Modeling Market Entry Mode Choice: the Case of German Firms in China

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CONTENTS

List of variables and parameters

θ: investing firm's ownership ratio in the joint project

$q(x)$: output

$q^f(\overline{x^f})$: output in the host country

$q^h(x^h)$: output in the home country

x: capital input

$\overline{x^f}$: capital input for the joint production in the host country

x^h: capital input for the production in the home country

X: investing firm's capital capacity

r^f: capital cost rate in the foreign country

r^h: capital cost rate in the home country

F^f: fixed cost of investment in the foreign country

F^h: fixed cost of investment in the home country

p: output price

a: a constant in inverse demand function

p^f: output price in the foreign country

p^h: output price in the home country

t^f: income tax rate in the foreign country

t^h: income tax rate in the home country

c_1: marginal cost of production of the investing firm

c_2: marginal cost of production of the foreign firm

C^f: actual cost incurred by the investing firm in the foreign country

C^h: actual cost incurred by the investing firm in the home country

m: premium arisen from the investing firm's acquisition activity

S: managerial expense

R^f: investing firm's revenue due to its operation in the foreign country

R^h: investing firm's revenue due to its operation in the home country

π: aggregate profit of the investing firm

π^f: investing firm's profit due to investment in the foreign country

π^h: investing firm's profit due to investment in the home country

β: portion of revenue employed by the managers for emolument

U: decision maker's utility of decision making

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Introduction

This dissertation aims to study the firms' foreign market entry problem from a theoretical as well as an empirical point of view.

This topic is actually not new in the literature of economics as well as business. Economists and business scientists have exerted a great effort in modeling this pivotal strategic decision-making problem, and numerous models, qualitative or quantitative, have arisen since the early 1970s. A rich empirical literature, which aims to test the theoretical models developed (i.e. mainly the qualitative ones) or to identify the determinants of entry mode choice, has been extant since the early 1980s. However, as suggested by Decker and Zhao (2004a), there are no widely accepted models. Each model has its strengths and weakness, and there have been empirical studies whose results have not agreed with each other. Additionally, since the end of 1990s, the creation of new models has been rare, however the empirical studies are abundant. Therefore, there is a great need to put forth some effort to remodel this problem under a new economic situation, with a particular focus on the German firms' investment behaviors in an emerging market, such as China.

An in-depth analysis of the existing theoretical models of foreign market entry, as shown in chapter 2, indicates that the existing entry mode choice models uniformly proceed using the existing theories of the firm, which are presented in chapter 1. Therefore, a new model of market entry should originate from a new branch theory of the firm or from a new understanding of the theory of the firm.

Foreign market entry is an ill-defined, complex, and dynamical decision-making problem (Kumar and Subramaniam 1997, Young et al. 1989). Such a problem in the eyes of organizational scientists is nothing but a strategic decision-making problem (Pennings 1986, Evan 1993).

In contrast to economists, organizational scientists usually study a firm and its strategic behaviors with a systematic approach (Robbins 1983 and 1993, Pennings

1986, Evan 1993). This systematic approach[1] considers not only the internal efficiency of an organization but also its fitness with the external environment, while stressing the joint impact of each systematic component, namely the decision maker, organization, and environment, on strategic behaviors.

Following this systematic logic, the dissertation is structured as follows.

Chapter 1 briefly reviews the main existing theories of the firm. This offers insight into the foundation of the theories of market entry. Additionally, this shed light on the new direction of modeling market entry mode choice.

Chapter 2 analyzes the existing models and approaches as well as the empirical studies of market entry. Some implications are given for managers in practice and for future research. This chapter originates from a previous paper by Decker and Zhao (2004a).

Chapter 3 develops a quantitative model of market entry for Small and Medium sized Enterprises (SMEs), which are characterized by an alignment of ownership with management and by a perfectly competitive market for their inputs and outputs. In this model, entry mode choices are determined by the internal efficiency of resource allocation under the constraints of capital budget and host country policies. This model offers rich implications for the decision makers of the firms concerned as well as the policy makers in the host country. This chapter, among other things, generalizes the previous papers by Decker and Zhao (2004 b,c).

Chapter 4, recognizing that the separation of ownership from management has been widely acknowledged as a significant property of large firms, develops a two-stage decision-making model, in which the board of directors, representing the interests of the shareholders, make strategic decisions in respect to market entry and the managers implement the strategy through tactical decisions. However, the managers are assumed to enjoy great latitude of decision-making, which allows them to favor private interests at the cost of the organizational interest of profit maximization, i.e. managerial discretion (Williamson 1965, Jensen and Merkling 1976). Consequently, the decision makers take a positive attitude toward expenses,

[1] This concept of "systematic approach" applies for the rest of this dissertation.

which bring them positive utility, i.e. expense preference (Williamson 1965). Analysis of this model induces rich implications for the firms concerned as well.

Chapter 5 aims to study the influence of organizational characteristics on entry mode choice systematically. There already exists an extensive volume of literature having studied the impact of organizational characteristics on entry mode choice separately and in different contexts. However, very few of them have studied entry mode choice by taking the firm itself as the unit of analysis. The influence of value system, organizational philosophy and organizational experience on entry mode choice is discussed in this chapter respectively.

Chapter 6 summarizes the propositions and conceptualizes the systematic framework of entry mode choice.

Chapter 7 empirically tests the systematic approach and identifies the potential influences of each systematic component on entry mode choice respectively. Results of this test are based on 20 in-depth interviews with German senior managers carried out via a semi-structured questionnaire. The results support the systematic approach significantly.

This dissertation identifies that entry mode theories are usually based on the existing theories of the firm. Given this identification, this dissertation applies the systematic logistic of the organizational theory of the firm as well as the economic theory of the firm to model entry mode choice. This dissertation is consisted of both theory development and empirical test. Entry mode choice in this dissertation is modeled and tested both quantitatively and qualitatively.

The identified relationship between the theory of the firm and the theory of entry mode choice and its successful application in this dissertation provide a good perspective for entry mode theory development in the future. The systematic model (qualitative and quantitative) in this dissertation makes up not only the scarcity of theory development but also the shortage of quantitative models in the recent years' literature, and it takes a new attitude toward firms' strategic decisions, e.g. entry mode choice. The interdisciplinary methodology, the qualitative and quantitative techniques applied in this dissertation in the process of modeling and testing the systematic model, will bring rich implications to future research as well.

Chapter 1 Market Entry and the Theory of the Firm

The study on the theory of the firm started with the early works done by Knight (1921) and Coase (1937), however it did not blossom until the mid-seventies. The theories of the firm have mainly discussed three issues, namely the existence, the size and the organization of the business firm (Foss et al. 1998).

As recognized by Penrose (1959), the theories of the firm vary according to the perspective from which the author wants the firm's economic activities to be considered, and can vary with the conceptual difference of various authors, resulting from their backgrounds. Phelan and Lewin (2000) subdivided the existing theories of the firm into two categories, namely the economic theories of the firm and the strategic theories of the firm. The former category focuses more on the cost of using a market mechanism, and the later stresses the benefit of using the firm in explaining the existence and the size of firm (Conner 1991). Organizational scientists, on the other hand, study firms from a quite different perspective.

Therefore, this chapter aims to present a brief synopsis of the existing theories of the firm. This helps to understand how firms' economic activities are studied, and therefore the origin of the theory of market entry, which is a firm's boundary issue. We note additionally that new directions of modeling market entry should stand on a good understanding of the evolution of the theories of the firm.

This chapter is structured as follows. The dominant economic and strategic theories of the firm are explained in the first section. Additionally, the organizational scientists' view of the firm is also presented in this section. This chapter then concludes with some implications for research, which are applicable to this dissertation.

1.1 The theories of the firm

1.1.1 The firm in the conventional economic theory

In the conventional price theory, which was mainly developed by prominent economists such as Marshall and Pigou, the firm is mainly characterized by a production technology. To formulate the firm's economic activities beautifully in mathematics, all of the firm's economic behaviors were reduced to two quantifiable variables, namely quantity and price. Therefore, the firm is at most a theoretical link explaining the changes of price and quantity in response to external dynamics (Langlois 1994, p.3). The firm's existence and its boundary decision based on this price theory are just plainly illogical, since the firm's boundaries in price theory are only a matter of assumption (Langlois and Robertson 1995). The firm, in this theory, is assumed to be completely rational (i.e. symmetric information, complete contracting, perfect calculation ability), and its economic behavior is determined by different production technologies (Foss et al. 1998).

Obviously, despite of its modeling advantage the price theory of the firm suffers from simplifying firms' economic behavior as a production technology; and through this, the theory loses the rich sights of firms' behaviors, which motivates the development of a significant amount of economical theories to address the theory of the firm from different perspectives.

1.1.2 The transaction cost (TC) theory of the firm

Contribution of Coase (1937)

Recognizing that the firm cannot write a complete contract without incurring any costs, i.e. the costs of using market mechanism, Coase in his groundbreaking article "The Nature of the Firm" (Coase 1937) raised the concept of transaction cost. Applying this concept, the author, in this article, analyzed two critical issues of the theory of the firm, namely the existence and the size of the firm. He explained that the existence of the firm is due to:

"The operation of a market costs something and by forming an organization and allowing some authority (an "entrepreneur") to direct the resources, certain marketing costs are saved" (Coase 1937, p.5).

That is to say, firms arise from market failure, which is the result of transaction costs. Additionally, he claimed that the firm exists to decrease the uncertainty or to enjoy different government policies on price mechanism and organization. His explanation on the size of the firm is from a comparison of the marginal cost with the marginal benefit of organizing a transaction; the firm will stop its expansion until the point where these two margins are equal. Coase's great contribution to the theory of the firm, except for looking at the firm differently from the traditional price theory of the firm, lies at bridging the two systems of resource allocation, i.e. the price mechanism on the one hand, and the authority on the other.

