis of Maximum Likelihood Estimates] table shows that (ibid. p.1097)

1. the maximum likelihood estimate of the parameter,

2. the estimated standard error of the parameter estimate,

---

[3] See SAS Institute Inc., 1989, p.1090 for the methods used to calculate the test.
[4] See SAS Institute Inc., 1989, p.1088-1089 for calculations.

3. the Wald chi-squared statistic which is to test whether the estimated parameter is 0,

4. the p value of the Wald chi-squared statistic with respect to a chi-squared distribution,

5. the standardized estimate for the slope parameter, and

6. the odds ratio that estimate the relative risk.

Lastly, there is [Association of Predicted Probabilities and Observed Responses] table, which includes a breakdown of the number of pairs with different responses and four rank correlation indexes. They are Somers' D, Goodman-Kruskal Gamma, c and Kendall's Tau-a.

Outputs of multiple ordinal logistic analysis are presented in the following. **MLR Output 1** will show a full model with the 12 variables (business variable is divided into two dummy variables). **MLR Output 2** will select key variables by stepwise forward selection method. Then, an interesting test result of the regression will be detected. The sign of two key variables is reversed from the current PROC LOGITIC procedure of the SAS. Accordingly, **MLR Output 3** is prepared to explain why the sign of two key variables was reversed before using the DESCENDING procedure of the SAS. Lastly **MLR Output 4** will present a backward elimination procedure. Both procedures will select or eliminate variables based on 0.05 significant level as default.

MLR Output 1: Full Model

Multiple Logistic Regression Model with an Ordinal Response

The LOGISTIC Procedure

Model Information

Data Set	YONG.YONGSAS2
Response Variable	entrymod
Number of Response Levels	3
Number of Observations	77
Link Function	Logit
Optimization Technique	Fisher's scoring

Response Profile

Ordered Value	entrymod	Total Frequency
1	1	42
2	2	22
3	3	13

NOTE: 1 observation(s) were deleted due to missing values for the response or explanatory variables.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
19.5037	11	0.0526

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	130.501
SC	160.975	160.971
-2 Log L	152.287	104.501

Multiple Logistic Regression Model with an Ordinal Response

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	47.7857	11	<.0001
Score	36.9462	11	0.0001
Wald	28.9489	11	0.0023

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	standardized Estimate	Odds Ratio
Intercept1	1	1.4083	2.0145	0.4887	0.4845		
Intercept2	1	3.8595	2.0582	3.5164	0.0608		
ln_ownsh	1	-3.5337	1.1758	9.0322	0.0027	-0.5386	0.029
setupcst	1	-0.1628	0.1713	0.9025	0.3421	-0.1449	0.850
ind_intl	1	-0.0694	0.1898	0.1338	0.7145	-0.0679	0.933
dmt_comp	1	-0.1925	0.1068	3.2499	0.0714	-0.3833	0.825
dmt_legl	1	0.1624	0.1423	1.3011	0.2540	0.2525	1.176
dmt_knwd	1	0.0304	0.1342	0.0513	0.8209	0.0485	1.031
dmt_appl	1	0.2985	0.1057	7.9686	0.0048	0.5344	1.348
natnlty	1	-1.4967	0.8978	2.7793	0.0955	-0.3290	0.224
buss1	1	-1.7189	1.4550	1.3956	0.2375	-0.4737	0.179
buss2	1	-1.1274	1.4304	0.6213	0.4306	-0.3051	0.324
ff_sorce	1	0.1917	0.2082	0.8474	0.3573	0.1580	1.211

Association of Predicted Probabilities and Observed Responses

Percent Concordant	85.3	Somers' D	0.708
Percent Discordant	14.5	Gamma	0.710
Percent Tied	0.3	Tau-a	0.425
Pairs	1756	c	0.854

MLR Output 2: Stepwise Selection

Multiple Logistic Regression Model with an Ordinal Response

Stepwise Selection

The LOGISTIC Procedure

Model Information

```
Data Set                      YONG.YONGSAS2
Response Variable             entrymod
Number of Response Levels     3
Number of Observations        77
Link Function                 Logit
Optimization Technique        Fisher's scoring
```


Response Profile

```
Ordered                          Total
Value           entrymod         Frequency

1               1                42
2               2                22
3               3                13
```

NOTE: 1 observation(s) were deleted due to missing values for the
response or explanatory variables.

Forward Selection Procedure

Step 0. Intercepts entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Residual Chi-Square Test

```
Chi-Square        DF      Pr > ChiSq
   36.9462        11          0.0001
```


Step 1. Variable dmt_appl entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Multiple Logistic Regression Model with an Ordinal Response
Forward Selection

The LOGISTIC Procedure

Score Test for the Proportional Odds Assumption

Chi-Square   DF   Pr > ChiSq
   0.1153   1   0.7342

Model Fit Statistics

| | | Intercept |
| | Intercept | and |
Criterion	Only	Covariates
AIC	156.287	138.931
SC	160.975	145.963
-2 Log L	152.287	132.931

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	19.3560	1	<.0001
Score	19.1688	1	<.0001
Wald	16.1846	1	<.0001

Residual Chi-Square Test

Chi-Square   DF   Pr > ChiSq
  24.0513   10   0.0075

Step 2. Variable ln_ownsh entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square   DF   Pr > ChiSq
   0.3685   2   0.8317

Multiple Logistic Regression Model with an Ordinal Response
Forward Selection

The LOGISTIC Procedure

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	124.165
SC	160.975	133.540
-2 Log L	152.287	116.165

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	36.1221	2	<.0001
Score	30.6313	2	<.0001
Wald	25.7703	2	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
10.8978	9	0.2828

NOTE: No (additional) variables met the 0.05 significance level for
entry into the model.

Summary of Forward Selection

Step	Variable Entered	Number In	Score Chi-Square	Pr > ChiSq
1	dmt_appl	1	19.1688	<.0001
2	ln_ownsh	2	15.6988	<.0001

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate	dds Ratio
Intercept1	1	-0.1308	0.6213	0.0443	0.8332		
Intercept2	1	1.9857	0.6605	9.0369	0.0026		
ln_ownsh	1	-3.8782	1.0229	14.3746	0.0001	-0.5911	0.021
dmt_appl	1	0.3073	0.0828	13.7861	0.0002	0.5500	1.360

```
Multiple Logistic Regression Model with an Ordinal Response

Forward Selection

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses

Percent Concordant      81.2    Somers' D     0.641
Percent Discordant      17.1    Gamma         0.651
Percent Tied             1.7    Tau-a         0.384
Pairs                   1756    c             0.820
```

IV.5.1.1. Stepwise selection using Descending option

"Analysis of Maximum Likelihood Estimates" in the previous page generated a surprising test result. As entry mode type changes from 1 to 3, log transformed domestic ownership should increase, and the role of foreign applicant should decrease. The sign of these two critical variables (parameter estimate), however, is exactly the opposite of the expected relationships.

The attention should be given to "ordered value" of the 'response profile' of the output (page 170). The ordered value gives the sort order of the response level (SAS, 1995, p102). The way that the data recorded in the MLR Output 2 should have been recognized by the SAS as if the entry mode 1 had the highest ordinal value. Therefore, a correct order of dependent variables in terms of commitment level of resources can be rearranged using the DESCENDING option of the SAS.

The test results are shown in the following MLR Output 3. The only difference between these two test results is the sign of the "parameter estimate" in the analysis of maximum likelihood estimates table. Therefore, the relationship between three types of entry mode and these two critical variables holds as expected or hypothesized.

MLR Output 3: Stepwise Selection Using DESCENDING Option

Multiple Logistic Regression model with an Ordinal Response

Stepwise Selection

The LOGISTIC Procedure

Model Information

Data Set   YONG.YONGSAS2
Response Variable   entrymod
Number of Response Levels   3
Number of Observations   77
Link Function   Logit
Optimization Technique   Fisher's scoring

Response Profile

Ordered Value	entrymod	Total Frequency
1	3	13
2	2	22
3	1	42

NOTE: 1 observation was deleted due to missing values for the response or explanatory variables.

Forward Selection Procedure

Step 0. Intercepts entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
36.9462	11	0.0001

Step 1. Effect dmt_appl entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Multiple Logistic Regression Model with an Ordinal Response
Stepwise Selection

The LOGISTIC Procedure

Score Test for the Proportional Odds Assumption

Chi-Square   DF   Pr > ChiSq
  0.1153   1   0.7342

Model Fit Statistics

| | | Intercept |
Criterion	Intercept Only	and Covariates
AIC	156.287	138.931
SC	160.975	145.963
-2 Log L	152.287	132.931

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	19.3560	1	<.0001
Score	19.1688	1	<.0001
Wald	16.1846	1	<.0001

Residual Chi-Square Test

Chi-Square   DF   Pr > ChiSq
 24.0513   10   0.0075

Step 2. Effect ln_ownsh entered:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square   DF   Pr > ChiSq
  0.3685   2   0.8317

Multiple Logistic Regression Model with an Ordinal Response
Stepwise Selection

The LOGISTIC Procedure

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	124.165
SC	160.975	133.540
-2 Log L	152.287	116.165

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	36.1221	2	<.0001
Score	30.6313	2	<.0001
Wald	25.7703	2	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
10.8978	9	0.2828

NOTE: No (additional) effects met the 0.05 significance level for entry
into the model.

Summary of Forward Selection

Step	Variable Entered	DF	Number In	Score Chi-Square	Pr > ChiSq
1	dmt_appl	1	1	19.1688	<.0001
2	ln_ownsh	1	2	15.6988	<.0001

Analysis of Maximum Likelihood Estimates

Varialbe	DF	Parameter Estimat	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimates	Odds Ratio
Intercept	1	-1.9857	0.6605	9.0369	0.0026		
Intercept2	1	0.1308	0.6213	0.0443	0.8332		
ln_ownsh	1	3.8782	1.0229	14.3746	0.0001	0.5911	0.021
dmt_appl	1	-0.3073	0.0828	13.7861	0.0002	-0.5500	1.360

```
Multiple Logistic Regression Model with an Ordinal Response
Forward Selection

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses

Percent Concordant     81.2     Somers' D     0.640
Percent Discordant     17.1     Gamma         0.651
Percent Tied            1.7     Tau-a         0.384
Pairs                  1756     c             0.820
```

IV.5.1.2. Parameter estimates and test of odds assumption

"Parameter Estimate" in the analysis of maximum likelihood estimates table gives

the parameter estimates (ibid., p103). From this table the two parallel regression lines

fitted to the data are

logit($\overline{P_3}$) = -1.9857 + 3.8782 (**ln-ownsh**) - 0.3073 (**dmt-appl**)

logit($\overline{P_2}$ + $\overline{P_3}$) = 0.1308 + 3.8782 (**ln-ownsh**) - 0.3073 (**dmt-appl**).

The positive coefficient of **ln-ownsh** indicated that higher levels of ownership are

associated with the increased probability of type 3 entry modes, while the negative

coefficient of **dmt-appl** (role of applicants) indicates the reverse relationship.

Another critical test result of the output is the "score test for the proportional odds

assumption", which shows the chi-square test for the proportional odds assumption.

LOGISTIC procedure with the ordinal response assumes a common slope parameter

based on the cumulative distribution probabilities of the response categories (ibid., p99).

When this assumption is not met, a model with distinct slope parameter rather than a

common one should be considered. The test result of a large p-value (0.8317) indicates

that the null hypothesis can not be rejected, meaning there is a common slope parameter

associated with the predictor variable. Therefore, the ordinal logistic regression is an

appropriate model and fits the data.

MLR Output 4: Backward Elimination Procedure

```
Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Model Information

Data Set                    YONG.YONGSAS2
Response Variable           entrymod
Number of Response Levels   3
Number of Observations      77
Link Function               Logit
Optimization Technique      Fisher's scoring

Response Profile

Ordered                        Total
Value          entrymod     Frequency
  1               3            13
  2               2            22
  3               1            42
NOTE: 1 observation(s) were deleted due to missing values for the
response or explanatory variables.


Backward Elimination Procedure

Step  0. The following variables were entered:

Intercept1  Intercept2  ln_ownsh  setupcst  ind_intl  dmt_comp
dmt_leg1  dmt_knwd  dmt_appl natnlty  buss1  buss2  ff_sorce


Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square        DF      Pr > ChiSq
   19.5037        11          0.0526
```

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	130.501
SC	160.975	160.971
-2 Log L	152.287	104.501

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	47.7857	11	<.0001
Score	36.9462	11	0.0001
Wald	28.9489	11	0.0023

Step   1. Variable dmt_knwd is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption
Chi-Square   DF   Pr > ChiSq
   14.6721   10   0.1445

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	128.552
SC	160.975	156.678
-2 Log L	152.287	104.552

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	47.7353	10	<.0001
Score	36.9092	10	<.0001
Wald	28.8838	10	0.0013

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
0.0495	1	0.8239

Step 2. Variable ind_intl is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
14.0916	9	0.1191

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	126.654
SC	160.975	152.436
-2 Log L	152.287	104.654

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	47.6334	9	<.0001
Score	36.9066	9	<.0001
Wald	28.9247	9	0.0007

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
0.1564	2	0.9248

Step 3. Variable buss2 is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
13.5705	8	0.0937

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	125.218
SC	160.975	148.656
-2 Log L	152.287	105.218

Multi Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	47.0691	8	<.0001
Score	36.7543	8	<.0001
Wald	28.9381	8	0.0003

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
0.6537	3	0.8840

Step 4. Variable setupcst is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
13.3005	7	0.0651

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	124.116
SC	160.975	145.211
-2 Log L	152.287	106.116

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	46.1708	7	<.0001
Score	35.8791	7	<.0001
Wald	28.6609	7	0.0002

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
1.6202	4	0.8052

Step 5. Variable dmt_leg1 is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
4.7050	6	0.5822

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	123.181
SC	160.975	141.931
-2 Log L	152.287	107.181

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	45.1063	6	<.0001
Score	35.3982	6	<.0001
Wald	28.6165	6	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
2.7702	5	0.7354

Step 6. Variable ff_sorce is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
4.7975	5	0.4411

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	122.442
SC	160.975	138.849
-2 Log L	152.287	108.442

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	43.8451	5	<.0001
Score	34.7528	5	<.0001
Wald	28.6235	5	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
3.8066	6	0.7028

Step 7. Variable dmt_comp is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
1.9969	4	0.7363

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	122.818
SC	160.975	136.881
-2 Log L	152.287	110.818

Multiple Logistic Regression Model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	41.4690	4	<.0001
Score	33.9814	4	<.0001
Wald	28.3194	4	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
5.8227	7	0.5606

Step 8. Variable buss1 is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
1.5663	3	0.6671

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	123.035
SC	160.975	134.754
-2 Log L	152.287	113.035

Multiple Logistic Regression model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	39.2523	3	<.0001
Score	32.1974	3	<.0001
Wald	27.9508	3	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
7.8596	8	0.4473

Step 9. Variable natnlty is removed:

Model Convergence Status

Convergence criterion (GCONV=1E-8) satisfied.

Score Test for the Proportional Odds Assumption

Chi-Square	DF	Pr > ChiSq
0.3685	2	0.8317

Model Fit Statistics

Criterion	Intercept Only	Intercept and Covariates
AIC	156.287	124.165
SC	160.975	133.540
-2 Log L	152.287	116.165

Multinomial Logistic Regression model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Testing Global Null Hypothesis: BETA=0

Test	Chi-Square	DF	Pr > ChiSq
Likelihood Ratio	36.1221	2	<.0001
Score	30.6313	2	<.0001
Wald	25.7703	2	<.0001

Residual Chi-Square Test

Chi-Square	DF	Pr > ChiSq
10.8978	9	0.2828

NOTE: No (additional) variables met the 0.05 significance level for
removal from the model.

Summary of Backward Elimination

Step	Variable Removed	Number In	Wald Chi-Square	Pr > ChiSq
1	dmt_knwd	10	0.0513	0.8209
2	ind_intl	9	0.0978	0.7544
3	buss2	8	0.5308	0.4663
4	setupcst	7	0.8622	0.3531
5	dmt_legl	6	1.0131	0.3142
6	ff_sorce	5	1.2468	0.2642
7	dmt_comp	4	2.2558	0.1331
8	buss1	3	2.1367	0.1438
9	natnlty	2	3.0619	0.0801

Analysis of Maximum Likelihood Estimates

Variable	DF	Parameter Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq	Standardized Estimate	Odds Ratio
Intercept1	1	-1.9857	0.6605	9.0369	0.0026		
Intercept1	2	0.1308	0.6213	0.0443	0.8332		
ln_ownsh	1	3.8782	1.0229	14.3746	0.0001	0.5911	0.021
dmt_appl	1	-0.3073	0.0828	13.7861	0.0002	-0.5500	1.360

Multiple Logistic Regression model with an Ordinal Response
Backward Elimination

The LOGISTIC Procedure

Association of Predicted Probabilities and Observed Responses

Percent Concordant   81.2   Somers' D   0.641
Percent Discordant   17.1   Gamma   0.651
Percent Tied   1.7   Tau-a   0.384
Pairs   1756   c   0.820

IV.6. Comparison between MDA and MLR

IV.6.1. Full Model

Above discussions and outputs of each statistical model are summarized in the following **Table 4-18** which includes all ten independent variables. Then, **Table 4-19** contains only those variables obtained by the stepwise selection procedure.

Table 4-18: Comparison between MDA and MLR − Full Model

	Multiple Discriminant Analysis (MDA)	Multiple Logistic Regression (MLR)
Assumptions	Populations are normal with identical covariance matrices	None
Usage	Classifying an observation into one of several populations	Relating qualitative variables to other variables through a logistic functional form
Good for	Classification when the assumptions are met	Cases when explanatory variables are nonnormal
Variables included	Full model: Ten variables Ln.ownsh, setupcst, ind.international, dmt.comp, dmt.legl, dmt.knwd, dmt.appl, natnlty, business1, business2, ff.sorce.	Full model: Ten variables Ln.ownsh, setupcst, ind.international, dmt.comp, dmt.legl, dmt.knwd, dmt.appl, natnlty, business1, business2, ff.sorce.
Variables showed significance	Canonical function 1*: Ln.ownshp (*corr*=0.565) Dmt.appl (*corr*=-0.546) Natnlty (*corr*=0.519) Canonical function 2*: Dmt.knwd (corr=0.704)	Ln.ownsh (p=0.0027) Dmt.comt (p=0.07) Dmt.appl (p=0.0048) Natnlty (p=0.0955)
Concordant ratio (Classification)	76.3% and 68.4% with the cross validation method	85.3%

* Largest absolute correlation between each variable and discriminant function.

* Variables that have less than 0.5 correlation are not listed.

IV.6.1. Stepwise Selection

Table 4-19: Comparison between MDA and MLR – Stepwise Selection

	Multiple Discriminant Analysis (MDA)	Multiple Logistic Regression (MLR)
Variables included	Stepwise selection: Ln.ownsh, dmt.appl, dmt.knwd	Forward selection: Ln.ownsh, dmt.appl Backward elimination: Ln.ownsh, dmt.appl
Variables showed significance	Canonical function 1*: Ln.ownshp (*corr*=0.683) Dmt.appl (*corr*=-0.665) Canonical function 2*: Dmt.knwd (corr=0.979)	Forward selection and Backward elimination: Ln.ownsh (p=.0001), dmt.appl (p=.0002)
Concordant ratio (Classification)	70.5% and 66.7% with the cross validation method	For both methods: 81.2%

* Largest absolute correlation between each variable and discriminant function.

It is clear why multiple ordinal logistic model is efficient than multiple discriminant analysis by comparing the two summary tables. While MLR scored 81.2 % of concordant ratio with only two variables (**Table 4-19**), MDA scored 76.3% of hit ration (without the cross validation procedure) with all ten variables included in the model (**Table 4-18**). In addition, due to the strict assumption of the normality of populations, researchers should be cautious using the MDA. Since there are three dummy variables (**natnlty, business1**, and **business2**), this set of explanatory variables seems more appropriate to be tested by the MLR. However, a detailed analysis of MDA was reviewed in the section **IV.4** since the goal of this research was classifying or discriminating firms with different types of entry modes.

Then, our attention should be given to the final key variables that are obtained by the stepwise selection procedure. MLR selected two variables, ownership structure of firms in the domestic markets (**ln.ownsh**) and active role of foreign applicants enticing franchisers into their markets (**dmt.appl**). The first canonical discriminant function of MDA came up with the same result. Then the second canonical discriminant function added the degree of understanding foreign markets as a source of learning (**dmt.knwd**). The relationship between the second discriminant function and **dmt.knwd** was close to one (.979). It means that this variable explains the rest variances that cannot be explained by those two variables.

In sum, the test results of the stepwise selection of two statistical methods were almost identical. The final results of stepwise selection indicate that the combination of the domestic ownership strategy and active enticement of foreign applicants has a major impact on the selection of foreign market entry mode of international franchisers. Then, firms' degree of understanding foreign markets as a source of learning should explain the rest.

V. DESCRIPTIVE STATISTICS OF THE SURVEY

V.1. Samples

V.1.2. Country of Origin

Seventy-two firms responded to the survey questionnaire: Fifty-nine were the US; twelve were the UK firms; and one was a Canadian firm (**Table 5-1**). One Canadian firm was treated as a missing datum since the nationality of firms is only mattered between the US and the UK.

Table 5-1: Nationality of the Samples

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	US	59	81.9	83.1	83.1
	UK	12	16.7	16.9	100.0
	Total	71	98.6	100.0	
Missing	Canada	1	1.4		
	Total	1	1.4		
Total		72	100.0		

V.1.2. Type of the Franchising Business

Following **Table 5-2** shows the type of business in which the samples are operating. One firm from the each nation has omitted the data, thus making a total of sixty-nine cases. As shown, the samples are well spread in terms of the business sectors. Other than the well-advertised fast food business, we can learn that there are various types of services that franchising firms provide. For the US firms, there are more firms engaged in the fast food and family restaurant combined than any other business sectors. Then, it is interesting to see that there are many US franchisers in the construction and home improvement business. This includes glass products, (kitchen) remodeling and

repairs, sunrooms and conservatories, leak detection, home inspection, and drain cleaning. Therefore, even in the construction and home improvement sector, sample firms are not concentrated in one or two areas.

Even the UK sample firms are wide spread in terms of their major services, despite of smallness of its sample size. For the UK samples, the largest number in a business sector is only three. There might be two business sectors such as family restaurant and business service which can be compared between the US and UK firms. However, it is still difficult to make a meaningful comparison between the US and UK firms in those sectors due to the small number of the cases, especially for the UK firms.

Table 5-2: Crosstabulation between Nationality and Type of Business

Count

| | | Nationality | | |
		US	UK	Total
Type of Business	Fast food restaurant	9		9
	Family restaurant	3	2	5
	Construction & Home improvement	10	1	11
	Business service: copy, printing, faxing, shipping, signs	7	3	10
	Education & Training	5	1	6
	Hotels & Motels	3		3
	Automotives	5		5
	Confectionary & Bakery	3		3
	Car rental service	2		2
	Employment & Staffing service	1	2	3
	Personal service: Fitness & hair-cut	1	1	2
	Others: cleaning, recreation, retailing, framing, real estat	9	1	10
Total		58	11	69

V.2. Entry Modes

V.2.1. Major Foreign Market Entry Modes

The unit of analysis in this study is the *major* foreign market entry mode. Several foreign market entry modes are grouped into three major entry mode types. Type/group 1 entry mode includes master franchising and area developers; Type/group 2 includes licensing and direct franchising; and Type/group 3 includes merger/acquisition, joint ventures, and 100% company-owned outlets.

Every sample firm except seven had one *major* foreign market entry mode. Those seven firms have used more than one type of major foreign market entry modes. This finding that firms usually maintain their major foreign market entry mode wherever they go can be a surprise to scholars who emphasize the importance and/or distinctiveness of certain locations. However, the locational determinants were not totally ignored by the sample firms. It was also found that the locational determinants have influenced on firms' decision making of the major foreign market entry mode.

Double counting of entry modes was avoided. Seven types of entry mode were grouped into three, and no additional counting was made within the same entry mode type. For example, if a firm responded it has used joint ventures, M&A, and 100% owned outlets, the code for the major foreign market entry mode variable (**entrymod**) of this firm was marked once as (type) 3. Statistically this approach seems more conservative and valid. There could be a bias if the same firm/data was recorded two or three times for the same type of the major entry mode.

Then, only meaningful entry modes were counted as the **entrymod**. If a firm's major foreign market entry mode was marked as licensing, but the firm had to buy one

outlet in a foreign country out of many international markets due to the default of a

foreign franchisee, the firm was recorded having a Type 2 entry mode. However, when a

company gave specific strategic and/or meaningful reasons for having the secondary

foreign market entry mode, even if the number of outlets by the secondary entry mode is

few, the firm is recorded having two or more major entry modes. As a result, seven firms

had two types of entry mode. Therefore, a total of seventy-nine entry modes was

recognized from the seventy-two sample firms.

Table 5-3 shows that the majority (54.4%) of samples used Type 1 entry modes

followed by the Type 2 foreign market entry modes. Due to the characteristics of

franchising business, there were only 13 cases (16.5%) of equity modes (Type 3).

Table 5-3: Major Foreign Market Entry Modes - 3 Types

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Master franchising / Area developer	43	54.4	54.4	54.4
	Licensing or Direct franchising	23	29.1	29.1	83.5
	Equity Ownership (M/A, JVs, FDI)	13	16.5	16.5	100.0
	Total	79	100.0	100.0	
Total		79	100.0		

V.2.2. Entry Modes by Type of Business

Following **Table 5-4.1** shows the relationship between the major foreign market entry mode and the type of business in which the sample franchisers operate. It doesn't seem that there is a particular business sector favoring a specific type of major entry mode. The most favored Type 1 entry modes have been used across the business types. Then, it is interesting to see that franchisers in the fast food and family restaurant and hotel and motel business sectors used more equity entry modes than those in other sectors.

Following two tables (**Table 5-4.2 and 5-4.3**) separated the national effect. **Table 5-4.2** shows that the US franchisers favor Type 1 entry modes. There are only five cases of the equity modes (Type 3), which are used by two fast-food, one construction & home improvement, and two hotel/motel franchisers. Even among these three sectors, the equity modes are not the major type of the foreign market entry mode. Only for the hotel/motel sector, the three types of entry mode cases are balanced.

On the contrary, the UK franchisers favored equity modes. **Table 5-4.3** shows that equity modes are the major foreign market entry mode for the UK firms and used by firms in the various sectors. There are seven cases of Type 3 and three cases for both Type 1 and Type 2 entry modes.

Table 5-4.1: Crosstabulation betweem Business Types and Foreign Market Entry Modes

Count

		Foreign Mkt Entry Mode			
		Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Type of Business	Fast food restaurant	5	3	2	10
	Family restaurant	1	3	2	6
	Construction & Home improvement	7	3	1	11
	Business service: copy, printing, faxing, shipping, signs	6	3	1	10
	Education & Training	4	1	1	6
	Hotels & Motels	2	2	2	6
	Automotives	2	3		5
	Confectionary & Bakery	3			3
	Car rental service		2		2
	Employment & Staffing service	2		1	3
	Personal service: Fitness & hair-cut	3		1	4
	Others: clening, recrat'n, retailng, framing, realestat, etc	7	2	1	10
Total		42	22	12	76

Table 5-4.2: Crosstabulation between Type of Business and Foreign Market Entry Modes of the US Firms

Count

		Foreign Mkt Entry Mode			
		Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Type of Business	Fast food restaurant	5	3	2	10
	Family restaurant	1	2		3
	Construction & Home improvement	7	2	1	10
	Business service: copy, printing, faxing, shipping, signs	5	2		7
	Education & Training	4	1		5
	Hotels & Motels	2	2	2	6
	Automotives	2	3		5
	Confectionary & Bakery	3			3
	Car rental service		2		2
	Employment & Staffing service	1			1
	Personal service: Fitness & hair-cut	1			1
	Others: clening, recrat'n, retailng, framing, realestat, etc	7	2		9
Total		38	19	5	62

Table 5-4.3: Crosstabulation between Type of Business and Foreign Market Entry Modes of the UK Firms

Count

		Foreign Mkt Entry Mode			
		Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Type of Business	Family restaurant		1	2	3
	Construction & Home improvement		1		1
	Business service: copy, printing, faxing, shipping, signs	1	1	1	3
	Education & Training			1	1
	Employment & Staffing service	1		1	2
	Personal service: Fitness & hair-cut	1		1	2
	Others: clening, recrat'n, retailng, framing, realestat, etc			1	1
Total		3	3	7	13

V.2.3. Entry Modes by Nationality

A different ownership strategy is expected due to the difference in the country of origin. Hennart & Larimo (1998) raised the same question of whether the national origin affects ownership decisions. However, their main concerns (the effects of psychological characteristics shared among the firms from the same nation and of cultural distance between host and home countries on the choice of entry modes) and subjects (manufacturing MNCs based in two countries, Japan and Finland, investing into the US) of the research were not directly related to this research.