Williamson's development

Williamson (1975 and 1985), inheriting Coase's transaction cost concept, developed the TC theory, which, as the author himself advertised, is an interdisciplinary study, i.e. a fusion of economics, law, and organization. In transaction cost economics, firms are treated as a governance structure rather than a production technology. In comparison with Coase (1937), Williamson (1975, 1985) had proposed:

1. That the transaction is the analysis unit of a firm's economic activities (Williamson 1985, p.41). Alternatively, the way by which the TC theory treats economic organization problems is through "transaction costs", and it poses the problem of economic organization as a problem of "contracting" (Williamson 1985, p.20). In addition, "any economic problem that can be posed directly or indirectly as a contracting problem is usefully investigated in transaction cost economizing terms" (Williamson 1985, p.41),
2. That opportunism, asset specificity, and bounded rationality are three assumptions of market failure and thereby transaction costs. He stressed this idea later in describing the attributes of the contracting process (Williamson 1985, p.31).

3. A comparatively institutional assessment on discrete institutional alternatives (of which the classical market contracting is located at one extreme; the centralized and hierarchical organization is located at the other; and the mixed mode of firm and market organization is located in between) instead of applying only the marginal analysis to determine the size of the firm (Williamson 1985 p.42).
4. That the TC analysis should be put into a larger context involving a tradeoff between transaction costs, production costs, and the social context in which the transactions are embedded (Williamson 1985, p.22),

Criticisms on the TC theory

Despite of its popularity in explaining the corporate governance issues, the TC theory bore much criticism. Kay (1982) criticized the TC theory by questioning the treatment of three assumptions. His argument reads as:

> *"In particular, opportunism is too limited as motivational basis for adequate treatment of economic activity, while asset specificity is neither necessary nor sufficient for problems of economic coordination to arise, even in the presence of bounded rationality and opportunism."*

Madhok (1996, 1997 and 1998) compared the TC theory with his OC theory, and criticized the TC theory for its inadequateness and shallowness as a theory of the firm.

In his 1996's paper, Madhok argued that the inadequateness and shallowness of the TC theory come not only from the restrictive assumptions of opportunism which leads to market failure and the notion of the firm as a bundle of transactions or contracts but also from solving the organizational governance or boundary issue as a cost minimizing problem (Madhok 1996, p.578).

In Decker and Zhao (2004a), some other weaknesses of this TC theory were summarized.

1.1.3 The bounded rationality (BR) theory of the firm

Recognizing the disadvantage of assuming perfect rationality (i.e. costless use of price mechanism, symmetric information, complete contracting, etc.), Simon and March developed the BR theory of the firm (Simon 1957, March and Simon 1993). In the BR theory and its adherent, i.e. the behavioral theory of the firm (Cyert and March 1992), the firm is treated as an authority organization. In this scenario, satisfying replaces maximizing as a criterion for decision-making. The bounded rationality assumption of the decision makers and the organization replaces the perfect one. This behavioral theory shifts the process of decision-making to the core of economic analysis. In this theory, the optimality of the decision-making process guarantees the optimality of the result (Cyert and March 1992). In addition, the process of decision-making is influenced by many factors, e.g. organizational goal and organizational expectation, which are various facets of the organization itself.

Even though the BR theory and the behavioral theory of the firm are more close to reality, they do not dominate the theory of the firm. These theories are more descriptive than normative. They suffer from the strong assumption that optimal decision-making processes generate optimal results. Furthermore, they ignore the influence of individuals and environment on strategic decision-making.

1.1.4 The agency theory of the firm

Disagreeing with the symmetric information assumption in the conventional price theory of the firm, the agency theory of the firm, which was originated from Alchian and Demsetz (1972) and Jensen and Meckling (1976), argues that the information asymmetry between the principal and the agent induces the costs of monitoring, bonding, and residual right loss, which are defined as agency costs. Additionally, they thought that it is essentially misguided to make a hard line between the market and the firm, and that the firm is actually a nexus of special contracts, such as a contract between employer and employee or a contract between buyer and seller among others.

The agency cost theory was widely applied latterly (Feentra 1998, Feentra and Hanson 2004) to analyze firms' boundary issues or investment problems.

However, the problem is that monitoring is not a distinguishing feature of a firm, managers in large firms operate within a pervasive web of accountability mechanisms that substitute for monitoring, e.g. the constraints from financial market, goods market, legal systems, and policies among others. More importantly, the agency costs are inevitable consequence of vesting discretion to the managers rather than residual rights, agent costs can be significantly reduced if the managerial discretion is eliminated.

1.1.5 The strategic theories of the firm

According to Phelan and Lewin (2000), the strategic theories of the firm tend to agree on three broad principles: 1) the resource-based nature of the firm, 2) the determination of firm boundaries, and 3) the bounded-rationality. Representatives of the strategic theories of the firm are the resource-based theory of the firm, the option theory of the firm, and the dynamic transaction costs theory. Since the last two branches are not widely applied for market entry studies, they are not discussed here.

Economists usually regard the seminal book "The theory of the growth of the firm" by Penrose (1959) as the origin of the well-known resource-based (RB) theory of the firm. In this theory, a firm is a collection of productive resources, physical and/or human-oriented. The author adopts a dynamic viewpoint towards the growth of the firm (Slater 1979 in Penrose 1980), and claims that the optimal growth of the firm involves a balance between the exploitation of existing resources and the development of new ones (Penrose 1980, Rugman and Verbeke 2002). The description of the strategic theory of the firm in her words reads as:

> *"A firm is more than an administrative unit; it is also a collection of productive resources the disposal of which between different users and over time is determined by administrative decision. When we regard the function of the private business firm from this point of view, the size of the firm is best gauged by some measure of the productive resources it employs" (Penrose 1980, p.24).*

There are many followers of this RB theory of the firm. Conner (1991), Conner and Prahald (1996), and Kogut and Zander (1992, 1993 and 2003) adopted this modus operandi and developed the knowledge-based (KB) theory of the firm. In addition, plenty of economists (Peteraf 1993, and Foss 1997, for example) have applied this theory for competitive advantage analysis. Additionally, based on the RB and the KB theory, Madhok (1996 and 1997) developed his organizational capability (OC) theory. In this OC theory, the firm is defined as a bundle of resource-based capabilities arising from knowledge, experience, or routines. The motivation of the firm shifts to the conceptual "organizational capability". The firm's boundary issue is thus determined and evaluated by the exploitation and exploration of organizational capabilities.

1.1.6 The firm in the eyes of organizational scientists

As analyzed above, the existing economic or strategic theories of the firm understood firms' economic behaviors, i.e. existence, size, and/or organization, from either the benefit or the cost perspective, i.e. an efficiency consideration. However, Organizational scientists have studied the firm, its nature and growth, from different angles. Evan (1993) has summarized six schools of organization theory. One can assume, however, that the theories of the organization are not limited to these six schools.

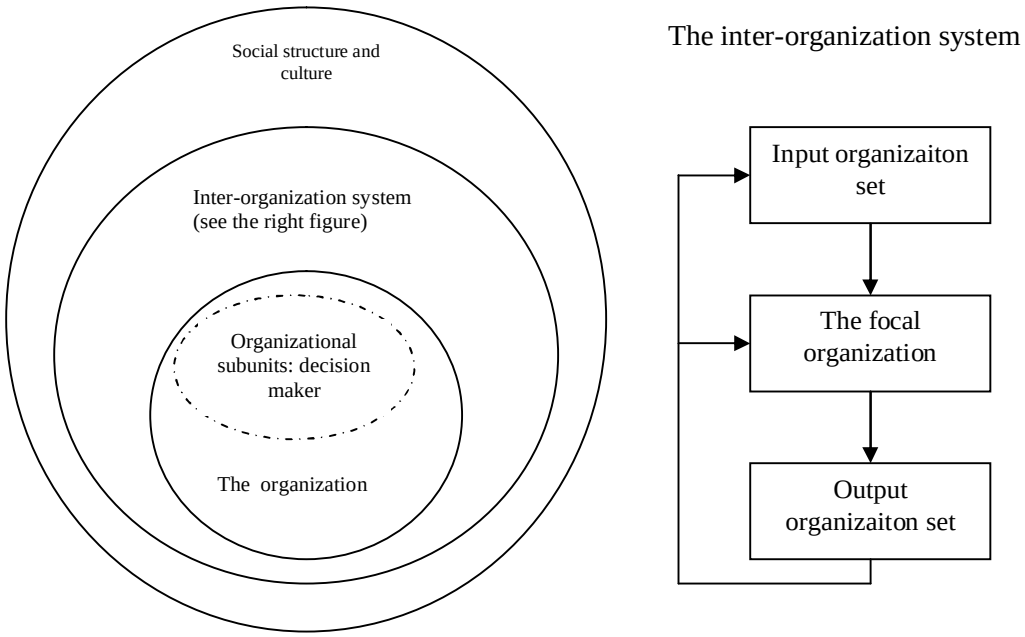
In organization theory, the firm as a whole is usually viewed as a profit-oriented organization, which is hierarchically organized with each subunit pursuing its own individual interest, and these individual interests are regulated by incentives (Koza and Thoenig 2003). The firms' survival and growth are essentially explained from two aspects, namely the internal efficiency and the external fit of the firm with its environment. The firm's strategic behavior actually involves at least three levels of analyses: (1) the subsystem of an organization, (2) the organizational system in its entirety (i.e. cultural components, e.g. values, goals, and philosophies, the structural components, and the technological components), and (3) the super system, i.e. the interactions or linkages of the focal organization with other organizations and its surrounding environment (Evan 1993, p.156). Similarly, firms' strategic behaviors are assumed to be a result of a systematic consideration as well, i.e. the individuals,

the firm itself, and the surrounding environment (Pennings 1986, Robbins 1993, p.44). Figure 1.1 explains this systematic logic in detail.

The existing organization theories of the firm differ in nature from the economic theories of the firm and the strategic ones in terms of the perspective from which the firms are studied. The organization theories do not show great passion for explaining the existence of the firm; rather they focus on studying the organization of the firm, e.g. the survival and growth of the firm, and/or other operational decisions, such as structure, design, strategy, bureaucracy, culture, etc.

This organizational scientists' view toward firm's growth and other strategic decisions offers a new insight for firms' market entry studies (Koza and Thoenig 2003).

Figure 1.1 The systematic logic of firms' strategic decision-making



Note: adapted from Evan (1993, p.250)

1. 2 Conclusion

As analyzed above, most of the existing economic theory of the firm is motivated by unrealistic assumptions of the price theory of the firm, i.e. perfect rationality.

In comparison with the strategic theories of the firm, the economic theories of the firm analyze the existence of a firm more from the cost of using market mechanisms

than from the benefit of using hierarchy. Therefore, in economic theories of the firm, the size of firm (i.e. the boundary issue) is more dependent on a marginal cost analysis of using two mechanisms (i.e. price mechanism on the one hand and hierarchy on the other) rather than on an analysis of resource or benefits exploitation and exploration, which is applied usually in strategic theories of the firm. The economic theories of the firm are endowed with mathematical elegance and normality; however, these theories on the prediction of the boundary of a firm are only one side of the story. The strategic theories of the firm are more capable of explaining the value creation and the location of firm boundaries; however, they lack a proper explanation of the existence of a firm (Phelan and Lewin 2000). Both the conventional economic efficiency consideration and the strategic competitive advantage consideration are relevant to firms' strategic behaviors. Ignoring any of these two aspects can lead to a wrong description.

Differently, organizational scientists take a systematic attitude toward the firm, which is more complete and in better tune with today's complex commercial environment. This systematic approach considers the internal efficiency during the process of decision-making; this is feasible in practice and elegant in theory. Furthermore, it also stresses the fitness between the firm and its surrounding environment, which creates the long run competitive advantages. In some sense, this systematic approach includes both the economic theory of the firm and the strategic theory of the firm; alternatively, it can apply not only a normative analysis but also a descriptive analysis. Meanwhile, this systematic logic highlights the influence of decision maker on strategic choices. Today's complex organizational structure and dynamic environment leave the decision maker no given routine to follow and therefore large latitude for discretion on their strategic decisions. The organization as well as its surrounding environment provides the decision maker not only sufficient conditions but also constraints to implement their strategic choices (Madhok 1996, 1997). They cannot be ignored during the process of decision-making.

Table 1.1 shows how the different theories of the firm view the economic behavior of the firm differently.

Table 1.1 Summary on the theories of the firm

Categories	Theories of the firm	Representatives	Basic assumptions	The size of firm
Economic theories	Price theory	Marshall and Pigou	Rationality (costless contracting, symmetric information, complete contracting), the firm is a production technology	Determined by assumption
	Transaction Cost (TC) theory	Coase (1937), Williamson (1975, 1985)	Costly and incomplete contracting, the firm is a collection of contracts	*Internal efficiency:* the costs of using market mechanism
	Bounded Rationality (BR) theory and behavioral theory	Simon (1957), Cyert and March (1992)	Bounded rationality, the firm is an authority organization	*Internal efficiency:* optimizing the behavior process
	Agency cost theory	Alchian and Demsetz (1972), Jensen and Meckling (1976), Jensen (2000)	Asymmetric information, separation of ownership from management, the firm is a corporate governance	*Internal efficiency:* minimizing the agency costs
Strategic theories	Resource Based (RB) theory	Penrose (1959, 1980)	The firm is a collection of resources	*Internal efficiency:* benefits of exploiting the existing resources and developing the new ones
	Organizational Capacity (OC) theory	Madhok (1996, 1997)	The firm is a collection of resource based capacities	*Internal efficiency:* benefits of exploiting and exploring organizational capacities
Organizational theories	Various schools of organizational theories[2]	Pennings (1986), Robbins (1991), Evan (1993)	The firm is not only a profit organization but also a social component with hierarchies	*Internal efficiency:* costs and benefits *External fitness:* social structure, culture, inter-organizational system

[2] See Evan (1993) for details.

Chapter 2 Market Entry Mode Choice: Cognitions from Empirical and Theoretical Studies

This chapter aims to analyze systematically the existing literature, theoretical and empirical, on market entry studies. A strength and weakness analysis on the existing theories, both qualitative and quantitative, indicates that each theory has a limited explanatory power of analyzing entry mode choice, and that each theory roots itself at least in one theory of the firm. Observing the discrepancies in both theories and empirical studies dealing with the entry mode choice, we conclude a significant need for further research in this important area of international marketing. More importantly, we provide some implications for managers in practice and outline some trends of entry mode theory as well as some strategies for future research.

The remainder is arranged as follows. Section 2.1 describes briefly the evolution of market entry studies in the field of international marketing. In section 2.2, an overview of the existing theories and models on market entry is presented together with discussions about their strengths and weaknesses. Conflicting results of the existing theories and empirical studies are discussed in section 2.3. The theoretical and empirical considerations drawn from this review are then used as the basis of practical implications for marketing management and some general suggestions for future research are outlined in section 2.4. This chapter concludes with some specific implications for the remainder of this dissertation.

2.1 Introduction

2.1.1 A critical issue in international marketing

The interest in foreign market entry mode choice (for brevity, the terminology “entry mode choice” will be used in the following) evolves from the issue of firm boundaries, which is one of the critical issues in the theory of the firm, i.e. the

existence, the boundary, and the internal organization of firm. As analyzed later, each theory of entry mode choice can trace its theoretical root to the theory of the firm. Additionally, it has been studied as a problem with distinctive feature, extent, form and pattern of international production (Southard 1931, Hymer 1960, Caves 1971 and 1974, Dunning 1958 and 1977). Economists and marketing experts have discussed it as a critical issue in international marketing.

Wind and Perlmutter (1977) argued that the choice of market entry mode has a great impact on international operations and can be regarded as "a frontier issue" in international marketing. Root (1994) claimed that the choice of market entry mode is one of the most critical strategic decisions for Multi-National Enterprises (MNEs). The choice of entry mode affects a firm's future decisions and performance in foreign markets. Operating in a foreign market entails a certain level of resource commitment, which is difficult to transfer from one level to another, especially from a high level to a low level. Kumar and Subramaniam (1997), Chung and Enderwick (2001), and Nakos and Brouthers (2002) emphasized that the choice of market entry mode is a critical strategic-decision for firms intending to conduct business overseas.

2.1.2 The existing models

Being such an important issue, entry mode choice has become the object of numerous theories and models developed to understand and explain the associated phenomena. The existing theories[3] can be divided into two sub-groups: qualitative theories and quantitative ones. Qualitative theories are primarily conceptual and abundant in the existing literature, whereas quantitative approaches[4] are mainly game theoretical and rare. Theoretical studies can also be classified into content-orientated and process-orientated approaches. The former aims at the identification of the determinants of entry mode choice and their possible influences, the latter aims at the description of how this decision is actually made by following some appropriate procedures.

[3] In the following, the word "theory" is used synonymously with "model" or "approach".
[4] The quantitative approaches will be discussed in details in chapter 3.

Among the existing qualitative theories there are five basic approaches (which will be discussed later on in this chapter) which are particularly prominent and have been tested widely. They are:

1. the Stage of Development (SD) model (Johanson and Wiedersheim-Paul 1975, Brooke 1986),
2. the Transaction Cost Analysis (TCA) model and extensions (Anderson and Gatignon 1986, Hill et al. 1990, Erramilli and Rao 1993),
3. the Ownership, Location and Internalization (OLI) model (Dunning 1977, 1980, 1988, 1995, 1998, and 2000),
4. the Organization Capability (OC) model (Madhok 1996 and 1997), and
5. the Decision Making Process (DMP) model (Young et al. 1989, Root 1994, Kumar and Subramaniam 1997).

The quantitative models are mainly game theoretical and rare in the existing literature. Grossman and Hart (1986) and their followers, as well as Buckley and Casson (1998) and their followers are some representatives. Chapter 3 will explain these models in details.

To our knowledge, no prominent models have been developed in recent years.

2.1.3 The existing empirical studies

Various empirical studies have been carried out to test the validity of the existing theories, to find out factors that might have an impact on the choice of entry mode, and to measure the corresponding effects.

The empirical studies have explored a pool of factors influencing the choice of entry mode. These factors, as showed in Table 2.1, can be classified into country specific, industry specific, firm specific and decision maker specific ones. Of course, there is no exclusive classification on the factors examined; a factor might be studied as a country factor in a certain context, but it might be taken as an industry factor in others. However, this ambiguity does not affect the implication of the main aspects by which entry mode choice is assumed to be influenced.

Table 2.1 Factors examined in the existing empirical studies

Clusters	Factors examined	Representative works
Country specific	Cultural distance	Chen and Hu (2002), Cristina and Esteban (2002), Evans (2002), Gillespie (2002), Leung et al. (2003)
	Institutional effects	Meyer (2001), Said and McDonald (2002)
	Country risk and environmental uncertainty	Cristina and Esteban (2002)
	Foreign exchange rate and host country currency	Baek and Kwok (2002)
	Immigration effects	Chung and Enderwick (2001)
	Country experience and length of diplomatic ties	Tse et al. (1997)
	Market size	Chung and Enderwick (2001), Eicher and Kang (2002), Nakos and Brothers (2002)
Industry specific	Technology transfer	Mattoo et al. (2001)
	Industry barriers and firm advantages	Siripaisalpipat and Hosbino (2000), Chen and Hennart (2002)
Organization specific	Network relationship	Coviello and Munro (1997)
	Firm size	Evans (2002), Nakos and Brouthers (2002), Leung et al. (2003)
	International experience	Reuber and Fisher (1997 and 2003), Evans (2002), King and Tucci (2002)
Decision maker specific	CEO successor characteristics	Herrman and Datta (2002)
	Role of staffing	Konopaske et al. (2002)

The above way of clustering indicates us at least two points: (1) entry mode choice is a complicated decision-making problem, which is influenced by multiple variables; (2) the factors influencing entry mode choice can be explored from a

systematic perspective, i.e. the decision maker, the organization, and the environment.

The possible influence of a factor on entry mode choice can be positive, negative, or irrelevant. By positive, it means that the higher the value of a factor, the higher equity mode will be adopted, and vice versa. However, the existing literature has concluded conflicting results in terms of how some factors will influence the choice of entry mode, the coming section 2.3 will explain this in details.