The crosstabulation of major foreign market entry modes and firm's nationality is shown in **Table 5-5**. There are 78 cases of major foreign market entry mode since one is treated as missing whose nationality is Canada. **Table 5-5** clearly shows preference of each national firm's foreign market entry modes. The US firms favored non-equity entry modes whereas the UK firms preferred equity modes. Out of the total forty-two and twenty-three Type 1 and 2 entry mode selections, there are only three and four cases of UK franchisers respectively in each of those entry types.

On the other hand, the UK firms do not seem to mind equity investments in the foreign markets. There are eight cases of Type 3 entry modes by the UK firms, charging 61.5% of the total equity entry mode cases. Then, we need to check what determinants have made UK firms prefer the equity modes to the others. The following section will present results of the simple *t-tests* of the three determinants by each national firm.

Table 5-5: Crosstabulation between Foreign Market Entry Modes and Nationality

			Nationality		
			US	UK	Total
Foreign Mkt Entry Mode	Master franchising / Area developer	Count	39	3	42
		% within Foreign Mkt Entry Mode	92.9%	7.1%	100.0%
	Licensing or Direct franchising	Count	19	4	23
		% within Foreign Mkt Entry Mode	82.6%	17.4%	100.0%
	Equity Ownership (M/A, JVs, FDI)	Count	5	8	13
		% within Foreign Mkt Entry Mode	38.5%	61.5%	100.0%
Total		Count	63	15	78
		% within Foreign Mkt Entry Mode	80.8%	19.2%	100.0%

V.3. National Differences

V.3.1. Simple T-Tests

Two national firms' differences can be tested according to the *Hypotheses* summarized in **Table 4-1** in the following page. A simple *T-Test* should be enough to show how firms from the two nations differ from each other in assessing their abilities, foreign market conditions, and other determinants of international operations.

Table 4-1: Hypotheses and Respective Variable Names

Hypothesis Number	Variable Name	Question Number*	Contents of Hypothesis: These will vary according to Entry Modes
H1	ind.tech	A.10.(1)	Technology level of the industry
H2	ind.ivst	A.10.(2)	Mandatory investment level of the industry
H3	ind.intl	A.10.(3)	Degree of internationalization of the industry
H4a	goods	A.3	Durable goods vs. intangible services/goods
H4b	business	A.4	Retail vs. wholesale business
H5	dmt.comp	B.5.(1)	Gaining competitiveness via int'l operation
H6a	fincap	A.9.(4)	Financial strength of the firm
H6b	mgrlcap	A.9.(5)	Managerial capabilities of the firm
H7	setupcst	A.8	Start-up investment level of the company
H8a	sales	A.7	Size of firm in terms of domestic sales
H8b	dmoutlet	A.5	Size of firm by the number of domestic outlet
H9	ownshp	A.6	Ownership structure of domestic operations
H10	exprnce	A.2	Experience: The year entered a foreign country
H11	mktstgy	A.9.(6)	Flexibility of international marketing strategies
H12	dmt.quic	B.5.(3)	Quickness of the foreign market development
H13	contact	C.7	Number of contacts to control franchisees
H14	upgrd.pt	C.6	Desire to upgrade production knowledge
H15	tnsf.kn	C.3	Easiness of transferring franchise knowledge
H16a	dcmt.fo	C.1	Easiness of codifying franchising operations
H16b	dcmt.pk	C.2	Easiness of codifying production knowledge
H17	natnlty	B.1	Nationality of the firm: US vs. UK
H18	dmt.prsk	B.5.(6)	Overall political risk of the target market
H19	dmt.legl	B.5.(9)	Legal difference bw home and host countries
H20	dmt.knwd	B.5.(10)	Int'l mkts as a source of dynamic learning
H21	ff.source	C.12	Foreign franchisees as a source of learning
H22	dmt.rivl	B.5.(11)	Competitive structure of target market
H23	change	C.8	Pressure to change product features
H24	dmt.dmnd	B.5.(7)	High demand condition: market potential
H25	fcon.no1	B.4	The 1st foreign country selected by firms
H26	dmt.appl	B.5.(12)	Enticement of qualified foreign applicants

*This indicates the question number in the questionnaire sent to the franchisers. Therefore, refer to the attached questionnaire to look into the actual questions asked.

Hypotheses 1 to 4 are about the *industry determinants*; H5 to H17 are for *firm-specific determinants*; and H18 to H26 are for *locational determinants*. Therefore, differences between the US and the UK firms in terms of these variables can be tested by simple *T-Tests*. The values or scores of each variable are given/measured by

directors/managers of international operations. Following **Table 5-6** is the *T-Test* results

for the industry determinants by the nationality of the firms. There is only one variable,

ind.tech, which showed a statistically significant difference between the two national

firms.

However, we don't know whose score is higher until mean values are known.

Therefore, descriptive statistics of these industry determinant variables are shown in

Table 5-7 in the following page.

Table 5-6: T-Test for Industry Determinants betweem the US & the UK Firms

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Mean | |
									Lower	Upper
Industry-evaluation: Production Technology	Equal variances assumed	.125	.724	2.297	68	.025	1.3017	.5666	.1710	2.4325
	Equal variances not assumed			2.220	15.387	.042	1.3017	.5864	5.457E-02	2.5489
Industry-evaluation: Madatory Investmt level	Equal variances assumed	.130	.720	-1.094	69	.278	-.4675	.4275	-1.3204	.3854
	Equal variances not assumed			-1.226	17.931	.236	-.4675	.3813	-1.2688	.3338
Industry-evaluation: Level of internationalization	Equal variances assumed	.076	.783	-.057	69	.955	-3.1073E-02	.5479	-1.1242	1.0620
	Equal variances not assumed			-.056	15.674	.956	-3.1073E-02	.5528	-1.2049	1.1428
Goods produced	Equal variances assumed	.023	.881	.592	69	.555	.1695	.2861	-.4012	.7402
	Equal variances not assumed			.567	15.189	.579	.1695	.2988	-.4667	.8057
Retail/Wholesale business	Equal variances assumed	3.027	.086	-1.006	69	.318	-.3192	.3173	-.9523	.3139
	Equal variances not assumed			-1.060	16.678	.304	-.3192	.3011	-.9554	.3170

Table 5-7 shows that the US firms graded the technology level of their industry

higher than the UK firms did. In order to be more meaningful, firms in the same business

sectors should have been compared. However, the wide spread of the UK firms among

the type of business combined with the small sample size makes the comparison difficult.

For the last two categorical variables (**goods** and **business**), we need more information

than the simple means. Following crosstabulations **Table 5-8** and **5-9** explain further

about each national firms' business activities.

Table 5-7: Mean Statistics of Industry Determinants for the US & the UK Firms

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Industry-evaluation: Production Technology	US	58	5.0517	1.7713	.2326
	UK	12	3.7500	1.8647	.5383
Industry-evaluation: Madatory Investmt level	US	59	3.9492	1.3824	.1800
	UK	12	4.4167	1.1645	.3362
Industry-evaluation: Level of internationalization	US	59	4.1356	1.7266	.2248
	UK	12	4.1667	1.7495	.5050
Goods produced	US	59	2.1695	.8935	.1163
	UK	12	2.0000	.9535	.2752
Retail/Wholesale business	US	59	1.8475	1.0139	.1320
	UK	12	2.1667	.9374	.2706

Table 5-8: Crosstabulation between Goods produced and Nationality

			Nationality		
			US	UK	Total
Goods produced	Non-durable consumer goods	Count	19	5	24
		% within Nationality	32.2%	41.7%	33.8%
		% of Total	26.8%	7.0%	33.8%
	Durable consumer goods	Count	11	2	13
		% within Nationality	18.6%	16.7%	18.3%
		% of Total	15.5%	2.8%	18.3%
	Intangible services/goods	Count	29	5	34
		% within Nationality	49.2%	41.7%	47.9%
		% of Total	40.8%	7.0%	47.9%
Total		Count	59	12	71
		% within Nationality	100.0%	100.0%	100.0%
		% of Total	83.1%	16.9%	100.0%

Table 5-9: Crosstabulation between Nationality and Retail/Wholesale Business

			Nationality		
			US	UK	Total
Retail/Wholesale business	Retail business	Count	34	4	38
		% within Nationality	57.6%	33.3%	53.5%
		% of Total	47.9%	5.6%	53.5%
	Wholesale business	Count	1	2	3
		% within Nationality	1.7%	16.7%	4.2%
		% of Total	1.4%	2.8%	4.2%
	Both retail and wholesale business	Count	23	6	29
		% within Nationality	39.0%	50.0%	40.8%
		% of Total	32.4%	8.5%	40.8%
	Others	Count	1		1
		% within Nationality	1.7%		1.4%
		% of Total	1.4%		1.4%
Total		Count	59	12	71
		% within Nationality	100.0%	100.0%	100.0%
		% of Total	83.1%	16.9%	100.0%

National differences regarding to the *firm-specific determinants* are shown in

Table 5-10.1 and 10.2. Then, following **Table 5-11** shows mean values of the firm-

specific variables by the nationality. The *T-Test* results (**Table 5-10.1**) showed that there

are significant differences in the domestic sales, number of domestic sales, and company

ownership of outlets. The geographic size of the domestic market should have a direct

impact on the number of domestic outlets and sales. The sample US firms have about

500 outlets, while the UK firms have around 150. Accordingly, the former had more than

$50 million sales in the domestic market in 1988, while the latter had about $15 million.

Then, the UK firms preferred company-owned outlets in the domestic market.

Table 5-11 shows that both national managers have evaluated their financial and

managerial capabilities about the same. Even for the variables related to the knowledge-

based attributes such as ease of knowledge-transferability and knowledge-codifiability,

there was not much difference. This could be due to the intrinsic characteristics of

franchising business. Since franchisers in the business format franchising should have a

routine procedure of making contracts with franchisees, they seem to have the equal

confidence level across the board in transferring and codifying franchising knowledge.

Table 5-10.1: Independent Samples T-Test for Firm-spcific Determinants

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Mean	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Determinant to gain competitiveness	Equal variances assumed	.089	.767	.254	62	.801	.2990	1.1794	-2.0587	2.6566
	Equal variances not assumed			.240	10.374	.815	.2990	1.2473	-2.4666	3.0646
Self-evaluation: Financial strength	Equal variances assumed	.004	.947	.981	69	.330	.4202	.4285	-.4346	1.2750
	Equal variances not assumed			.979	15.779	.342	.4202	.4293	-.4908	1.3312
Self-evaluation: Managerial capability	Equal variances assumed	.092	.762	1.053	69	.296	.3588	.3407	-.3210	1.0385
	Equal variances not assumed			1.129	16.994	.275	.3588	.3179	-.3119	1.0294
Start-up cost	Equal variances assumed	5.643	.020	1.179	69	.242	.5636	.4780	-.3900	1.5171
	Equal variances not assumed			2.032	45.946	.048	.5636	.2773	5.375E-03	1.1217
Domestic sales in 1998	Equal variances assumed	.376	.542	3.183	66	.002	1.7560	.5516	.6546	2.8573
	Equal variances not assumed			3.446	17.568	.003	1.7560	.5095	.6836	2.8283
Total outlets in the Domestic Markets	Equal variances assumed	9.291	.003	3.183	69	.002	1.8362	.5769	.6853	2.9870
	Equal variances not assumed			5.780	54.241	.000	1.8362	.3176	1.1994	2.4729
Ownership in the Domestic Markets	Equal variances assumed	.472	.494	-2.200	68	.031	-1.1868	.5395	-2.2634	-.1102
	Equal variances not assumed			-2.171	15.688	.046	-1.1868	.5468	-2.3477	-2.5842E-02
Year that started foreign operation	Equal variances assumed	.479	.491	-.665	63	.509	-1.8535	2.7876	-7.4241	3.7170
	Equal variances not assumed			-.738	16.105	.471	-1.8535	2.5118	-7.1754	3.4684

Table 5-10.2: Independent Samples T-Test for Firm-spcific Determinants

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Mean	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Self-evaluation: F. Mkting strategy	Equal variances assumed	.439	.510	-.582	69	.563	-.3206	.5513	-1.4204	.7791
	Equal variances not assumed			-.651	17.891	.523	-.3206	.4925	-1.3558	.7146
Determinant: quick penetration	Equal variances assumed	2.052	.157	1.248	66	.217	.9345	.7490	-.5609	2.4299
	Equal variances not assumed			1.013	13.581	.329	.9345	.9223	-1.0493	2.9183
For quality purpose, the frequency of contact with F franchisees	Equal variances assumed	.000	.996	-.202	68	.841	-.1341	.6645	-1.4601	1.1920
	Equal variances not assumed			-.203	14.087	.842	-.1341	.6595	-1.5477	1.2796
Desire to upgrade production techniqu	Equal variances assumed	1.049	.310	.725	65	.471	.4808	.6631	-.8435	1.8052
	Equal variances not assumed			.618	9.681	.551	.4808	.7777	-1.2597	2.2214
Ease of transferring franchise/production knowledge	Equal variances assumed	.504	.480	1.419	67	.160	.6118	.4311	-.2487	1.4724
	Equal variances not assumed			1.645	19.063	.116	.6118	.3720	-.1666	1.3903
Ease of documentin franchise operation	Equal variances assumed	.059	.808	-.512	68	.610	-.2443	.4768	-1.1956	.7071
	Equal variances not assumed			-.482	15.031	.637	-.2443	.5068	-1.3242	.8357
Ease of documentin franchise production knowledge	Equal variances assumed	.969	.329	-.097	65	.923	-5.0877E-02	.5227	-1.0948	.9930
	Equal variances not assumed			-.081	10.960	.937	-5.0877E-02	.6276	-1.4329	1.3312

Table 5-11: Mean Statistics for Firm-specific Determinants

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Determinant: to gain competitiveness	US	55	5.8545	3.2456	.4376
	UK	9	5.5556	3.5040	1.1680
Self-evaluation: Financial strength	US	59	5.7119	1.3525	.1761
	UK	12	5.2917	1.3561	.3915
Self-evaluation: Managerial capability	US	59	6.0254	1.0924	.1422
	UK	12	5.6667	.9847	.2843
Start-up cost	US	59	1.8136	1.6239	.2114
	UK	12	1.2500	.6216	.1794
Domestic sales in 1998	US	56	4.8393	1.7661	.2360
	UK	12	3.0833	1.5643	.4516
Total outlets in the Domestic Markets	US	59	3.1695	1.9666	.2560
	UK	12	1.3333	.6513	.1880
Ownership in the Domestic Markets	US	58	2.3966	1.6956	.2226
	UK	12	3.5833	1.7299	.4994
Year that started foreign operation	US	54	87.0556	8.6120	1.1719
	UK	11	88.9091	7.3682	2.2216
Self-evaluation: F. Mkting strategy	US	59	4.2627	1.7820	.2320
	UK	12	4.5833	1.5050	.4345
Determinant: quick penetration	US	56	7.0179	2.1950	.2933
	UK	12	6.0833	3.0289	.8744
For quality purpose, the frequency of contact with F franchisees	US	59	4.5932	2.0267	.2639
	UK	11	4.7273	2.0045	.6044
Desire to upgrade production technique	US	58	4.2586	1.7924	.2354
	UK	9	3.7778	2.2236	.7412
Ease of transferring franchise/production knowledge	US	57	4.0702	1.3997	.1854
	UK	12	3.4583	1.1172	.3225
Ease of documenting franchise operation	US	58	3.6724	1.4795	.1943
	UK	12	3.9167	1.6214	.4680
Ease of documenting franchise production knowledge	US	57	3.6491	1.4576	.1931
	UK	10	3.7000	1.8886	.5972

National differences regarding to *location-specific determinants* are shown in Table 5-12, and the following **Table 5-13** shows mean values of the location-specific variables by the nationality.

There are two variables that showed statistically significant difference. The importance of foreign applicants (**dmt.appl**) in enticing the franchise business and legal difference (**dmt.legl**) of foreign locations was recognized more seriously by the US franchisers than by the UK firms.

Table 5-12: Independent Samples T-Test for Location-specific Determinants

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Mean	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Determinant: political risk of host country	Equal variances assumed	.088	.767	1.413	63	.163	1.5595	1.1040	-.6466	3.7656
	Equal variances not assumed			1.514	11.345	.157	1.5595	1.0302	-.6997	3.8187
Determinant: legal difference	Equal variances assumed	1.431	.236	2.172	63	.034	2.0595	.9484	.1643	3.9547
	Equal variances not assumed			2.650	12.935	.020	2.0595	.7771	.3799	3.7391
Determinant: F mkt. as a souce of learning/knowledge	Equal variances assumed	1.011	.318	-1.274	65	.207	-1.0924	.8574	-2.8047	.6198
	Equal variances not assumed			-1.098	14.180	.291	-1.0924	.9952	-3.2243	1.0395
F franchisees have been a source of:	Equal variances assumed	.131	.719	1.432	69	.157	.6412	.4476	-.2518	1.5343
	Equal variances not assumed			1.527	16.893	.145	.6412	.4198	-.2449	1.5274
Determinant: aggressive expansion by rival firms	Equal variances assumed	.619	.434	.053	63	.958	5.482E-02	1.0406	-2.0247	2.1343
	Equal variances not assumed			.042	8.145	.967	5.482E-02	1.2939	-2.9196	3.0292
F franchisees who changed our product features	Equal variances assumed	.269	.606	-.076	68	.939	-3.4483E-02	.4509	-.9341	.8652
	Equal variances not assumed			-.069	14.467	.946	-3.4483E-02	.5025	-1.1090	1.0400
Determinant: demand condition of target mkt	Equal variances assumed	.025	.874	-.280	64	.780	-.2182	.7779	-1.7722	1.3359
	Equal variances not assumed			-.245	12.815	.810	-.2182	.8904	-2.1446	1.7082
Determinant: enticement of F applicants	Equal variances assumed	3.014	.088	2.030	62	.047	2.0179	.9939	3.105E-02	4.0047
	Equal variances not assumed			1.573	8.048	.154	2.0179	1.2825	-.9365	4.9722

Table 5-13: Mean Statistics for Location-specific Determinants

	Nationality	N	Mean	Std. Deviation	Std. Error Mean
Determinant: political risk of host country	US	56	4.8929	3.1082	.4154
	UK	9	3.3333	2.8284	.9428
Determinant: legal difference	US	56	4.3929	2.7148	.3628
	UK	9	2.3333	2.0616	.6872
Determinant: F mkt. as a souce of learning/knowledge	US	55	4.4909	2.5667	.3461
	UK	12	5.5833	3.2322	.9330
F franchisees have been a source of:	US	59	4.9746	1.4337	.1866
	UK	12	4.3333	1.3027	.3761
Determinant: aggressive expansion by rival firms	US	57	2.9298	2.6448	.3503
	UK	8	2.8750	3.5229	1.2455
F franchisees who changed our product features	US	58	2.4655	1.3792	.1811
	UK	12	2.5000	1.6237	.4687
Determinant: demand condition of target mkt	US	55	6.8727	2.2694	.3060
	UK	11	7.0909	2.7732	.8362
Determinant: enticement of F applicants	US	56	6.6429	2.4968	.3336
	UK	8	4.6250	3.5026	1.2383

V.3.2. Favored Target Nations

Lastly, the favored target markets of the two national firms (*H25*: **fcon.no1 – no3**) are compared in the following tables (**Table 5-14s** and **5-15s**). Firms were asked the first three foreign nations they entered. As expected more than one third of the US firms favored Canada as their first target foreign country (**Table 5-14.1: fcon.no1**). Next, Australia was targeted despite of a long distance from the US. The demand condition of the expanding Australian economy should have influenced on the firms' decision to enter Australia. It may also indicate that psychic distance matters more than physical distance when a firm selects its target markets. This argument is supported by the fact that many US firms selected European nations, although wide spread among the continent, as their first target market (9 cases: 2 UK and 7 others). Then, US firms showed no specific

preference for the second and third target nations. They are spread among Australia,

New Zealand, Mexico, European nations, South America, and Asian countries.

On the other hand, the UK firms showed a consistency in their selection of the

first three target countries: They preferred neighboring European nations (**Table 5-15.1-**

3). Ireland (5) was the most preferred target country followed by Belgium (4) and

German (4). Then, Asian nations were as popular as the US market. It is interesting to

see that France was never included as one of the first three target nations by the UK

firms.

Table 5-14.1: US Firms' 1st Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Canada	21	35.6	36.2	36.2
	Mexico	4	6.8	6.9	43.1
	UK	2	3.4	3.4	46.6
	Australia	8	13.6	13.8	60.3
	Perto Rico, Bahamas, Costa Rica	4	6.8	6.9	67.2
	Other European nations	7	11.9	12.1	79.3
	Asian Nations	6	10.2	10.3	89.7
	African Nations	5	8.5	8.6	98.3
	Russia	1	1.7	1.7	100.0
	Total	58	98.3	100.0	
Missing	System Missing	1	1.7		
	Total	1	1.7		
Total		59	100.0		

Table 5-14.2: US Firms' 2nd Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Canada	8	13.6	16.3	16.3
	Mexico	5	8.5	10.2	26.5
	UK	5	8.5	10.2	36.7
	Australia, New Zealand	2	3.4	4.1	40.8
	Puerto Rico, Bahamas	6	10.2	12.2	53.1
	European Countries	8	13.6	16.3	69.4
	Asian countries	11	18.6	22.4	91.8
	African nations	2	3.4	4.1	95.9
	Russia	1	1.7	2.0	98.0
	Guam	1	1.7	2.0	100.0
	Total	49	83.1	100.0	
Missing	System Missing	10	16.9		
	Total	10	16.9		
Total		59	100.0		

Table 5-14.3: US Firms' 3rd Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Canada	3	5.1	6.8	6.8
	Mexico	5	8.5	11.4	18.2
	UK	6	10.2	13.6	31.8
	Australia, New Zealand	8	13.6	18.2	50.0
	Puerto Rico, Bahamas, S. America	8	13.6	18.2	68.2
	Europeans	5	8.5	11.4	79.5
	Asian nations	6	10.2	13.6	93.2
	Middle East	2	3.4	4.5	97.7
	Africa	1	1.7	2.3	100.0
	Total	44	74.6	100.0	
Missing	System Missing	15	25.4		
	Total	15	25.4		
Total		59	100.0		

Table 5-15.1: UK Firms' 1st Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	European countries	7	58.3	63.6	63.6
	USA	2	16.7	18.2	81.8
	Asian countries	2	16.7	18.2	100.0
	Total	11	91.7	100.0	
Missing	System Missing	1	8.3		
	Total	1	8.3		
Total		12	100.0		

Table 5-15.2: UK Firms' 2nd Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	European countries	7	58.3	77.8	77.8
	Asian countries	1	8.3	11.1	88.9
	Middle East nations	1	8.3	11.1	100.0
	Total	9	75.0	100.0	
Missing	System Missing	3	25.0		
	Total	3	25.0		
Total		12	100.0		

Table 5-15.3: UK Firms' 3rd Foreign Country Entered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	European	5	41.7	62.5	62.5
	Asian	3	25.0	37.5	100.0
	Total	8	66.7	100.0	
Missing	System Missing	4	33.3		
	Total	4	33.3		
Total		12	100.0		

V.4. Test of Hypotheses: Influence of Three Determinants on the Entry Modes

In the previous methodology chapter, the *Oneway ANOVA* was used to recognize the statistically significant variables that differentiated firms according to the three types of foreign market entry modes. However, the mean statistics of the variables were not mentioned in that chapter since the object of that chapter was not to describe the means but to select critical variables that can separate three types of entry mode and that can be included in a statistical model.

There is no need to repeat the *Oneway ANOVA* in this chapter since they were already shown in **Table 4-10** to **4-12** in the previous chapter. Only groups' mean statistics are generated by the SPSS to compare and contrast the expected influence of the three determinants on the entry modes and the actual data outcomes.

V.4.1. Industry Determinants and Entry Modes

Following **Table 5-16** presents the mean statistics for the *industry determinants*, and **Table 5-17** compares the expected impacts of each variable on the selection of entry modes and the actual data. As the type of entry mode changes from Type 1 to type 3, we expect more commitment in terms of financial investments and managerial efforts. Then two sets of crosstabulation are prepared (**Table 5-18.1** and **18.2**) for **goods** and **business** variables since they are non-metric, categorical variables.

Table 5-16: Mean Statistics of Industry Determinants by the Entry Modes

Foreign Mkt Entry Mode		Industry-evaluation: Production Technology	Industry-evaluation: Madatory Investmt level	Industry-evaluation: Level of internationalization	Goods produced	Retail/Wholesale business
Master franchising / Area developer	Mean	4.7619	3.7907	4.2093	2.2093	2.0698
	N	42	43	43	43	43
	Std. Deviation	1.9357	1.3194	1.7533	.8880	.9855
Licensing or Direct franchising	Mean	4.9130	4.0000	3.7391	2.0000	1.5217
	N	23	23	23	23	23
	Std. Deviation	1.7298	1.5076	1.8882	.9045	.9472
Equity Ownership (M/A, JVs, FDI)	Mean	3.9231	4.2308	5.0769	1.9231	1.6154
	N	13	13	13	13	13
	Std. Deviation	2.1780	1.3634	1.4979	1.0377	.9608
Total	Mean	4.6667	3.9241	4.2152	2.1013	1.8354
	N	78	79	79	79	79
	Std. Deviation	1.9250	1.3754	1.7879	.9142	.9927

Following **Table 5-17** shows the expected influence of each variable on the commitment level of foreign market entry and the actual data based on **Table 5-16**. Therefore, this is the table that shows the test result of the *Hypotheses* for the industry determinants. In **Table 5-17**, **HC** means high commitment entry modes (Type 3 entry modes), **LC** indicates low commitment entry mode (Type 1), and **N** and **P** are abbreviation of a negative and a positive relationship between each variable and the commitment level of the entry mode.

Table 5-17: Expected and Actual Impacts of *Industry Determinants* on Entry Modes

Hypothesis Number	Variable Names	Expected relationships between variables and entry modes	Actual Sign	Significance (p Value)
H1	ind.tech	P: The higher → HC	N	.302
H2	ind.ivst	N: The higher → LC	P	.577
H3	**ind.intl**	**P: The higher → HC**	**P**	**.097**
H4a	goods	Durable goods → HC	-	.508
H4b	**Business**	**Wholesale business → HC**	**-**	**.068**

Before we tackle **Table 5-17**, we need to remind that the UK firms directly affect

Type 3 entry mode cases; eight of thirteen Type 3 cases were made by the UK firms. On

the contrary, for the rest two types of entry cases, the US firms are the dominant forces.

Therefore, we need to separate the effect of nationality by dividing firms according to

their country of origin. Accordingly, two more tables (**Table 5-19s**) are prepared to test

the relationship between the entry mode types and the determinants for each national

firm.

Table 4-10 (*Oneway ANOVA* for Industry determinants), which is incorporated in

to **Table 5-17**, shows that two variables (**ind.intl**, and **business**) do not have the same

mean values among the three types of entry mode with statistical significance. From

Table 5-16, ind.intl matches the expected direction of commitment level in terms of

entry mode and the actual data. Firms with Type 3 entry modes regard their industry is

more internationalized than firms with other types.

For **ind.tech** (H1) and **ind.ivst** (H2), however, the actual relationships with the

entry modes are direct opposite of the expectation. Then, we have to be careful in

concluding about this test result because of the impacts of nationality. Shortly, **Tables 5-**

19s will show the different evaluation of variables by the two national firms.