2.2 Discussion on the established qualitative theories

2.2.1 The SD model

Johanson and Wiedersheim-Paul (1975) proposed the stage of development (SD) model (i.e. known as the "U" model while they were studying the internationalization strategies of SMEs. The model asserts that the internationalization of SMEs is a long, slow, and incremental process in two dimensions: the geographical or cultural expansion and the level of commitment. Brooke (1986) applied this approach to explain market entry. However, this model is not perfect: it provides a set of feasible entry modes but not the right ones (Young et al. 1989). This is because it is not capable of explaining why a newly established firm starts entry with a wholly owned venture but not export. We note that the SD model does not dominate the existing literature.

2.2.2 The TCA model and its extensions

The Transaction Cost Analysis (TCA) originated from Anderson and Gatignon (1986). TCA is based on the TC theory of the firm, which was initiated by Coase (1937) and Williamson (1975 and 1985) as a tool to explain economic problems where asset specificity, uncertainty, and opportunism play a key role. The TCA framework argued that MNEs choose a specific mode of entry that maximizes the long-term risk-adjusted efficiency through minimizing of the transaction costs.

Different entry modes are defined by the level of control, which is a result of ownership. Wholly owned ventures, for example, are characterized by the highest

level of control; export and contracting are characterized by the lowest level of control.

In this TCA framework, entry mode choice depends on four constructs that determine the optimal degree of control: transaction specific asset, external uncertainty, internal uncertainty, and free riding potential (Anderson and Gatignon 1986). In their paper, Anderson and Gatignon (1986) applied proprietary content, poor understandability, customization, and product class immaturity for measuring the asset specificity, and country risk for measuring the external uncertainty. The firms' cumulative experience, socio-cultural distance and small business community are the measures of internal uncertainty. Finally, brand value measures the possibility of free riding.

The propositions suggested that the higher the transaction specificity of asset, the uncertainties, and the possibility of free riding, the more efficient a high equity entry mode is.

Other researchers then significantly supplemented the framework. Anderson and Weitz (1986) applied the TCA framework to analyze the vertical integration and the marketing productivity problems. Hill et al. (1990) integrated both the environmental and the strategic factors. Klein et al. (1990) incorporated production costs into the TCA framework and divided the external uncertainty into different categories. Erramilli and Rao (1993) modified this framework to suit for service industries through assuming that firms prefer a high level of control unless proven otherwise. Lu (2002) put forward the institutional theory as complementary to the TCA theory. The author claimed that the TCA theory is static and unable to explain the evolution of entry mode. Brouthers (2002) addressed the institutional, cultural and the transaction cost related factors. He claimed that the institutional factors refer to the conditions that undermine property rights. The institutional factors increase the risks of exchange and the cultural factors tend to influence managerial costs and uncertainty evaluation in the target market.

The TCA framework and its extensions have been widely applied and tested in empirical studies. Existing empirical literature found that the transaction cost related factors influence entry mode choice significantly. Meyer (2001), based on a sample

of German and British MNEs in CEE, concluded that the unstable incomplete institutions increase the transaction costs, therefore influence the entry mode choice. Brouthers (2002) suggested that the firms, which make their entry mode choices by applying this TCA criterion, are performing better than those who do not. Nakos et al. (2002) analyzed both the market entry decisions and the performance of Dutch and Greek SMEs in CEE and suggested that the TCA framework for MNEs tend to apply for SMEs as well. Chen and Hu (2002) supported the framework of TCA by examining foreign-invested firms in China from 1979 to 1992. Leung et al. (2003) examined the TCA related factors affecting entry mode decisions of foreign banks in China.

Despite of offering many insights into the role of corporate governance in entry mode decision, the TCA framework and its extensions raise some doubts. These doubts originate from the challenges of its ancestor, the TC theory of the firm. If the assumptions of asset specificity and opportunism even in presence of bounded rationality, as Kay (1982) argued, are really over restrictive, the TCA framework becomes explicitly too narrow. Alternatively, as Madhok (1996) insisted, the efficiency can be attained by maximizing benefits rather than minimizing costs, the shallowness and partiality of TCA framework become obvious.

Additionally, the TCA frameworks have a very limited predictive power in entry mode choice due to the following reasons:

1) transaction costs themselves are ambiguous and difficult to measure, what more important however is that the transaction cost itself has no absolute connection with corporate governance,

2) the effect of transaction costs in today's business has fallen dramatically due to technology development and economic integration (Downes and Mui 1998, Krempel and Plümper 2002),

3) it has a very limited explanatory power with respect to the complex multinomial choice of market entry mode (Gatignon and Anderson 1988, Klein et al. 1990),

4) it neglects many important aspects in terms of firms' boundary decisions: the government regulations (i.e. they generally define the feasible set of entry modes), the production costs (Anderson and Gatignon 1986), the larger strategic and the competitive context within which the firms are operating (Madhok 1998), and non-profit goal of decision-making[5] (Milgrom and Roberts 1992). Moreover, it excludes non-transaction benefits (Anderson and Gatignon 1986).

Therefore, the TCA framework offers very limited managerial guidelines in practice despite of its popular appearance in existing literature.

2.2.3 The OLI model

The OLI theory was introduced by Dunning (1977) at a presentation on a Nobel Symposium in Stockholm on "The International Allocation of Economic Activity" intending to identify and evaluate the factors influencing both the initial act and the growth of foreign production. The OLI model is based on a combination of the economic theory of the firm as well as the competitive advantage theory of the firm. In the following decades, the author himself (Dunning 1980, 1988, 1995, 1998, and 2000) developed this model further.

In his first presentation, Dunning recognized that the attempts to identify distinctive features of foreign direct investment in terms of ownership endowments had already been made by Southard (1931). Hymer (1960) further explored this ownership endowment idea; Caves (1971 and 1974) refined and extended it later. Many hypotheses focusing on the particular kinds of ownership advantages of MNEs were proposed: production differentiation (Caves 1971), entrepreneur and managerial capability (McManus 1972), for example. Dunning also acknowledged Vernon's (1974) concept of location advantage in explaining foreign investment. This concept of location advantage was integrated by Dunning (1977) to explain international production. Furthermore, Buckley and Casson (1976) suggested

[5] Some MNEs might enter into a new market for strategic networking for instance. Alternatively, if some shareholders of the MNE considered are meanwhile upstream or downstream partners of the MNE, they might influence the MNE to adopt an entry mode, which does not maximize the profit of the MNE but their own ones.

internalization to explain international investment and they argued that MNEs would internalize their activities in a foreign country if the costs of internalization were lower than that of exporting or other contractual agreements.

The OLI theory stated that entry mode decisions are determined by the composition of three sets of advantages as perceived by enterprises:

1. ownership advantages (i.e. advantages that are specific to the nature and the nationality of the owner),
2. internalization advantages (i.e. advantages arising from transferring ownership advantages across national boundaries within the organization), and
3. location advantages (i.e. advantages arising from the fact that different locations feature different resources, institutions and regulations affecting the revenue and the cost of production).

The more OLI advantages a firm possesses, the greater the propensity of adopting an entry mode with a high control level such as a wholly owned venture. Later Dunning (1995, 1998, and 2000) updated the model and argued that competitive advantages, market failure, collaboration, and dynamic environments should also be integrated into the model, when decisions on international production are made.

The OLI model was widely applied in the past to explain entry mode decisions and its basic ideas were supported by several empirical studies. Agarwal and Ramaswami (1992) supported this theory by empirically examining a sample of American service firms. Brouthers et al. (1999), and Nakos and Brouthers (2002) adopted this framework to explain MNEs' entry mode decisions when facing a transition economy such as CEE.

In spite of its eclecticism, its improved measurability, and its improved explanatory power, the OLI model is a static one. It intends to cover all factors affecting entry mode decisions, but in fact, it fails to do so due to the ignorance of strategic factors, the characteristics of and the situational contingency surrounding the decision maker, and even the competition.

2.2.4 The OC model

Aulakh and Kotabe (1997) have discussed organizational capability as an aspect that influences entry mode choice. Madhok (1996, 1997, and 1998) systematically studied the organizational capability and proposed this OC approach.

This approach is based on the RB theory of the firm and its offspring, i.e. the KB theory of the firm (Penrose 1959, Conner 1991, Kogut and Zander 1993, and Conner and Prahald 1996). The RB theory regards a firm as a bundle of capabilities and knowledge where individual skills, organization and technology are inextricably woven together (Nelson and Winter 1982). The model argues that entry mode decision is capability related, and it is made under a framework governed by considerations of the deployment and development of a firm's capabilities rather than the costs of transactions.

The organization capability as an aspect of benefit is taken into account for the first time in entry mode choice. However, this approach has some limitations:

1. there is an over emphasis on the future value rather than the short run profit. Certainly, firms make their strategic decisions with long-run growth or capability deployment and development as a goal, but not the only one,
2. the OC theory suffers, when it is used to solve the firm's boundary decisions, from the bad measurability of the OC itself. Because of this bad measurability and impreciseness, the OC theory is therefore less applicable in practice for managers,
3. the OC theory ignores explicitly the roles of decision maker as well as the environment in the process of entry mode decisions.

2.2.5 The DMP models

The DMP models were represented by Young et al. (1989), Root (1994), Kumar and Subramaniam (1997), Pan and Tse (2000), as well as Eicher and Kang (2002). These models are traceable to the BR theory and the behavioral theory of the firm (Simon 1957, Cyert and March 1992, March and Simon 1993), in which the decision-making process has a greater influence on achieving the firm's goals.

These models argue that entry mode choice should be treated as a multi-stage decision-making process. In the course of decision-making, various factors, such as the objectives of market entry, the existing environment, as well as the associated risks and costs, have to be taken into account. Focusing more on optimizing the process of decision-making rather than on calculating the economic efficiency, these models are more descriptive than normative. However, designing the process of decision-making very easily falls into two false directions, either too specific or too general. The decision-making procedures of choice cannot be designed completely distinct in nature. Additionally, it ignores the role of the organization itself and that of the decision maker during the process of decision-making.

2.2.6 In Summary

The existing qualitative theories have studied entry mode from various perspectives, e.g. economic efficiency, competitive advantage, decision-making process, economic evolution, etc. Entry mode choice has been studied as a solution of improving the organizational performance, e.g. the TCA, the OLI theory, and the OC theory for instance. However, a systematic consideration of the decision maker and the decision-making context is usually ignored during the process of entry mode choice.

In practice, none of the existing models is widely applied by management due to various reasons. For example, the TCA has a bad measurability; the SD approach is too formalistic and therefore it cannot explain why some firms start entry with a whole owned venture.

Table 2.2 summarizes the main aspects discussed above.

Table 2.2 An assessment of the existing theories on entry mode choice

Basic models	*References*	*Theory of the firm applied*	*Main arguments*	*Limitations*
SD model	Johanson and Wiedersheim-Paul (1975), Brooke (1986)	The evolution theory of firm (Nelson and Winter 1982)	Internationalization is a long, slow and incremental process of cultural and geographical expansion and commitment.	Can not explain why some newly established firms start with a high equity entry mode, such as FDI
TCA model and extensions	Anderson and Gatignon (1986), Hill et al. (1990), Klein et al. (1990), Erramilli and Rao (1993)	Transaction cost theory (Coase 1937, and Williamson 1975 and 1985)	Efficiency-maximizing firms adopt entry modes which minimize transaction costs.	Bad measurability, little connection with corporate governance, over-restrictive assumptions
OLI model	Dunning (1977, 1980, 1988, 1995, 1998, and 2000), ect.	Economic theory as well as strategic theories of the firm	The more ownership, location and internalization advantages a firm possesses, the more likely it adopts a high equity entry mode.	A static model ignores the impact of the firm objective, the decision maker, and the situational contingency surrounding the decision maker.
OC model	Aulakh and Kotabe (1997), Madhok (1998)	The RB (Penrose 1959), KB (Conner 1991, and Kogut and Zander 1993) among others	Entry mode decision depends on the deployment and development of firm capability, i.e. maximization of benefits.	It ignores other goals of market entry as well as the decision maker and the social and political environment.
DMP model	Young et al. (1989), Root (1994), and Kumar and Subramaniam (1997)	The BR and the behavioral theory of firm (Simon 1957, and Cyert and March 1992), etc.	Entry mode choice is regarded as a multistage process taking into account some important factors.	It ignores the impact of the organizational performance and the decision maker.

2.3 Some conflicting results

As could be seen from the discussion above, most of the existing studies aimed to explore the factors, which are related to entry mode choice and their impacts. In fact, there are many factors having to be taken into account in research and practice. Root (1994) altogether identified 22 factors. In terms of the possible influence of a specific factor on entry mode choice, the existing literature shows great inconsistencies.

2.3.1 Conflicting results of theoretical studies

2.3.1.1 International experience

Theoretically, different schools of researchers insisted on the applicability of their own approaches for explaining entry mode choice. By applying different approaches, they explained the impact of a certain factor on entry mode choice quite differently, e.g., international experience, and cultural distance.

In respect to international experience, some researchers have argued that a firm's level of international involvement is positively related to international experience, i.e. the more international experience a firm possesses; the more efficient it is to adopt an entry mode with a high level of equity involvement. There are different versions of explanations. Stopford and Wells (1972) clarified this phenomenon by the "humanity" of firm, i.e. a firm behaves humanlike and matures as it acquires more experience from international markets. Similarly, Davidson (1980 and 1982) illustrated this phenomenon with uncertainty, the more experience accumulated, the less uncertainty, and therefore the more confident the firm is. Consequently, a high equity entry mode is adopted. Anderson and Gatignon (1986) and Nakos et al. (2002) supported this idea explicitly.

The counter-argument is that international experience is negatively related to international involvement. This understanding bases itself on the "ethnocentric orientation" of many international neophytes. Ethnocentrism leads inexperienced firms to demand a high ownership first in order to exploit its advantages by holding key positions. Later on, when the firm has acquired enough local knowledge and when it has adapted to local conditions, a shared ownership or a low degree of ownership is preferred. Wiechmann and Pringle (1979) supported this theory explicitly. Stopford and Wells (1972) and Shetty (1979) found empirically that the experienced firms prefer a joint venture (JV) rather than a wholly owned foreign venture (WOFV).

Erramilli (1991) explained this dissent with an underlying time frame. He thought that in the long-run entry mode choice is positively related to experience, however entry mode choice is negatively related to experience in the short run. He therefore

compromised the two extreme explanations by structuring a "U" shaped relationship between entry mode and experience:

> *"In our opinion, the key reason for the controversy appears to be the widely differing time frames adopted by researchers in opposing camps. Proponents of the positive relationship between experience and control, such as Gatignon and Anderson (1988), have generally employed continuous, long-term measures of experience. On the other hand, analysts who noted negative relationships have typically focused their attention on the early part of firms' international evolution."*

This compromise is a step forwards in explaining the influence of organizational experience on entry mode choice. However, applying the time frame as the only argument for this "U" shaped relationship is very shallow, as it does not indicate the essential motivation of the dynamics of entry mode choice.

2.3.1.2 Cultural distance

Cultural distance is another arguable factor. Some economists or marketing experts pointed out that the cultural distance between the home and the host country discourages the ownership involvement, i.e. it is negatively related to the level of control. Some other economists argued that cultural distance encourages ownership involvement.

Gatignon and Anderson (1988), Kogut and Singh (1988) and Erramilli and Rao (1993) supported a negative relationship between the cultural distance and entry mode choice. This can be explained

1. by managers shying away from ownership involvement when they have no or merely inconsistent knowledge about local values or operation methods (Davidson 1980 and 1982, Root 1994), or
2. by managers undervaluing the investment due to uncertainty caused by cultural distance (Root 1994), or
3. by high information collection costs due to cultural distance (Root 1994), or
4. by high managerial costs, e.g. due to training requirement.

A positive relationship is explained by the fact that ownership makes it possible to make things done in its own way, which is assumed to be more efficient and more advantageous (Hymer 1960). Padmanabhan and Cho (1996) as well as Anand and Delios (1997) supported this theory with empirical studies.

Again, these two phenomena coexist in reality, both explanations are reasonable. However, their predictability and the ability to generalize are very restrictive. The predictive direction of this relationship is dependent on a specific context.

2.3.2 Conflicting results of the empirical studies

Some empirical studies are divergent with respect to what kind of influence individual factors might exert on entry mode choice.

International experience, which is assumed to have important implications for entry mode decision, has been examined empirically with a high frequency. Surprisingly many conflicting results can be observed. Findings, which support a positive relationship, were reported by Caves and Mehra (1986), Anderson and Gatignon (1986), Erramilli (1991), Argarwal (1994), Reuber and Fisher (1997), Evans (2002), Herrman and Datta (2002) and King and Tucci (2002). In contrast, Chung and Enderwick (2001) found some empirical support for a negative relation. However, some other empirical studies have also concluded a non-significant relation, e.g. Brouthers (2002).

There are also conflicting results with regard to the influence of cultural distance on entry mode decision. Some studies (e.g. Hennart and Larimo 1998, Gatignon and Anderson 1988, Treadgold 1988, Kogut and Singh 1988, Erramilli and Rao 1993, Evans 2002, Cristina and Esteban 2002, and Leung et al. 2003) found that there is a negative relationship between cultural distance and entry mode choice. Other empirical studies provided evidence for a positive relationship. This, for example, applies for Padmanabhan and Cho (1996) and Anand and Delios (1997).

The size of a firm is also an important factor, which has initiated many examinations in the past. It leads however also to obviously conflicting results. Caves and Mehra (1986), Kogut and Singh (1988), Erramilli and Rao (1993) and Leung et al. (2003) supported the assumption that the bigger a firm is, the more

efficient it is to adopt a high equity entry mode. Conversely, Reuber and Fisher (1997) as well as Evans (2002) found that the size of a firm is not an important contributing factor.

The regularity of conflicting influences of some specific factors on entry mode choice implies that a deterministic relationship between a factor and entry mode choice can easily be concluded, but is difficult to generalize.

2.3.3 Summing up

The theories as well as empirical investigations analyzing the possible influence of a specific factor on entry mode choice derive controversial results. These contrasts are depicted in Table 2.3.

The existing inconsistencies can be explained from many different perspectives. Essentially, entry mode choice is a strategic behavior, which is ill defined and complex (Young et al. 1989, Kumar and Subramaniam 1997), therefore it is the result of a great set of determinants, psychological, economical, and political, and their interactions. Trying to examine a specific factor's influence while keeping other factors constant is feasible and fruitful in theory, but this is not manageable in practice. Moreover, the contrary observations might arise for the following reasons:

1. different researchers might start their research with different expectations under different theoretical guidance,
2. different studies apply different methodologies with different samples,
3. a specific factor may exert contrary effects simultaneously on entry mode choice, the consequence depends on which strength is dominant in a specific context.

Table 2.3 Conflicting theoretical interpretations and empirical results

	Factor	*Positive relation*	*Negative relation*	*Irrelevant relation*
Theoretical interpretations	Inter-national experience	Anderson and Gatignon (1986), Davidson (1980, 1982)	Wiechmann and Pringle (1979)	
	Cultural distance	Hymer (1960)	Erramilli and Rao (1993), Gatignon and Anderson (1988), Kogut and Singh (1988)	
Empirical results	Inter-national experience	Evans (2002), Herrman and Datta (2002), King and Tucci (2002), Reuber and Fisher (1997), Agarwal (1994)	Chung and Enderwick (2001)	Brouthers (2002)
	Cultural distance	Anand and Delios (1997), Padmanabhan and Cho (1996)	Leung et al. (2003), Cristina and Esteban (2002), Evans (2002), Treadgold (1988), Gatignon and Anderson (1988), Erramilli and Rao (1993), Kogut and Singh (1988)	
	Firm size	Leung et al. (2003), Erramilli and Rao (1993), Kogut and Singh (1988), Caves and Mehra (1986)		Evans (2002), Reuber and Fisher (1997)

Source: Decker and Zhao (2004b), "SMEs' Choice of Foreign Market Entry Mode: A Normative Approach", *International Journal of Business and Economics* 3 (3), p.185.

2.4 Implications and outlook

From the above analyses and considerations, we can extract some useful implications for marketing management practice. Meanwhile, the existing conflicts between theory and empirical "reality" allow us to derive some implications for future research and this dissertation in particular.