For **business** variable, the analysis of data by *oneway ANOVA* is not appropriate

due to the non-metric character of the data: hence, **Table 5-18.1** is prepared. Franchisers

in the wholesale business is expected/hypothesized to have a higher resource

commitment entry modes such as joint venture, M&A, and company-owned outlets.

Contrary to the expectation, firms in the retail business seem to have more equity-based

entry modes. 69.2% of all type 3 equity-based entry modes consists of the firms in the

retail business. Then, 73.9% of all Type 2 entry cases and 44.2% of all Type 1 entry cases are from the firms also in the retail business. The noticeable role of the retail firms in the selection of entry modes is attributable to the large number of retail firms in the samples (57%).

Then, we cannot conclude that firms in the sole-retail business favor equity-based type 3 entry modes. Out of 45 retailers, many preferred or selected Type 1 (42.2%) and Type 2 (37.8%) entry modes, and the rest (20%) had type 3 entry modes. Therefore, we can only conclude that type 3 entry modes are most frequently used by sole-retailers since nine out of fourteen type 3 entry mode cases have only retail business. On the other hand, **Table 5-18.1** shows that there are only three firms that operate exclusively on the wholesale basis, and most firms in the wholesale business also have retail business. Therefore, for these firms which have both retail and wholesale business, it is difficult to judge which type of business has determined the selection of entry modes.

Table 5-18.1: Crosstabulation between Retail/Wholesale business and Foreign Market Entry Modes

			Foreign Mkt Entry Mode			
			Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Retail/Wholesale business	Retail business	Count	19	17	9	45
		% within Retail/Wholesale business	42.2%	37.8%	20.0%	100.0%
		% within Foreign Mkt Entry Mode	44.2%	73.9%	69.2%	57.0%
	Wholesale business	Count	2	1		3
		% within Retail/Wholesale business	66.7%	33.3%		100.0%
		% within Foreign Mkt Entry Mode	4.7%	4.3%		3.8%
	Both retail and wholesale business	Count	22	4	4	30
		% within Retail/Wholesale business	73.3%	13.3%	13.3%	100.0%
		% within Foreign Mkt Entry Mode	51.2%	17.4%	30.8%	38.0%
	Others	Count		1		1
		% within Retail/Wholesale business		100.0%		100.0%
		% within Foreign Mkt Entry Mode		4.3%		1.3%
Total		Count	43	23	13	79
		% within Retail/Wholesale business	54.4%	29.1%	16.5%	100.0%
		% within Foreign Mkt Entry Mode	100.0%	100.0%	100.0%	100.0%

We need to prepare another crosstable (Table 5-18.2) for *H4a*. It was hypothesized that firms, which produce durable consumer goods, were expected to use more equity-based entry modes. Contrary to the expectation, type 3 modes were used by firms serving non-durable goods and intangible services. The situation is about the same as that of the wholesalers and retailers. First, there are not many firms selling durable goods; only 13 out of 79 firms (16.5%). Second, even among the firms selling intangible

goods and non-durable goods, type 3 mode is not the most popular entry mode.

Therefore, it is difficult to draw a conclusion from this table that either group has

preferred equity-based entry modes. Both groups favored Type 1 entry modes, but firms

producing non-durable consumer goods had the higher portion of Type 3 entry mode

cases.

Table 5-18.2: Crosstabulation bw Goods Produced & Foreign Market Entry Modes

			Foreign Mkt Entry Mode			
			Master franchising / Area developer	Licensing or Direct franchising	Equity Ownership (M/A, JVs, FDI)	Total
Goods produced	Non-durable consumer goods	Count	13	9	7	29
		% within Goods produced	44.8%	31.0%	24.1%	100.0%
		% of Total	16.5%	11.4%	8.9%	36.7%
	Durable consumer goods	Count	8	5		13
		% within Goods produced	61.5%	38.5%		100.0%
		% of Total	10.1%	6.3%		16.5%
	Intangible services/goods	Count	22	9	6	37
		% within Goods produced	59.5%	24.3%	16.2%	100.0%
		% of Total	27.8%	11.4%	7.6%	46.8%
Total		Count	43	23	13	79
		% within Goods produced	54.4%	29.1%	16.5%	100.0%
		% of Total	54.4%	29.1%	16.5%	100.0%

Based on the following two tables (**Table 5-19.1 & 19.2**), **Table 5-17.1** is

constructed. The actual data of US firms matched with the expected relationship between

the determinants and the entry modes. We can see the impacts of the British firms on

ind.tech and **ind.ivst**. The US firms behaved as expected in those two determinants,

while the UK firms showed an opposite course. Regarding to the industry technology, there is a strong sign that the UK firms with the lower commitment entry modes evaluated their industry as technologically advanced than the firms with Type 3 entry modes did.

However, the small sample size of the UK firms makes it very difficult to draw a meaningful conclusion from the data. There are only three and four cases of Type 1 and Type 2 entry modes for the UK firms. Then, the impacts of UK firms are well recognized in Type 3 entry modes: There are eight UK firms out of total thirteen Type 3 cases. Therefore, the UK firms' statistics play an important role especially for the Type 3 entry mode cases.

Table 5-17.1: Expected and Actual Impacts of *Industry Determinants* on Entry Modes

Hypothesis Number	Variable Names	Expected relationships	Actual Sign (Both)	Actual Sign (The US)	Actual Sign (The UK)	Significance (*p* Value)
H1	ind.tech	P	N	P	N	.302
H2	ind.ivst	N	P	N	P	.577
H3	**ind.intl**	**P**	**P**	**P**	**P**	**.097**
H4a	goods	P: Durable goods	-	-	-	.508
H4b	**Business**	**P: Wholesale**	-	-	-	**.068**

Table 5-19.1: The US Firms' Mean Statistics of Industry Determinants by the Entry Modes

Foreign Mkt Entry Mode		Industry-evaluation: Production Technology	Start-up cost	Industry-evaluation: Madatory Investmt level	Industry-evaluation: Level of internationalization	Goods produced	Retail/Wholesale business
Master franchising / Area developer	Mean	4.8947	1.4872	3.8974	4.4103	2.2051	2.0513
	N	38	39	39	39	39	39
	Std. Deviation	1.9001	1.2952	1.2731	1.6814	.8938	.9986
Licensing or Direct franchising	Mean	5.1579	2.4737	4.0000	3.7368	2.0526	1.4737
	N	19	19	19	19	19	19
	Std. Deviation	1.5728	2.0647	1.6330	1.9103	.9113	.9643
Equity Ownership (M/A, JVs, FDI)	Mean	5.2000	3.2000	3.2000	5.4000	2.2000	1.0000
	N	5	5	5	5	5	5
	Std. Deviation	2.4900	2.5884	1.4832	1.6733	1.0954	.0000
Total	Mean	5.0000	1.9206	3.8730	4.2857	2.1587	1.7937
	N	62	63	63	63	63	63
	Std. Deviation	1.8287	1.7441	1.3969	1.7819	.9017	1.0026

Table 5-19.2: The UK Firms' Mean Statistics of Industry Determinants by the Entry Modes

Foreign Mkt Entry Mode		Industry-evaluation: Production Technology	Start-up cost	Industry-evaluation: Madatory Investmt level	Industry-evaluation: Level of internationalization	Goods produced	Retail/Wholesale business
Master franchising / Area developer	Mean	4.3333	1.0000	3.3333	2.6667	2.0000	2.6667
	N	3	3	3	3	3	3
	Std. Deviation	1.5275	.0000	1.1547	1.1547	1.0000	.5774
Licensing or Direct franchising	Mean	3.7500	1.7500	4.0000	3.7500	1.7500	1.7500
	N	4	4	4	4	4	4
	Std. Deviation	2.2174	.9574	.8165	2.0616	.9574	.9574
Equity Ownership (M/A, JVs, FDI)	Mean	3.1250	1.3750	4.8750	4.8750	1.7500	2.0000
	N	8	8	8	8	8	8
	Std. Deviation	1.6421	.7440	.8345	1.4577	1.0351	1.0690
Total	Mean	3.5333	1.4000	4.3333	4.1333	1.8000	2.0667
	N	15	15	15	15	15	15
	Std. Deviation	1.7265	.7368	1.0465	1.7265	.9411	.9612

V.4.2. Firm-specific Determinants and Entry Modes

Following **Tables 5-20.1** to **20.3** show the mean statistics for the *firm-specific*

determinants, and **Table 5-21** compares the expected impacts of each variable on the

selection of entry modes and the actual mean data shown in **Tables 5-20.1** to **20.3**. The *p*

values (significance) of the *oneway ANOVA* tests are from the **Table 4-11s** in the

previous methodology chapter. Again, in **Table 5-21**, **HC** means high commitment entry

modes (type 3 entry modes), **LC** indicate low commitment entry mode (Type 1), and **N**

and **P** are abbreviations of the negative and positive relationship between each variable

and the commitment level of the entry modes.

Table 5-20.1: Mean Statistics of Firm-specific Determinants by Entry Modes

Foreign Mkt Entry Mode		eterminant: to gain competitiveness	Self-evaluation: Financial strength	Self-evaluation: Managerial capability	Start-up cost	Domestic sales in 1998	Total outlets in the Domestic Markets
Master franchising / Area developer	Mean	6.0000	5.5349	5.7907	1.4419	4.5476	2.8140
	N	42	43	43	43	42	43
	Std. Deviation	3.0604	1.3689	1.1456	1.2402	1.7697	1.8804
Licensing or Direct franchising	Mean	4.4000	5.9565	6.2826	2.3478	5.0952	3.0435
	N	20	23	23	23	21	23
	Std. Deviation	3.6476	1.2605	.9633	1.9214	1.6705	1.9418
Equity Ownership (M/A, JVs, FDI)	Mean	8.0000	5.4231	6.0000	2.0769	4.1538	3.0000
	N	9	13	13	13	13	13
	Std. Deviation	2.6458	1.3821	.9129	1.8467	2.3397	2.5495
Total	Mean	5.8028	5.6392	5.9684	1.8101	4.6316	2.9114
	N	71	79	79	79	76	79
	Std. Deviation	3.3322	1.3396	1.0692	1.6019	1.8536	1.9948

Table 5-20.2: Mean Statistics of Firm-specific Determinants by Entry Modes

Foreign Mkt Entry Mode		Ownership in the Domestic Markets	Year that started foreign operation	Self-evaluation: F. Mkting strategy	Determinant: quick penetration	For quality purpose, the frequency of contact with F franchisees
Master franchising / Area developer	Mean	1.9070	87.3415	4.2674	7.0000	4.2381
	N	43	41	43	42	42
	Std. Deviation	1.0870	7.9612	1.6986	2.3374	2.0459
Licensing or Direct franchising	Mean	3.1364	87.5789	4.0435	6.5714	4.9130
	N	22	19	23	21	23
	Std. Deviation	2.1223	8.2618	1.9881	2.2039	2.0430
Equity Ownership (M/A, JVs, FDI)	Mean	4.2308	86.6154	4.7692	7.1538	5.2500
	N	13	13	13	13	12
	Std. Deviation	1.5892	9.1973	1.4806	3.0780	1.8647
Total	Mean	2.6410	87.2740	4.2848	6.9079	4.5974
	N	78	73	79	76	77
	Std. Deviation	1.7505	8.1535	1.7499	2.4176	2.0343

Table 5-20.3: Mean Statistics of Firm-specific Determinants by Entry Modes

Foreign Mkt Entry Mode		Desire to upgrade production technique	Ease of transferring franchise/production knowledge	Ease of documenting franchise operation	Ease of documenting franchise production knowledge	Nationality
Master franchising / Area developer	Mean	3.9750	4.2561	3.9286	3.7692	1.0714
	N	40	41	42	39	42
	Std. Deviation	1.7901	1.2406	1.5043	1.5805	.2607
Licensing or Direct franchising	Mean	4.5455	3.8696	3.3913	3.6087	1.1739
	N	22	23	23	23	23
	Std. Deviation	1.8703	1.4555	1.3731	1.4058	.3876
Equity Ownership (M/A, JVs, FDI)	Mean	4.0909	3.6923	3.6154	3.0833	1.6154
	N	11	13	13	12	13
	Std. Deviation	2.3433	1.4936	1.7097	1.3114	.5064
Total	Mean	4.1644	4.0455	3.7179	3.6081	1.1923
	N	73	77	78	74	78
	Std. Deviation	1.8931	1.3528	1.5024	1.4880	.3967

Table 5-21: Expected and Actual Impacts of *Firm-specific Determinants* on Entry Modes

Hypothesis Number	Variable Names	Expected relationships between variables and entry modes	Actual Sign	Significance (p Value)
H5	**dmt.comp**	**P: The higher → HC**	**P**	**.020**
H6a	fincap	P: The higher → HC	About the Same	.394
H6b	mgrlcap	P: The higher → HC	P	.205
H7	**setupcst**	**N: The higher → LC**	**Mixed**	**.072**
H8a	sales	P: The larger → HC	Mixed	.327
H8b	dmoutlet	P: The larger → HC	P	.894
H9	**ownshp**	**P: The higher → HC**	**P**	**.000**
H10	exprnce	P: The higher → HC	About the Same	.946
H11	mktstgy	P: The less flexible → LC	P	.493
H12	dmt.quic	P: The higher → HC	P	.745
H13	contact	P: The more → HC	P	.214
H14	upgrd.pt	P: The higher → HC	P	.526
H15	tnsf.kn	P: The easier → LC	P	.326
H16a	dcmt.fo	P: The easier → LC	P	.378
H16b	dcmt.pk	P: The easier → LC	P	.382
H17	**natnlty**	**UK firms → HC**	**P**	**.000**

As shown in **Table 5-21**, there are four variables (**dmt.comp, setupcst, ownshp, and natnlty**) that showed different group means by the three types of entry mode with statistical significance. They even matched the expected and actual relationship between the variables and the entry modes, except **setupcst**. When start-up cost is relatively high, it should be difficult to expand the business through mainly equity modes. Therefore, franchiser may want to use financial and managerial resources of franchisees. Then, if the same logic applies, the franchisers who expand through equity methods should have lower start-up cost than that of franchisers who prefer to make contracts. However, the data showed a mixed picture.