2.4.1 Implications for international marketing practice

2.4.1.1 Serious decision on mode of entry

As economists have highlighted, entry mode choice is a "critical strategic decision", or a "frontier issue" of international marketing. Entering into a new market especially via high-equity modes usually involves a concomitant commitment of resources, which cannot be easily transferred from one form to another. A high resource-commitment entry mode usually exposes the firm to great risk (Anderson and Gatignon 1986).

As analyzed above, due to the complexity of entry mode choice, there is no widely accepted model. In addition, the theories as well the empirical studies contradict themselves on what factors are influential and how. Therefore, managers cannot find a direct answer from the existing literature to how entry mode decisions should be made in their cases.

The managers should thus seriously consider their entry mode decisions especially when it is a choice of a high equity mode. Certainly, this is not to suggest that one should always start with a low equity mode to avoid risk, doing so might definitely miss a good chance. The main point is to find a way maximizing the success rate.

2.4.1.2 How to maximize the success rate

To maximize the possibility of success is the goal of a rational decision maker, this problem occurs frequently however yields no simple solution. With respect to entry mode choice, there are no rules to guarantee complete success, however some implications can be inferred from the above analyses. The first step is to make an extensive evaluation on the potentially influential variables; secondly, to optimize the decision-making process.

As indicated above, there are a multiple of factors that should be considered during the process of entry mode choice. These factors can be explored from the perspectives of the host and home countries, the industrial characteristics, the firm's characteristics, the decision maker's characteristics and the product characteristics. This is not to say that no variables are insignificant. In fact, there are some factors, which do not play such an important role, and hence can be ignored. Among the

identified variables, a high weight should be given to those highlighted in the existing literature, e.g. experience, cultural distance, country risks, and the decision maker's characteristics, etc. Of course, there are always some hidden factors, which are important in essence however are often ignored, organizational philosophy is for example. This asks for a systematic process of assigning this responsibility to different departments or individuals, accompanied with some evaluations.

Meanwhile, the decision-making process is an important consideration. Those DMP models formulated by Young et al. (1989), Root (1994), and Kumar and Subramaniam (1997) offer useful implications for entry mode choice in practice. Especially, the hierarchical decision-making model by Kumar and Subramaniam (1997) is applicable to the SMEs, which are short of resources.

Additionally, the great inconsistencies in the existing theories and empirical studies in terms of the possible influence of some factors on entry mode choice indicate the managers a careful comparison on the decision-making context in the existing literature with that they have in reality. A better correlation between the two contexts implies a better applicability of the relevant results from the existing literature.

Finally, an objective evaluation of the benefits, the costs and the risks of each alternative entry mode during the process of decision-making is critical.

2.4.2 Outlook for future research

2.4.2.1 Some trends in entry mode theory

1) A dynamic and/or longitudinal decision-making model

We could notice that entry mode choice was primarily regarded as a one-stage or a static decision-making problem in prior literature. In reality, it is often a multiple-stage problem, which involves at least a process of goal formulation, alternative strategies identification, and optimal or suboptimal strategy selection. It is ambitious to suggest a dynamic choice model as representing the process as it involves a hierarchy of single decisions, each of which being an attempt to improve the outcome in the light of new information gained in previous decisions. However, it

can provide a more realistic description of human problem solving than a static one does. Furthermore, firms having started to enter into a foreign market may change their original strategy due to learning effects or unscheduled developments. Therefore, a dynamic model considering the longitudinal aspects, as which is developed later in this dissertation, is desirable to gain a better understanding of entry mode decisions. Some other researchers, Pan and Tse (2000) for instance, have realized this trend and have attempted to formalize and explain the phenomenon, however it still deserves attention in future research.

2) Comparative studies

The entry mode decisions have been studied primarily as a profit maximization problem of industrial or non-industrial organizations, which exist solely for profit and growth. No matter the efficiency considerations of the TCA framework by minimizing the "friction" costs, or the competence and/or growth consideration of the OC theory by maximizing benefits, they are both profit oriented. However, there are some non-industrial organizations, e.g. public universities, whose existence is not mainly driven by profit, expansion or growth. Thus, their market entry decisions are not made on the basis of profit maximization. Entry mode decisions of profit-oriented organizations therefore can be different with those of non-profit oriented organizations. These differences still need to be investigated in depth. Furthermore, the choice of entry mode might differ in different time periods due to different macro or microeconomic contexts. Therefore, inter-temporal studies of this problem might can possibly induce a better understanding of entry mode theory. As far as the literature concerned, there are few existing papers having studied this problem from these two aspects.

3) A multi-objective problem

As the existing qualitative and quantitative models indicated, the profit or efficiency maximization dominates other goals or considerations during the process of entry mode choice. However, industrial organizations' entry into a new market might be not only for the goal of profit maximization but also for other purposes, e.g. network building, information gathering, etc. These goals may be of conflicting natures and can hold different priorities on entry mode decision. Therefore, if we

redefine the problem by taking into account other objectives of foreign market entry, we may have to solve it in a quite new style. There should be at least a tradeoff process among these different goals. Recently Hajidimitriou et al. (2003) constructed a goal-programming model to solve entry mode choice as a multi-objective problem. It is possible that future research will be able to solve this multi-objective problem with different economic methods.

4) A systematic model of entry mode choice

As analyze above, most of the existing literature focuses on the identification of the factors, which influence the market entry decision, and on their possible impact on this decision. These studies result mostly in a partial behavior analysis (Dunning 1988, 2000). Being specific to a certain context and time period, the implications from a partial behavior analysis are limited and difficult to generalize. This limitation is confirmed by the great inconsistencies in the existing literature. Restricting to some selected factors may easily lead to wrong or inconsistent conclusions, just like one who touches only a leg of the elephant and claims that an elephant looks like a tree. So, more general business strategy models are needed to analyze the entry mode choice and to explain the genesis of the corresponding decision.

As identified in chapter 1, entry mode models usually find their roots in at least one branch of the firm theories. The development of such a general business strategy model should also refer to the existing theories of the firm, which might offer new insights into the behavior of a firm. Organizational scientists usually adopt a different approach when firms' economic behaviors are being studied, i.e. a systematic approach (Pennings 1986, Evan 1993). This systematic theory of the firm is more complete and better in tune with today's complex economic environment.

Therefore, introducing this systematic concept to study the entry mode choice could generate new insights. Moreover, such a general or systematic model should be engaged on an individual, organizational as well as institutional or societal level of analysis in terms of the internal and external efficiency. Why is so? Since entry mode choice is usually made directly by the owners and/or managers, individually or cooperatively. The individuals' behavior is a reflection of their preferences, which

are influenced by the bounded rationality (i.e. inadequate information, limited computational skills and uncertainty, etc.), the defined roles in the organization, as well as being contingent on the environment around them. As argued by Evan (1993), organizational strategy, organizational structure and environment factors are in a close relationship; a good matching between the environment and the organizational strategy and structure is positively related to performance. Organizational behavior and individual decisions can shape as well as mirror the environment, and the environment can affect individual as well as organizational behavior.

2.4.2.2 Some research strategies for entry mode theory

Referring to the previous analysis, we suggest in the following some research methodologies or areas of interest, which could be explored further in future research.

1) Case study methodology

Almost with no exception, previous empirical studies on entry mode choice were implemented with sample surveys. One problem of the sample survey is that the analytical results are quite dependent on the sample quality. The quality of the sample is however subject to a large number of factors, e.g. the design of the questionnaire, the rate of reply, the validity of the answers among others. The sample quality is thus very difficult to control. The other problem of the sample survey is that the analytical results are very easily to be generalized by mistakes. Actually, the analytical results even from a large sample are usually valid only within the specific context, which is represented by the sample. Thus, the effort of generalizing the analytical results of a sample survey usually ends in vain. However, if we narrow our focus to specific firm or firms, the analysis could offer more in depth insight; thereby present some practical implications for managers. Of course, a case study cannot escape the weakness of generalization yet.

2) Computer simulation methodology

Economists have indicated the great importance of the right entry mode to firms' final success. A wrong decision, especially a choice of a high equity entry mode, could incur a big loss in time, money and/or other resources.

Therefore, a simulation on the performance of an entry mode in a similar context before the final decision may offer the decision makers good insights in advance. However, the use of computer simulations in the study of entry mode choice is almost as neglected as the case methodology. Computer simulations on the performance of entry mode decision in a similar context could help to reduce the risk of a wrong entry mode choice. To answer this question, several studies have suggested potentially fruitful applications of this methodology to strategic decision-makings (Nagy et al. 1989, Nersesian 1990). Applying this methodology to study entry mode choices is feasible. A computer simulation before the final choice of entry mode may be more scientific and correctly corresponds to reality.

3) Interdisciplinary methodology

In the past, the problem at hand has been studied from different aspects of economic theories, e.g. the TC theory (Coase 1937, and Williamson 1975 and 1985), the network economics (Coviello and Munro 1997), the institution economics (Meyer 2001, Brouthers 2002, and Lu 2002), and information and uncertainty (Müller 2001). However, as far as we know, very few of the existing papers have studied this problem from an interdisciplinary perspective including the knowledge from organization theory and behavior science (Herrmann and Datta 2002 inspected the impact of successor CEO characteristics on entry mode choice for instance). The existing backlog in this respect should be accounted for in future research. Being a decision-making problem, entry mode choice might share some similarities with other decision-making problems. For example, in the Art of War[6], Sun Tzu articulated the preconditions of successfully initiating a war. He analyzed, in detail,

[6] One of the most outstanding works is "The Sun Tzu Art of War" which is regarded as the bible of military science in China and one of the oldest military treaties in the world. It was widely translated into several languages (Giles 1910, Griffth 1988) and applied to various aspects of business, e.g. marketing, human resource and career building (see for example http://www.clearbridge.com/current.htm). However, according to our knowledge, it has not been applied to market entry mode studies so far.

the decision makers, the organization, and the institutional environment. So referring to such a prominent decision-making method in future research, which is consistent with the systematic concept of strategic decision-making formulated by organizational scientists, could offer a new methodology of entry mode study. In addition, entry mode decisions can be studied axiomatically by other economic disciplines such as option theory (Li 2003), which is one strategic theory of the firm (Phelan and Lewin 2000).