Despite of statistical insignificance, nine variables among the firm-specific determinants show the match between the predicted and actual influence of the variables

on the selection of entry modes: **mgrlcap, dmoutlet, mktstgy, dmt.quic, contact, upgrd.pt, tnsf.kn, dcmt.fo,** and **dcmt.pk.** There is a positive relationship between the variables and the commitment level of the entry modes. The higher level of the first six of these variables will result in higher entry commitments, which mean type 3 equity-based modes. The last three variables are about the knowledge-based attributes, and the relationship between the variables and the entry modes is about the ease of knowledge transferability and codifiablility. It was hypothesized that franchisers with higher commitment entry modes will find it easier to transfer and codify franchise knowledge.

Then, there are two variables (financial capability and international experience of the firm) that showed about the same mean values, and domestic sales figure was mix by the entry modes. Despite of the dismal difference among firms in term of financial capability evaluated by themselves, firms with Type 2 entry modes scored the highest. This makes sense since their domestic sales were the highest. The lowest domestic sales statistic for the firms with the Type 3 entry modes should be attributable to the smaller size the UK firms, which consist the majority of that mode.

V.4.3. Locational Determinants and Entry Modes

Following **Tables 5-22.1** to **22.2** show the mean statistics for the *locational determinants*, and **Table 5-23** compares the expected impacts of each variable on the selection of entry modes. The significance of the *oneway ANOVA* tests is from the **Table 4-12** in the previous methodology chapter. Again, in **Table 5-23**, **HC** means high commitment entry modes (type 3 entry modes), **LC** indicate low commitment entry mode

(Type 1), and **N** and **P** are abbreviations of the negative and positive relationship between each variable and the commitment level of the entry modes.

Table 5-22.1: Mean Statistics of Locational Determinants by Entry Modes

Foreign Mkt Entry Mode		Determinant: political risk of host country	Determinant: legal difference	Determinant: F mkt. as a souce of learning/knowledge	F franchisees have been a source of:
Master franchising / Area developer	Mean	5.1951	4.7317	4.6429	5.0465
	N	41	41	42	43
	Std. Deviation	3.0350	2.8286	2.4774	1.4793
Licensing or Direct franchising	Mean	3.9500	2.8947	3.7143	4.6304
	N	20	19	21	23
	Std. Deviation	2.9105	2.4013	2.7045	1.5242
Equity Ownership (M/A, JVs, FDI)	Mean	4.0000	3.9167	7.4167	4.1538
	N	12	12	12	13
	Std. Deviation	2.6285	1.9752	2.5030	1.2810
Total	Mean	4.6575	4.1111	4.8267	4.7785
	N	73	72	75	79
	Std. Deviation	2.9638	2.6830	2.7869	1.4823

Table 5-22.2: Mean Statistics of Locational Determinants by Entry Modes

Foreign Mkt Entry Mode		Determinant: aggressive expansion by rival firms	F franchisees who changed our product features	Determinant: demand condition of target mkt	Determinant: enticement of F applicants
Master franchising / Area developer	Mean	2.7317	2.4524	6.8810	7.0488
	N	41	42	42	41
	Std. Deviation	2.3877	1.4004	2.3808	2.2798
Licensing or Direct franchising	Mean	3.1000	2.4783	6.6500	5.3684
	N	20	23	20	19
	Std. Deviation	2.8636	1.3774	2.3681	3.1835
Equity Ownership (M/A, JVs, FDI)	Mean	4.0000	2.8462	7.6667	3.4545
	N	11	13	12	11
	Std. Deviation	3.2863	1.9081	1.7753	2.4643
Total	Mean	3.0278	2.5256	6.9459	6.0423
	N	72	78	74	71
	Std. Deviation	2.6695	1.4747	2.2869	2.8657

Table 5-23: Expected and Actual Impacts of *Locational Determinants* on Entry Modes

Hypothesis Number	Variable Names	Expected relationships between variables and entry modes	Actual Sign	Significance (p Value)
H18	dmt.prsk	N: The higher → LC	N	.217
H19	dmt.legl	N: The higher → LC	N	.044
H20	dmt.knwd	P: The higher → HC	P	.001
H21	ff.sorce	N: The Lower → HC	N	.139
H22	dmt.rivl	P: The more → HC	P	.377
H23	change	N: The higher → LC	About the Same	.696
H24	dmt.dmnd	P: The higher → HC	P	.464
H26	dmt.appl	N: The more → LC	N	.000

Table 5-23 shows that all of the locational determinants except one (**change**) have the relationship with the entry modes as expected. Especially three (**dmt.legl**, **dmt.knwd**, and **dmt.appl**) variables showed statistically significant differences in the estimated means. Regarding to the legal difference between home and host markets (**dmt.legl**), group 1 (firms with low commitment entry modes: Type 1) had a higher concern than the firms with higher commitments (Type 3) as expected. Then, group 2 (or firms with Type 2 entry modes) is less concerned about the legal differences than group 3 does. It makes sense that they should have less concern about the legal differences since group 2 do not commit financial investments in foreign markets.

In terms of the strategic importance of the foreign markets (**dmt.knwd**) and franchisees (**ff.sorce**) as a source of knowledge, group 3 emphasized it most highly as expected. For *Hypothesis 20*, the relationship is set up in a negative way due to the way the question is asked in the questionnaire (Questionnaire: Section C-12). **Ff.sorce** even showed little statistical significance with a p value of 0.139. Again, regarding to **dmt.knwd**, group 2 scored the lowest, which is understandable due to the characteristics of licensing operation.

Regarding to the pressure for local responsiveness (**change**), franchisers were asked to respond on a seven point Likert scale about the frequency of product change by foreign franchisees (Section C-8: extremely rare vs. extremely many cases of changes in product features), and all three groups scored less than three. Therefore, foreign franchisees seem to follow the guidance of franchisers across the board. On the other hand, it may indicate the strict governance of international operations by the international franchisers.

V.5. Conclusion

Franchisers will be franchisers wherever they go. They will make franchising contracts with franchisees when they go abroad. Therefore, majority of international franchisers will enter foreign markets via Type 1 and 2 entry modes. As expected 83.5% of entry cases was either Type 1 (54.4%) and Type 2 (29.1%) entry mode. Therefore, it seems meaningless explaining this natural behavior of franchisers, even if conventional theories of international business may find the default foreign market entry mode of international franchisers unfamiliar.

What intrigues students of IB to examine the entry modes of international franchisers is not the majority but a small group of international franchisers. There are a few cases (16.5% of this sample) that entered foreign market via equity modes. By taking equity modes, franchisers are in a sense giving up being franchisers. Why would a franchiser do that? This research has tried to find out the answer by applying the resource- and/or knowledge-based perspectives.

Oneway ANOVAs (**Tables 4-10, 4-11.1, 4-11.2,** and **4-12**) presented in the previous Chapter identified nine variables that had different group means with statistical significance among the firms of the different types of entry modes. They were (i) level of internationalization and (ii) business types (wholesale vs. retail) from the industry determinants; (iii) global strategic motivation, (iv) start-up costs, (v) domestic ownership structure, and (vi) nationality of firms from the firm-specific determinants; and (vii) legal differences, (viii) understanding foreign market as a source of learning, and (ix) active enticement of foreign applicants from the locational determinants.

Among these, variables (1), (3), and (8) are of special interests in this study.

These variables are all constructed based on a knowledge-based perspective, upon which

the relationship with the entry modes was anticipated. Those three variables proved

having the expected relationship with the three types of entry modes. As hypothesized

for each variable, international franchisers, which have entered foreign markets via Type

3 equity modes, were operating in the relatively more internationalized industries, had

strategic motivations of gaining competitiveness by engaging in international operations,

and understood foreign markets as a source of new learning. Franchisers were expected

to commit financial and managerial resources since the equity modes facilitate the

learning process by having more control and since firms had solid financial and

managerial capabilities enough to take capital investments.

Therefore, the positive relationship among the degree of control, degree of

resource commitment, and dynamics of learning as shown in **Figure 3-1** seems

applicable to the behaviors of international franchisers. This is one of the critical

findings of this research. The franchising operation has been generally regarded as one

of distribution methods, which is suitable for market-seeking business activities.

However, this research proved that even within the business format franchising,

franchisers consider equity modes of entry to facilitate new knowledge gaining. Both

internalization theory and KB viewpoint predict the same type of entry strategy under

such conditions despite of the contradicting assumptions upon which each theory is

based.

Then, the finding about firms' preference of entry modes based on the origin of

their home base added another dimension to the study of international franchising. There

was a distinctive contrast in the preference of entry modes between the US and the UK

firms. The US international franchisers favored contractual modes (Type 1 & 2: 92%)

while the UK firms preferred equity modes (Type 3: 53.3%). Contrary to the US

samples' popular choice of Type 1 modes (master franchising/area development

agreement: 61.9%), only 20% of the UK samples entered foreign market via Type 1

modes.

Nonetheless, there were not may variables that showed significant difference

between the two national firms. Especially among the fifteen firm-specific variables,

only start-up costs and total number of domestic outlets showed statistically significant

difference. Due to the small size of the domestic market, the UK firms should have less

number of outlets. And the UK firms required less amount of investment to open a new

outlet. Among eight locational factors, only the role of foreign franchisees was perceived

differently. The US firms stressed the role of foreign franchisees more importantly than

the UK firms did. Therefore, the higher start-up costs combined with the active

enticement of foreign franchisees may have combined to result in the US firms'

preference for contractual modes.

However, the survey findings may have a limitation due to the small number of

the UK sample firms. It is attributable to the small size (28 firms) of the population of

the UK international franchisers. Despite of the high response rate (42.86%), the small

number of absolute sample size (12 firms) may raise questions regarding to the findings

of the origin of international franchisers.

Due to the emphasis by the US sample firms, the active role of foreign franchisees

draws attention. If majority of the US firms like to make contracts with foreign

franchisees and stress the important role of active foreign applicants, a deserving recognition should be given to foreign applicants. The researchers of international franchising study have ignored this factor since they were so much focused on the firm-specific traits such as experience and size of international franchisers and market conditions such as saturated domestic and potential foreign markets. Therefore, this research calls for more attention to the role of foreign applicants.

Then, even if there were not many variables that showed statistical significance in separating group means of the three types of entry modes, majority of variables in each determinant showed the expected relationship in line with the type of the foreign market entry modes. Therefore, we may conclude that the framework constructed in this study represents a satisfactory reflection of the reality.

Again, it is also open to a criticism that doubts the statistical significance of the findings due to the small number of cases for Type 2 and especially for Type 3. The small number of cases, which do not reach to the axiomatic thirty cases for Type 2 and 3, has to be accepted as a limitation of this study. Then, it should be also reminded that this research has gathered the largest number of responses among the study of international franchisers.

VI. DISCUSSION AND RESEARCH IMPLICATION FOR FUTURE STUDY

The mode of foreign market entry has been one of the extensively researched areas in the international business (IB) study. Since entering foreign countries via any type of entry modes is the first step of making firms international, students of the IB study have been drawn to examine the methods of and those who make the first step. Regarding to the question of "who", researchers have realized that not everyone could afford to enter foreign markets. Only those who have accumulated strategic capabilities/ assets were strong enough to overcome and expand in to foreign environments. Many firms even internalized transactions to avoid market failures. They are multinational companies (MNEs), which have been the star of the IB study. As a result, the major theories of IB have been devoted to explain and predict behaviors of MNEs.

This study, however, has turned its attention to business format franchising that has many different traits from those of manufacturing MNEs. Most franchisers are small, bound with partners/franchisees, service-oriented, inferior in technology, and less experienced in foreign operations compared to MNEs. Most of all, franchising business has the characteristics of "swollen middle" (Hennart, 1993) incorporating features of both market and hierarchy. Therefore, it was doubtful whether we could explain the international activities of franchisers with the conventional theories that have been developed mainly for manufacturing MNEs.

Transaction cost economics, at first glance, seems to have a little difficulty explaining the contractual entry mode of international franchisers, which is embedded in the format of franchising operations. Under many hypothetically opportunistic conditions, in which franchisers are expected to internalize transactions due to the

positive transaction costs, franchisers continue to make contracts with local foreign franchisees. From franchisers' point of view, however, there is nothing strange about making contracts with foreign franchisees. They are franchisers, and franchisers make contracts with franchisees. This is how a franchising business works. Therefore, the default mode of making contracts should be understood by transaction cost economists as a more efficient way of running franchising operations than internalizing the contracts.

Once we understand the whole process of making contracts between franchisers and franchisees as a daily routine of a franchising business, it is easier to explain international franchisers' preference for the contractual modes of entry with the rationale of TCE. If a franchiser is so much used to recruit, screen, and after all make contracts with many franchisees, the franchiser should have devised a means to reduce the transaction costs related to that repetitive process up to a point where they become negligible. Therefore, if the franchiser, which is regarded as a cost minimizer, has to decide between making contracts that requires minimal transaction costs and internalizing the whole transactions that demands heavy financial and managerial commitments, he/she would select contractual modes. Hence, the transaction costs have been the focus of analysis and could explain why international franchisers prefer contractual modes.

Then, a knowledge- or resource-based point of view suggests another way of understanding the international operations of franchisers. It explains why franchisers ignore other options and continue to engage in with local franchisees without considering the transaction costs. Away from considering efficiency side of operations, KB theory has turned its attention to capabilities, knowledge, and learning aspects of international franchisers. It has enlightened and highlighted that signing up with franchisees is the

most comfortable way of running a business that franchisers are fully aware of and/or capable of. In other words, they may not have accumulated knowledge and (financial) capabilities necessary to internalize transactions.

VI.1. Major Foreign Market Entry Mode of International Franchisers

Therefore, KB theory is geared to explain one of the most critical findings of this study that most franchisers have one *major* foreign market entry mode being used wherever they go. Only sixteen sample firms had more than one entry mode. Among them seven firms were recognized as having multiple entry modes in the analysis since the rest had additional entry modes within the same type/category of entry modes. As a result, seventy-eight percent (56/72) of the sample firms had only one entry mode. Therefore, the principal finding of previous pilot studies through the mail survey and interviews that majority of international franchisers have a major foreign market entry mode is confirmed once more by this research.