4) Sights on emerging markets

Some researchers have investigated the entry mode choice in an emerging market, such as Leung et al.(2003), Nakos and Brouthers (2002). However, this is not to say that there is no need for further study in this field. On the other hand, the wide inconsistencies existing in the literature inspires further research with different samples or methodologies. A large or significantly growing market capability, a transitory economic and political system, a dynamic consumption behavior, a distinct culture and a favorable investment environment characterize the newly emerging markets (e.g. China). These markets offer a good chance of development especially for SMEs. However, due to the big physical distance and distinct culture, there are still many existing challenges for investment. Therefore, further research is still expected to answer such kind of questions as to how German firms should make their entry mode choice for entering into China.

2.4.3 The guidelines for this dissertation

We have derived from the existing literature some trends and research strategies for the study of entry mode choice; however, the question is which trend and strategies will be applied for this dissertation.

Among the four trends of entry mode theory, which are proposed in section 2.4.2.1, this dissertation will focus on the systematic approach with a longitudinal consideration. In correspondence to the indication derived in chapter 1 that the theory of entry mode usually originated from the theory of the firm, the systematic approach can explicitly find its roots in the organizational theory of the firm. However, this is not to say that the other trends are not important or do not deserve

further research. Additionally, another important implication from the existing empirical literature is that firms in different size brackets operate in different fashions, and thereby choose their entry modes with different strategies. This is quite reasonable: small firms differ from large firms in many ways, such as organizational structure, available resources and potential constraints, complexity and flexibility, among others. However, this does not imply that a positive or negative relationship exists between the firm size and entry mode choice.

Therefore, entry mode choice will be studied, in this dissertation, through a systematic approach with a longitudinal consideration. Naturally, the consideration of three systematic aspects, i.e. the decision maker, the organization, and the environment, in the process of entry mode choice should happen simultaneously. For simplicity, they are studied sequentially.

In respect to the research strategies, this dissertation is going to be an interdisciplinary study on entry mode choice (i.e. applying the traditional economic efficiency theory, the strategic theory of the firm, the psychological theory, the organization theory, etc.). To test the developed model, this dissertation employs an empirical test instead of a computer simulation. This is because the structure of the systematic model, which will be visualized in chapter 6, is too complicated to allow a simple simulation; an empirical test on the other hand is able to better examine the validity of the model. To offset the limitation of the sample survey, the empirical examination of the model developed in this dissertation is based on some in depth interviews, which are guided by a semi-structured questionnaire. Finally, China, one of the most prosperous emerging markets, is studied as a target market for German firms' market entry decision.

Chapter 3 SMEs' Market Entry Mode Choice: Risk Aversion and Environment

As suggested in chapter 2, the entry mode choice, in this dissertation, will be studied by taking three aspects, i.e. the systematic logic, the firm size, and dynamics as well as longitude, into account simultaneously. This chapter thus starts with modeling the entry mode choice of the SMEs. One of the significant properties of the SMEs is the simple organizational structure, in which the owners are the decision makers; therefore, there is an alignment of the decision maker's interest with that of the firm. This simple structure allows to investigate how the SMEs interact with their surrounding environment in the process of strategic decisions, e.g. entry mode choice.

Through analyzing the simple quantitative model developed, some qualitative and quantitative propositions are induced for the decision makers, both in the companies concerned and in economic policy. In addition, this theoretical model and its results will be compared with those of prior relevant works.

This chapter is organized as follows. Section 3.1 describes the existing quantitative models in brief. In section 3.2, a new quantitative model of entry mode choice focusing on SMEs is developed. Practical implications and propositions for the decision makers in the companies concerned and in economic policy, as well as some comparisons with prior research, will be presented in section 3.3. Some possible extensions on the model as well as its deduced implications are discussed in section 3.4. The chapter closes with some conclusions.

3.1 Quantitative models of entry mode choice

The existing literature on entry mode choice primarily refers to MNEs. The activities of SMEs have received far less attention (Kumar and Subramaniam 1997, Nakos and Brouthers 2002). Meanwhile, the importance of SMEs'

internationalization has increased, however, tremendously in recent years (Nakos and Brouthers 2002).

As demonstrated in the previous chapter, most of the existing theories are qualitative and content-orientated and there is little congruence regarding the applicability of the available models to the entry mode decision. Hardly any of the existing models are explicitly tailored to the SMEs to our knowledge. Among the very few quantitative models in the existing literature, the game theoretical ones are dominant.

One branch is represented by Grossman and Hart (1986) and their followers, who motivated their models by the transaction cost theory of Coase (1937) among others. Buckley and Casson (1998) and followers represent the other branch, which bases its models mainly on the internalization theory.

Grossman and Hart (1986) developed a two-period, two-player model to explain vertical and lateral integration as a problem of ownership allocation efficiency based on the assumptions that asset specificity and ownership are the purchase of non-contractible rights. Optimal ownership is determined by equating the marginal benefits of one party's increased control with the marginal costs of the other party's loss of control. Later, many papers, such as Hart and Moore (1990), Feenstra (1998), and Feenstra and Hanson (2004), suggested fruitful models by referring to the ideas of the previously mentioned authors.

Buckley and Casson (1998) formulated a theoretical model investigating the choice between export, licensing, joint venture (JV) and wholly owned foreign venture (WOFV) in a two-firm economy. The optimal entry mode is selected by eliminating the dominated strategies, i.e. those higher in cost and lower in profit. Görg (1998), inspired by Buckley and Casson (1998), constructed a Cournot model to investigate the influence of market structure on entry mode choice in a three-firm economy. Müller (2001) constructed a two-period model for a two-firm economy. In the first period, the MNE decides to enter either by acquisition or by Greenfield investment or not to enter at all. In the second period, the MNE competes in price with the local firm in the host country if entering by Greenfield investment or it operates as a monopolist in the host country if entering via acquisition. Eicher and

Kang (2002) expanded on Müller (2001) to allow for international trade and transport costs.

The above game theoretical models represent entry mode choice as an optimization problem and enlighten the players' strategic interactions during the decision-making process. However, the SMEs are not actually in such an abstract economy, they can neither compete as a duopolist when entering via Greenfield investment nor operate as a monopolist when entering by acquisition. Additionally, in such an economy, the environment in which the firms are embedded, is easily ignored. The decision maker's influence on entry mode choice is usually ignored in the above models. On the other hand, the SMEs do not really make their entry mode choice decision by following such a complicated thinking process. Most of the existing quantitative models focus on the choice between acquisition and Greenfield investment, i.e. between two alternatives of direct investment (wholly owned venture) (Görg 1998, Müller 2001). Very few of them have integrated two hierarchical decisions, namely the decision of investment and the choice of the mode of entry into one framework.

Summing up, we can conclude that an explanatory framework fit for SMEs is still indispensable. The new model we are going to develop in the next section provides a concrete orientation for the SME's entry mode decision, especially in a practical respect. The model takes the decision maker and the environment in particular, in which the former is embedded, into account. In this sense, this model is one part of our systematic framework with a particular emphasis on the SMEs and their surrounding environment.

3.2 A new model of entry mode choice

3.2.1 The SMEs

SMEs differ from MNEs not only in structural aspects but also with regard to the entry mode choice (Erramilli and D'Souza 1993). SMEs are relatively simple in their organizational structures and objectives. Usually SMEs take the form of a private company, a partnership, or a joint stock company (Haahti and Pichler 1995).

Managers, who are identified in this chapter with the decision makers, are frequently the owners of the firms that take the first two forms. Therefore, we assume that the SME decision maker's objective of entry mode choice is in line with that of the SME as a whole in our model. Fundamental objectives of firms are growth and development (Milgrom and Roberts 1992). The SME decision makers are intentionally rational when they make their decisions under some constraints.

Therefore, the principle followed by the SME managers for their entry mode decision is simply to maximize the expected aggregate profit of investment in both the home country and host country through allocating its investment between the two countries optimally. Therefore, the SME may or may not invest in the foreign country. When the firm decides not to invest in the foreign country it may enter via exporting or contracting (Anderson and Gatignon 1986). In case of an investment, the SME can either cooperate with a foreign partner, i.e. to establish a JV, or form a WOFV.

3.2.2 Notations and the model

Starting from the above considerations, we can make the following assumptions to construct a simple framework for modeling entry mode choice.

1. The difference among different entry modes, e.g. exporting/contracting, a JV and a WOFV, is essentially a difference of ownership (Anderson and Gatignon 1986, Grossman and Hart 1986). To choose an optimal entry mode the SME decision maker has only to determine the optimal ownership ratio regarding the foreign country operation instead of comparing the expected outcomes of different alternative entry modes. This ratio can be denoted by θ, with $\theta \in [0,1]$. This means that there is no limitation on the ownership ratio θ in the host country, i.e. the policy constraint in the host country is trivial. If $\theta = 0$, the SME decides not to invest, alternatively, the SME enters via exporting or contracting. If $\theta = 1$, the SME enters via a WOFV; otherwise, it enters as a JV.
2. The company has a simple production technology producing one output $q(x)$ with one input, i.e. capital x, by this we assume that other non-capital

inputs are numerated with cash. This technology holds a property of strict concavity, i.e. $\partial^2 q(x)/\partial x^2 < 0$. This is to guarantee the uniqueness of maximum output. Economically, the marginal productivity with respect to input is decreasing. Furthermore, q^f, $\overline{x^f}$ denote the output and the input of the production in the foreign country. $\overline{x^f} > 0$ can be forecasted and is given, it might result from two sources, namely the investment of the SME (i.e. $x^f = \theta\overline{x^f}$) and the investment of its partner in the host country (i.e. $(1-\theta)\overline{x^f}$). Analogously, q^h and x^h denote the output and the input of production in the home country. The sum of the SME's investment in the two countries cannot exceed its capital capacity X. In addition, r^f and r^h represent the capital cost rates in the foreign and home countries respectively. Both foreign and home operations incur fixed costs of investment F^f and F^h respectively.