Then, we need to remind that 83.5% of entry mode cases (**Table 5-3**) were contractual entry modes (Type 1 -master franchising/area developer; and Type 2 – licensing and direct franchising). Especially, the US firms (92.1%) favored contracts compared to the UK firms (46.7%) (**Table 5-5**). Together, international franchisers favored making contracts with local franchisees or licensees (83.5%).

Because of this kind of statistics, I had to give up pursuing the first mail survey which was heavily based on the internalization theory. I expected many international franchisers would have equity ownership entry modes due to the benefits of internalization and possible opportunistic behaviors of foreign franchisees. However,

franchisers simply continued to make contracts since they have been very used to making contracts with franchisees. Therefore, a knowledge- or resource-based viewpoint is helpful understanding the *major* entry mode of international franchisers.

Then, we come to face a critical argument. If the firm-specific knowledge base has predetermined the major foreign market entry mode, the role of other entry mode determinants becomes meaningless. Especially, if the influence of idiosyncratic foreign market conditions has no or little impacts on the selection of entry modes, international business suddenly becomes a simple extension of domestic operations. No student of international business study including myself agrees on this.

Especially in line with the firm-specific capabilities of international franchisers, the capabilities of foreign locations should be also considered. We tend to fix the relationship between franchisers and franchisees as having one way communication: Franchisers are knowledge creators and transferors while franchisees are knowledge receivers. However, a deliberate effort was given in this research to find out whether there are international franchisers who regard foreign markets and franchisees as sources of new knowledge and take an advantage of foreign capabilities to improve their competitive edge. By taking different entry strategies firms may try to achieve the goal of obtaining foreign capabilities.

Following **Table 6-1** and **6-2** confirm our theory: Firms with Type 3 entry modes, which have stressed the importance of foreign markets as a source of learning (**Table 4-12** & **Table 5-13**), also have recognized the positive impacts of international operations on enhancing their competitiveness in the domestic and global markets. This finding should be in line with the findings of Chen & Chen (1998). They interpreted "FDI as an

attempt to acquire know-how that reinforces the strengths or complements the weakness

of the investors" (ibid., p. 463). They also recognized that contrary to the conventional

wisdom small firms are active in such strategic asset-seeking investments. Hence efforts

should be given to link the relationship between a major foreign market entry mode of

international franchisers and particular conditions of international markets.

Table 6-1: Oneway ANOVA of Competitiveness by 3 Types of Entry Mode

		Sum of Squares	df	Mean Square	F	Sig.
Intl operation has improved my comp. in domestic mkts	Between Groups	15.315	2	7.657	2.956	.058
	Within Groups	196.863	76	2.590		
	Total	212.177	78			
Intl operation has improved my comp. in global mkts	Between Groups	15.362	2	7.681	3.745	.028
	Within Groups	153.818	75	2.051		
	Total	169.179	77			

**Table 6-2: Mean Statistics of Competitiveness
Measured by 3 Types of Entry Mode**

Foreign Mkt Entry Mode		Intl operation has improved my comp. in domestic mkts	Intl operation has improved my comp. in global mkts
Master franchising / Area developer	Mean	4.3721	5.6190
	N	43	42
	Std. Deviation	1.6039	1.3426
Licensing or Direct franchising	Mean	3.4783	4.7826
	N	23	23
	Std. Deviation	1.9038	1.8329
Equity Ownership (M/A, JVs, FDI)	Mean	4.6154	6.0000
	N	13	13
	Std. Deviation	.8697	.7071
Total	Mean	4.1519	5.4359
	N	79	78
	Std. Deviation	1.6493	1.4823

VI.2. This Research in Perspective

The pilot survey, conducted in the spring of 1996, of international franchisers from the list of *Entrepreneur* (1996) magazine had based on the theoretical framework of Dunning (1995), emphasizing the three constructs of the dichotomized eclectic paradigm in the age of alliance capitalism. The pilot and the followed open-ended mail survey findings provided an insightful foundation for the research direction of the international entry mode and its determinants of business format franchisers.

The top 200 US (of which 40 firms were disqualified) international franchisers listed in the *Entrepreneur International* (1998) magazine and thirty UK international franchisers were targeted. They were all business format franchisers. Seventy-two firms responded altogether, scoring a return ratio of 38.8%. This was the first study of international franchisers that included both the US and the UK firms. Interestingly, there was not much difference between these two national firms in terms of the firm-specific attributes, except size (the sampled US firms were bigger than the UK firms in terms of the number of outlets).

In this research, the franchise operation is analyzed by the two theories of firms. Since franchisers have the alternative choices of organizational modes, either by making contracts or owning outlets, the transaction cost and knowledge-based perspectives were carefully reviewed to understand why firms internalize transactions and use price mechanisms. Especially, a deliberate analysis to understand how firms gain knowledge and become competitive was carried out. In addition to concerning the efficiency side of transaction costs, an emphasis was given to competence enhancement efforts of firms via knowledge gaining and learning. The two theories were appropriate to predict and/or hypothesize the underlying relationship between the selection of organizational mode and its various determinants. Then, internationalization theory was added for the analysis of relationship because of its obvious emphasis on the knowledge accumulation and the dynamic selection of entry modes.

Next, the focus was given to identify a list of factors that was expected to differentiate firms with three types of entry modes. From the list of twenty-five hypotheses, the *oneway ANOVA* distinguished nine explanatory variables, each of which

showed different group means among the firms of different entry modes with statistical significance. Among the industry determinants, firms with Type 3 entry modes (equity modes) indicated that they are in the highest level of industry internationalization as expected. Regarding to the distribution channel of firms, firms in the retail business had more Type 3 entry modes contrary to the expectation. The UK firms, consisting the majority of the Type 3 mode, should have affected on this test result.

Four variables among the firm specific determinants showed statistical significance. They were strategic motivation of gaining global competitiveness, initial start-up costs, domestic ownership structure, and nationality of firms. Except start-up costs variable, which showed a mixed sign of the relationship, the rest confirmed the expected relationship with the three types of entry modes. Among the locational determinants, legal differences between home and host countries (negative relationship), the significance of foreign market as sources of learning (positive), and the enticement of qualified foreign applicants (negative) showed the expected relationships with the selection of entry modes with statistical significance.

Then, the aggregated impacts of these nine individual variables on the three types of entry modes were tested by the multiple discriminant analysis and multiple ordinal logistic regression. Once all these explanatory variables were included, four variables from each of the MDA and MLR were identified as statistically significant. Both methods recognized that domestic ownership structure, role of foreign applicants, and country of origin played significant role in differentiating the choice of entry modes. In addition, MDA identified the recognition of foreign markets as sources of learning from the second canonical function, while MLR acknowledged the significant role of strategic

motivation of global competitiveness gaining through international operations. Therefore, it can be concluded that there are *de facto* but not *de jure* international franchisers that internalize their cross border markets not only to exploit existing competitiveness advantages but also to gain new advantages. This should be one of key findings of this research that differentiates from other literatures of international franchising.

In this model, however, the interaction between the firm-specific and foreign locational determinants was absent. Efforts to test the effects of interaction among the key determinants on the selection of entry modes were missing in this study. Even with only those nine variables, it was difficult to build a statistically meaningful interaction model due to a small number of cases (13) for Type 3 entry modes.

Finally, the key explanatory variables were identified through the stepwise selections using both MDA and MLR. Both had only two variables, i.e. **ln.ownsh** (domestic ownership) from firm-specific determinants and **dmt.appl** (role of foreign applicants) from locational determinants. Then, MDA recognized one more variable **dmt.knwd** (foreign markets as a source of learning) from locational determinants, again from the second canonical function, which means that **dmt.knwd** explains variances that cannot be explained by **ln.ownsh** and **dmt.appl**. The result of stepwise selection indicates that domestic ownership structure and active role of foreign applicants are two most critical explanatory variables that fit the data over 80%. Domestic ownership structure has a positive relationship with firms' commitment level of entry modes, while enticement of foreign applicants discourages a high level of commitments.

Then, this critical role of foreign applicants, which has been unrecognized by most literatures of international franchising, is discussed in the following section.

VI.3. Role of Foreign Applicants

Since we have a tendency to highlight on "who", we tend to ignore "with whom". If 83.5% of the foreign market entry cases of the samples chose the contract modes to enter foreign markets, a deserving attention should be given to foreign franchisees. Especially, if there were differences in measuring the influence of enticement of qualified foreign applicants among the samples with different entry modes, we should recognize the role of foreign applicants as one of very serious determinants. In **Table 4-12**, the *oneway ANOVA* for **dmt.appl** (determinant: enticement of foreign applicants) shows a difference among group means with a very high statistical significance (p=0.0001). **Table 5-22.2** shows that firms with Type 1 (mean=7.0488) and Type 2 (5.3684) entry modes have weighed the significance of foreign applicant more highly than those with Type 3 (3.4545) modes. Therefore, the significant role of foreign applicants influencing on the decision making of international franchisers should be examined further.

In addition, there are national differences (p = 0.047) in measuring the importance of foreign applicants (**Table 5-12**). Since the majority of the US sample firms favored contractual modes than the UK sample firms, the US firms (6.6429) stressed the importance of foreign applicants higher than the UK firms (4.6250) did (**Table 5-13**). Or, the finding can be interpreted that foreign franchisees have preference for the US firms over the UK firms.

With the rapid development of communication systems, international franchisers can establish an easy access to foreign applicants. Through various ways of advanced electrical communications, such as teleconference and internet, firms can readily promote their trademarks and/or brand names across the globe. At the same time, they can reduce costs and time necessary for the screen process of selecting qualified applicants. Therefore, the impact of electrical trade through internet on the international operations of franchisers is an interesting future research topic

VI. 4. Knowledge-based Attributes

Since the theoretical backbone of this research is a knowledge-based (KB) perspective, various KB attributes were tested to see the relationship with the entry modes. There were five firm-specific (**contact, upgrd.pt, tnsf.kn, dcmt.fo, dcmt.pk**) and two locational (**dmt.knwd** and **ff.sorce**) knowledge-based attributes. The correlation among them is shown in the following **Table 6-3**. Among them only **dmt.knwd** (understanding international markets as a source of learning) showed significant difference (p= 0.001) among the three types of entry modes (**Table 4-12**). However, the core concepts of KB theory such as transferability (**tnsf.kn**) and codifiability (**dcmt.fo** and **dcmt.pk**) of knowledge were not found statistically different among firms with different types of entry modes (**Table 4-11.2**). It means firms in each group of entry modes have measured these variables almost equally.

The main reason of these similar responses regarding to those variables can be attributable to the intrinsic characteristics of franchising operations. In order to engage in routine contracts with franchisees, each franchiser should have established a standardized

procedure of transferring franchising format and codifying franchising operations and production techniques. As a result, every one evaluated their abilities of knowledge transferability and codifiability at the approximately same level.

But, there should be a scientific way of measuring the transferability and codifiability of knowledge and learning instead of relying on managerial perceptions. Constructing indexes of measuring such concepts that can be applied cross sectional studies will be challenging. Nonetheless, for the scientific study of knowledge-based viewpoints, researcher should try to come up with a scientific index for such critical concepts.

Table 6-3: Pearson Correlations among Knowledge-based Variables

		contact	upgrd.pt	tnsf.kn	dcmt.fo	dcmt.pk	dmt.knwd	ff.sorce
Pearson Correlation	contact	1.000	.191	.014	.099	.140	.339**	-.171
	upgrd.pt	.191	1.000	.034	.148	.153	.212	-.119
	tnsf.kn	.014	.034	1.000	.540**	.459**	.123	.135
	dcmt.fo	.099	.148	.540**	1.000	.686**	.291*	-.025
	dcmt.pk	.140	.153	.459**	.686**	1.000	.070	.150
	dmt.knwd	.339**	.212	.123	.291*	.070	1.000	-.156
	ff.sorce	-.171	-.119	.135	-.025	.150	-.156	1.000
Sig. (2-tailed)	contact		.105	.907	.394	.235	.003	.137
	upgrd.pt	.105		.778	.212	.198	.080	.314
	tnsf.kn	.907	.778		.000	.000	.301	.242
	dcmt.fo	.394	.212	.000		.000	.012	.831
	dcmt.pk	.235	.198	.000	.000		.564	.203
	dmt.knwd	.003	.080	.301	.012	.564		.182
	ff.sorce	.137	.314	.242	.831	.203	.182	
N	contact	77	73	75	76	74	73	77
	upgrd.pt	73	73	72	73	72	69	73
	tnsf.kn	75	72	77	77	74	73	77
	dcmt.fo	76	73	77	78	74	74	78
	dcmt.pk	74	72	74	74	74	70	74
	dmt.knwd	73	69	73	74	70	75	75
	ff.sorce	77	73	77	78	74	75	79

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

VI.5. Global Strategic Management of Knowledge and Competitiveness

Since firms need to gain knowledge to remain competitive, the locus of this research has been on managers' perceptions about the knowledge gaining and learning by engaging in the international operations. While the enhancement of competitiveness is considered, an interesting byproduct of this mail survey came across. Firms were asked about what kind of a global strategy they had for the management of production knowledge. Three options such as no change from that of domestic operation, a standardized approach across the globe, and a responsive manner to foreign local needs and capabilities were provided. Then they were asked whether they have improved their competitiveness in the domestic and global markets by engaging in the international operations.

The intention of asking firms' global management of production knowledge was to see how each international franchiser manages its franchising operations in the global markets. One specific aspect of knowledge had to be asked to make the respondents easy to understand and respond. Therefore, among the various types of knowledge necessary to run a business, such as marketing, product, production, etc, only production knowledge was asked. Then, global strategic management of other types of knowledge couldn't be asked because respondents might become easily bored if the same kind of questions was asked repeatedly.

Table 6-4 shows that there are differences in the managerial perceptions about the improvement of firms' competitiveness in the domestic and global markets according to the different strategic management of production knowledge. Both in the domestic and foreign markets, firms with different strategic management of production knowledge

measured the influence of international operations differently with statistical significance.

Following **Table 6-5** shows the mean statistics (one to seven scale) of each group of

global strategies of production knowledge. Therefore, exactly the same kind of analysis

that this research has examined can be achieved only if the dependent variable is changed

from the modes of foreign market entry to the strategic management of production

knowledge.

If firms set up a global strategy to improve their competitive position in the

domestic and global markets, findings of the relationship between a strategic

management of knowledge and managerial perceptions of competitive enhancement will

be interesting both to managers and scholars. Since a list of firm-specific variables has

been developed in this research, the same variables can be used to identify what kinds of

firm-specific attribute lead to different global strategic approaches. The relationship

between the management of knowledge and global competitiveness will be a future

research topic that can be analyzed by this survey.

Table 6-4: Oneway ANOVA of Competitivenss by Global Strategic Management of Knowledge

		Sum of Squares	df	Mean Square	F	Sig.
Intl operation has improved my comp. in domestic mkts	Between Groups	20.098	2	10.049	3.884	.025
	Within Groups	178.513	69	2.587		
	Total	198.611	71			
Intl operation has improved my comp. in global mkts	Between Groups	10.875	2	5.438	2.439	.095
	Within Groups	151.604	68	2.229		
	Total	162.479	70			

Table 6-5: Mean Statistics of Competitiveness Measures by Global Strategic Management of Production Knowledge

With intl experience, our production knowledge has become more		Intl operation has improved my comp. in domestic mkts	Intl operation has improved my comp. in global mkts
Has not changed much	Mean	3.2632	4.7222
	N	19	18
	Std. Deviation	1.9956	1.8409
Responsive to local needs & capabilities	Mean	4.3939	5.4848
	N	33	33
	Std. Deviation	1.5600	1.5637
Standardized across the world	Mean	4.5500	5.7500
	N	20	20
	Std. Deviation	1.2344	.9105
Total	Mean	4.1389	5.3662
	N	72	71
	Std. Deviation	1.6725	1.5235

Appendix: Copy of the Survey Questionnaire

A Survey of Global Franchising Managers
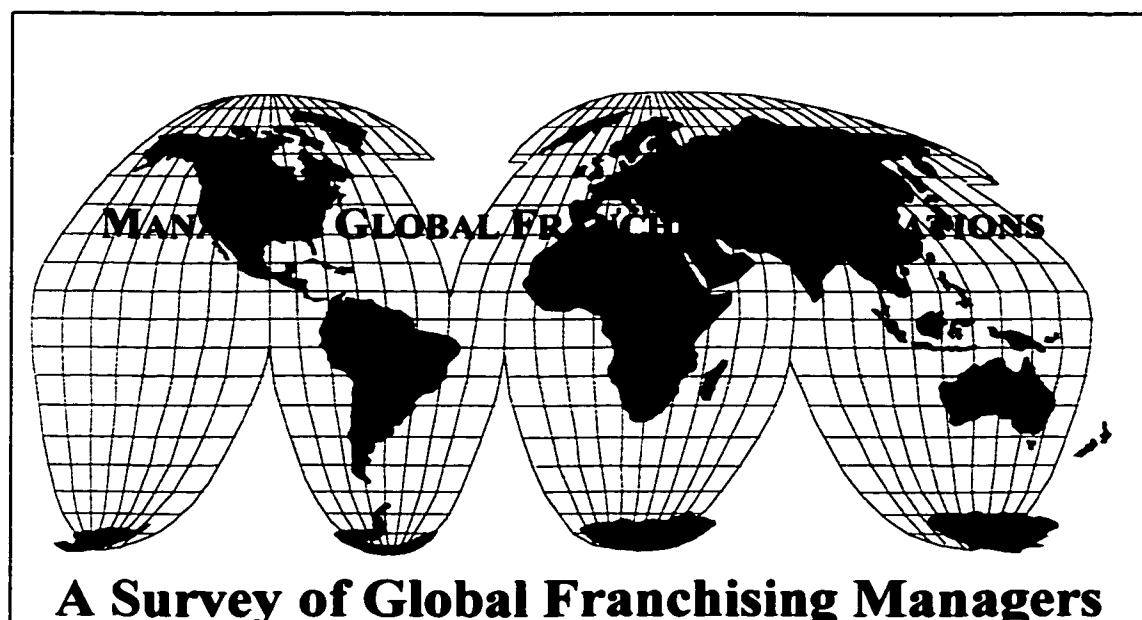
An International Survey of Senior Franchising Managers

This is an international survey of the most important international franchisers from the US and the UK. It is designed to better understand the international management of franchise knowledge and overseas market development.

***Your response is completely confidential.** Aggregated responses will be used only for academic research. **Completion of the questionnaire should take you less than 20 minutes.** Your response is critical and your participation is very much appreciated. Thank you very much.*

THE STATE UNIVERSITY OF NEW JERSEY

RUTGERS

Research Sponsored by
International Business Department
Graduate School of Management

Rutgers University International Franchising Survey 1

Section A: COMPANY CHARACTERISTICS

1. Please indicate the industry (SIC code) in which your company operates and your company's major products/services.

   Industry: _____ **SIC CODE:** _____

   Major products: _____

2. The year my company first opened an outlet in a <u>foreign</u> country was: 19 _____

Please check (√) the appropriate box for the following questions.
---

3. My company produces

   ☐ non-durable consumer goods.
   ☐ durable consumer goods.
   ☐ intangible services/goods.
   ☐ others: _____

4. My company is in

   ☐ a retail business.
   ☐ a wholesale business.
   ☐ both retail and wholesale businesses.
   ☐ others: _____

5. As of today, my company has following number of **total outlets** in the US:

   ☐ Less than or equal to 150
   ☐ 151 - 299
   ☐ 300 - 499
   ☐ 500 - 699
   ☐ 700 - 999
   ☐ 1000 - 1500
   ☐ More than 1500

6. The percentage of outlets that are **owned** by my company in the US is:

0 %	1-5 %	6-10%	11-20%	21-49%	50%	51-99%	100%

Rutgers University International Franchising Survey 2

7. Our total **sales** of all outlets in the US in 1998 was (if not available, 1997 figure):

❑ Less than $5 million
❑ $5 - $10 million
❑ $11 - $30 million
❑ $31 - $50 million
❑ $51 - $100 million
❑ $101 - $500 million
❑ Over $500 million

8. The start-up cost (in thousand $) to open our new franchise outlet is:

Less than 350	350-749	750-999	1,000-1,999	2,000-5,000	More than 5,000

Please circle your degree of agreement for the following statements.

9. In assessment of **my company** compared to other firms in my industry, its

(1) size in terms of total sales is

EXTREMELY   EXTREMELY
SMALL : _1_:_2_:_3_:_4_:_5_:_6_:_7_: LARGE

(2) international experience is

EXTREMELY   EXTREMELY
LIMITED : _1_:_2_:_3_:_4_:_5_:_6_:_7_:EXTENSIVE

(3) effort to develop foreign markets is

EXTREMELY   EXTREMELY
PASSIVE : _1_:_2_:_3_:_4_:_5_:_6_:_7:AGGRESSIVE

(4) financial strength is

EXTREMELY   EXTREMELY
WEAK : _1_:_2_:_3_:_4_:_5_:_6_:_7_: STRONG

(5) managerial capabilities are

EXTREMELY   EXTREMELY
WEAK : _1_:_2_:_3_:_4_:_5_:_6_:_7_: STRONG

(6) marketing activities in __foreign__ markets such as
promotion, pricing, and advertising are

EXTREMELY   EXTREMELY
STANDARDIZED:_1_:_2_:_3_:_4_:_5_:_6_:_7_:FLEXIBLE

10. In assessment of the **industry** in which my company operates, the level of

(1) production technology is

EXTREMELY   EXTREMELY
LOW : _1_:_2_:_3_:_4_:_5_:_6_:_7_: HIGH

(2) mandatory investment is

EXTREMELY   EXTREMELY
LOW : _1_:_2_:_3_:_4_:_5_:_6_:_7_: HIGH

(3) internationalization is

EXTREMELY   EXTREMELY
LOW : _1_:_2_:_3_:_4_:_5_:_6_:_7_: HIGH

Rutgers University International Franchising Survey 3

Section B: FOREIGN MARKET ENTRY MODES

1. Among the following, please indicate your company's <u>major</u> **foreign market entry mode** that has been used most frequently to establish outlets in foreign countries (please check one box):

   ❏ Merger/acquisition of existing operations

   ❏ Licensing

   ❏ Joint ventures

   ❏ Company-owned outlets (100% ownership)

   ❏ Direct franchising

   ❏ Master franchising or Area Developer

2. With this major foreign market entry mode, how many <u>foreign</u> outlets have you established?

   Total number of foreign outlets: _____

3. With this major foreign market entry mode, in how many foreign countries are you currently operating?   **Total number of foreign countries:** _____

4. Among these countries, please name three countries where your company started its initial overseas operations.

   The 1st foreign country my company entered: _____

   The 2nd foreign country my company entered: _____

   The 3rd foreign country my company entered: _____

5. Following factors are the **motivations/reasons** of using certain foreign market entry mode. Please indicate the direct *influence* of each factor on your selection of the <u>major</u> foreign market entry mode.

Please use a scale of "0" to "10" where 10=extremely significant and 0=the least.

   _____ To gain overall competitiveness from the international experiences/operations

   _____ Resource/financial availability

   _____ To penetrate the target market quickly

   _____ To closely monitor/control foreign franchisees

   _____ Previous foreign market entry experience

   _____ Overall political risk of the host country

   _____ Potential/high demand condition of the target market

   _____ Mandatory market entry mode ruled by the host government

   _____ Legal difference from the domestic market

   _____ Strategic importance of the foreign market as a source of learning/knowledge gaining

   _____ Aggressive expansion by the rival firms

   _____ Enticement of qualified foreign applicants

Rutgers University International Franchising Survey 4

6. Other than your company's major foreign market entry mode, please indicate, if any, the number of foreign outlets established by the following market entry modes.

Total number of foreign outlets:

_____ Established by joint ventures

_____ Established by merger/acquisition

_____ Fully owned by the company (foreign direct investment)

7. If any, please explain what factors made your company enter foreign countries via

(1) **Joint Ventures:** _____ : _____ : _____

(2) **Mergers/Acquisitions:** _____ : _____ : _____

(3) **Company ownership:** _____ : _____ : _____

8. Are there any foreign countries that your company has entered with a specific motive of **learning** new knowledge such as marketing strategies, organizational capabilities, and production technologies? ❑ No

❑ Yes

If Yes, please name countries: 1._____ : 2._____ : 3._____

Then, have you used other entry mode different from the major foreign market entry mode? ❑ No

❑ Yes

If Yes, what was the entry mode? _____

9. Has your company ever changed its major foreign market entry mode?

❑ No

❑ Yes If Yes, what was the previous major foreign market entry mode? _____

10. Does your company normally export to a foreign country prior to franchise?

❑ No

❑ Yes

11. Has the **number** of your foreign franchise outlets increased over the last three years?

❑ No, it has decreased.

❑ No, it has remained the same.

❑ Yes

12. Has the total **sales** of your **international** operation increased over the last three years?

❑ No, it has decreased.

❑ No, it has remained the same.

❑ Yes

Rutgers University International Franchising Survey 5

| Please circle your degree of agreement for the following statements. |

1. Documentation of our franchise
   operation has been

   EXTREMELY   EXTREMELY
   EASY :_1_:_2_:_3_:_4_:_5_:_6_:_7_: DIFFICULT

2. Documentation of our
   production knowledge has been

   EXTREMELY   EXTREMELY
   EASY :_1_:_2_:_3_:_4_:_5_:_6_:_7_: DIFFICULT

3. Transferring our franchise/production
   knowledge to foreign franchisees has been

   EXTREMELY   EXTREMELY
   EASY :_1_:_2_:_3_:_4_:_5_:_6_:_7_: DIFFICULT

4. Foreign franchisees have adopted our

                                          EXTREMELY

EXTREMELY
   franchise system

   EASILY :_1_:_2_:_3_:_4_:_5_:_6_:_7:DIFFICULTLY

5. Our production knowledge has
   been changed

   EXTREMELY   EXTREMELY
   RARELY:_1_:_2_:_3_:_4_:_5_:_6_:_7_:FREQUENTLY

6. Our desire to upgrade production
   technique has been

   EXTREMELY   EXTREMELY
   LOW :_1_:_2_:_3_:_4_:_5_:_6_:_7_: HIGH

7. For quality purpose, we contact
   foreign franchisees

   EXTREMELY   EXTREMELY
   RARELY:_1_:_2_:_3_:_4_:_5_:_6_:_7:FREQUENTLY

8. Foreign franchisees who have changed
   our product features are

   EXTREMELY   EXTREMELY
   FEW   :_1_:_2_:_3_:_4_:_5_:_6_:_7_: MANY

9. My company's desire to control
   foreign franchisees is

   EXTREMELY   EXTREMELY
   LOW   :_1_:_2_:_3_:_4_:_5_:_6_:_7_: HIGH

10. The location of new product development
    has been

   OVERSEAS :_1_:_2_:_3_:_4_:_5_:_6_:_7_: THE US

11. The location of new production technology has been

   OVERSEAS :_1_:_2_:_3_:_4_:_5_:_6_:_7_: THE US

12. Foreign franchisees have been a source of

   NEW KNOWLEDGE :_1_:_2_:_3_:_4_:_5_:_6_:_7_: REVENUES

Rutgers University International Franchising Survey 6

13. By working with <u>foreign</u> franchisees, my company has

(1) improved product quality   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

(2) improved production technology   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

(3) improved marketing methods   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

(4) improved management skills   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

14. International operations have improved our competitiveness

(1) in the domestic markets   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

(2) in the global markets   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

15. If we have the necessary/enough market knowledge about a foreign market, we commit

capital/equity investment there   STRONGLY DISAGREE : 1 : 2 : 3 : 4 : 5 : 6: 7 : STRONGLY AGREE

16. As we become more involved in our international operation, our production knowledge has

(please check only one box):

☐   become more responsive to local needs and capabilities.

☐   become more standardized across the world.

☐   not changed much.

Please use the next page for any additional comments you may have about this project.

Thank you very much for your assistance
All Responses Will Be Kept
Strictly Confidential

TO RETURN QUESTIONNAIRE
Please use the return envelope for your convenience or FAX to (973) 353-1323.
If the envelope is missing, please return the completed questionnaire to:
Dr. John H. Dunning, School of Management
Rutgers University, 180 University Avenue, Newark, NJ 07102

Your comments:

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