3. The SME's profits made abroad and at home are taxed separately without any overlapping. The income tax rates in the host and home country are denoted by t^f and t^h, with t^f and $t^h \in [0,1)$.
4. Due to the size of SMEs, their markets for the outputs are competitive both at home and abroad. The output price p^f in the foreign country is assumed to be a random variable, which is a standard normal distribution with mean being μ and variance being σ^2. Due to prior experience the output price p^h in the home country is given. The prices of inputs in the home and host country are given as well. The risk of operating abroad can thus be represented by the variance σ^2 of the output price (i.e. or by the standard variance σ).
5. The allocation of the profit of the joint project between the SME and its partner in the host country, if the SME operates jointly with a foreign partner, is assumed for simplicity to be dependent on nothing but the ownership ratio θ. Therefore, its profit due to investment in the host country is $\pi^f = \theta\left[p^f q^f(\overline{x^f}) - r^f\overline{x^f} - F^f\right](1-t^f)$. The home country profit

is $\pi^h = \left[p^h q^h(x^h) - r^h x^h - F^h \right](1-t^h)$. The SME's aggregate profit is $\pi = \pi^f + \pi^h$.

6. The company is characterized by a constant absolute risk aversion (CARA) utility over the aggregate profit, i.e. $-\frac{U''(\pi)}{U'(\pi)} = \gamma > 0$. U is monotonically increasing and strictly concave with respect to π. γ is the parameter of risk aversion, and it is constant due to the CARA utility function.

With the above assumptions, the decision-making problem can be described as follows:

$$\underset{\{x^f, x^h\}}{\text{Max}} \ \text{E}(U(\pi)) \tag{3.1}$$

$$\text{s.t.} \quad x^h \geq 0 \tag{3.2}$$

$$x^f \geq 0 \tag{3.3}$$

$$x^f \leq \overline{x^f} \ , \ \text{with } 0 < \overline{x^f} < X \tag{3.4}$$

$$x^f + x^h \leq X \tag{3.5}$$

The decision variables are explicitly x^f and x^h. Due to the fact that $\theta = x^f / \overline{x^f}$, θ is therefore an equivalent decision variable of x^f. Consequently, constraint (3.3) and (3.4) are equivalent to $\theta \in [0,1]$. The SME's total investment cannot exceed its capacity, X.

With the assumption that p^f is the only (normally distributed) random variable, we can conclude that π^f and $\pi = \pi^f + \pi^h$ have a normal distribution as well. Therefore, the mean and the variance of π are:

$$\overline{\pi} = \theta \left[\mu q^f(\overline{x^f}) - r^f \overline{x^f} - F^f \right](1-t^f) + \pi^h \tag{3.6}$$

$$Var(\pi) = \theta^2 (1-t^f)^2 \left[q^f(\overline{x^f}) \right]^2 \sigma^2 . \tag{3.7}$$

The assumption of CARA utility together with the normal distribution of the aggregate profit give rise to a mean-variance utility function where the company's expected utility is a linear combination of the mean and the variance of the aggregate profit (Sargent 1987). Therefore, we have:

$$\underset{\{x^f,x^h\}}{\text{Max}}\ \text{E}(U(\pi)) \Leftrightarrow \underset{\{x^f,x^h\}}{\text{Max}}\left[\bar{\pi} - \frac{\gamma Var(\pi)}{2}\right]$$

$$\Leftrightarrow \underset{\{\theta,x^h\}}{\text{Max}}\left[\begin{array}{l}\theta\left[\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f\right](1-t^f) + \pi^h \\ -\dfrac{\gamma\theta^2(1-t^f)^2\left[q^f(\overline{x^f})\right]^2\sigma^2}{2}\end{array}\right]$$

. s.t. $x^h \geq 0$, (3.8)

$\theta \geq 0$, (3.9)

$\theta \leq 1$, (3.10)

$\theta\overline{x^f} + x^h \leq X$. (3.11)

The corresponding Lagrangean function is

$$\begin{aligned}L(\theta, x^h, \lambda_1, \lambda_2, \lambda_3, \lambda_4) &= \theta\left[\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f\right](1-t^f) \\ &+\left[p^h q^h(x^h) - r^h x^h - F^h\right](1-t^h) \\ &-\frac{\gamma\theta^2(1-t^f)^2\left[q^f(\overline{x^f})\right]^2\sigma^2}{2} \\ &+\lambda_1 x^h + \lambda_2\theta + \lambda_3(1-\theta) + \lambda_4(X - \theta\overline{x^f} - x^h)\end{aligned} \quad (3.12)$$

The λ_1 , λ_2 , λ_3, and λ_4 are nonnegative Lagrangean multipliers.

The first order conditions are:

$$\frac{\partial L(\theta, x^h, \lambda_1, \lambda_2, \lambda_3, \lambda_4)}{\partial\theta} = 0 \quad (3.13)$$

$$\frac{\partial L(\theta, x^h, \lambda_1, \lambda_2, \lambda_3, \lambda_4)}{\partial x^h} = 0 \quad (3.14)$$

The complementary slackness conditions are:

$$\lambda_1 \geq 0,\ \lambda_1 x^h = 0 \quad (3.15)$$

$$\lambda_2 \geq 0,\ \lambda_2\theta = 0 \quad (3.16)$$

$$\lambda_3 \geq 0,\ \lambda_3(1-\theta) = 0 \quad (3.17)$$

$$\lambda_4 \geq 0,\ \lambda_4(X - \theta\overline{x^f} - x^h) = 0 \quad (3.18)$$

Equation (3.13) and (3.14) can be transformed into:

$$\left[\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f\right](1-t^f) - \gamma\theta(1-t^f)^2\left[q^f(\overline{x^f})\right]^2\sigma^2 + \lambda_2 - \lambda_3 - \lambda_4\overline{x^f} = 0, \quad (3.19)$$

and $(p^h q_1^h(x^h) - r^h)(1-t^h) + \lambda_1 - \lambda_4 = 0$ respectively. (3.20)

$q_1^h(x^h)$ is the first order derivative, economically it is the marginal productivity in the home country. To simplify the notations, we let $A = \left[\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f\right](1-t^f)$, $B = \gamma(1-t^f)^2\left[q^f(\overline{x^f})\right]^2\sigma^2$, and $C = (p^h q_1^h(x^h) - r^h)(1-t^h)$. Here *A*, *B*, and *C* have economic interpretations. *A* can be interpreted as the expected profit of the project in the host country after tax being paid, we note it simply as a net expected profit, similarly *C* is the net marginal profit of investing in the home country, and $C\overline{x^f}$ can be interpreted as the opportunity cost of investing $\overline{x^f}$ in the host country. *B* is the perceived risk of investing in a foreign country.

3.2.3 Solutions

In order to find the optimal ownership ratio, which defines the optimal mode of entry, and further to investigate how this optimal mode of entry is sensitive to the external factors, we will solve this decision-making problem, which is described by (3.1) - (3.5). We discuss firstly the corner cases, the boundary cases, and then the interior case.

3.2.3.1 Corner cases

(1) $\theta^* = 1$, $(x^h)^* = 0$, and $\left(x^f\right)^* = \theta^*\overline{x^f} = \overline{x^f} < X$

In this case, the SME will not invest in the home country; it invests however in the host country via a WOFV. Additionally, its investment in the host country, due to the assumption, is lower than the capital capacity. The question remains to identify the conditions under which the SME will decide to do so.

From Kuhn-Tucker theorem, $(x^h)^* = 0$, $\theta^* = 1$ and $\left(x^f\right)^* = \theta^* \overline{x^f} = \overline{x^f} < X$ induce that $\left(\lambda_2\right)^* = \left(\lambda_4\right)^* = 0$, $\left(\lambda_1\right)^* \geq 0$, and $\left(\lambda_3\right)^* \geq 0$. Inserting these optimal values into Eq. (3.19) and Eq. (3.20) respectively, we obtain that

$$(\lambda_3)^* = A - B \geq 0, \tag{3.21}$$

$$\left(\lambda_1\right)^* = -C \geq 0. \tag{3.22}$$

Eq. (3.21) describes the situation that the net expected profit arising from investing in the host country is at least not less than the SME decision maker's perceived risk of investing. Eq. (3.22) illustrates simply that the net marginal profit of capital investment in the home country is not positive. This is to say that, in such a situation, it is optimal for the SME to invest in the host country via a WOFV, but not invest in the home country.

(2) $\theta^* = 0$, $(x^f)^* = \theta^* \overline{x^f} = 0$, and $(x^h)^* = 0$

In this situation, the firm will not invest in any country. Solving this problem, we receive:

$$(\lambda_1)^* \geq 0, \ (\lambda_2)^* \geq 0 \tag{3.23}$$

$$(\lambda_3)^* = (\lambda_4)^* = 0 \tag{3.24}$$

$$(\lambda_1)^* = -C \tag{3.25}$$

$$(\lambda_2)^* = B - A \tag{3.26}$$

This means that the SME will not invest in any country when the net marginal profit of investing in the home country is non-positive, and the risk of investing in the host country is not less than net expected profit. The results are understandable and consistent with the practice.

(3) $\theta^* = 0$, $(x^f)^* = \theta^* \overline{x^f} = 0$, $(x^h)^* = X > 0$

This case means that the SME decides to invest all of its capital in the home country but not the host country. Again, we try to identify the conditions under which this case could happen.

Similarly, we solve this problem and find that at this point there must be:

$$(\lambda_1)^* = (\lambda_3)^* = 0, \tag{3.27}$$

$$(\lambda_2)^* \geq 0,\ (\lambda_4)^* \geq 0, \tag{3.28}$$

$$(\lambda_4)^* = C, \tag{3.29}$$

$$(\lambda_2)^* = C\overline{x^f} - A\ . \tag{3.30}$$

Eq. (3.29) simply indicates that the net marginal profit of investing in the home country is non-negative, and Eq. (3.30) implies that the net profit arising from investing in the home country is greater or equal to the net expected profit of investing the same amount of capital in the host country. Under these two conditions, it is better for the firm not to invest in the host country.

(4) $\theta^* = 1$, i.e. $0 < (x^f)^* = \theta^* \overline{x^f} = \overline{x^f}$, $(x^h)^* > 0$, and $(x^h)^* + (x^f)^* = X > 0$

Solving this problem, we obtain:

$$(\lambda_1)^* = (\lambda_2)^* = 0, \tag{3.31}$$

$$(\lambda_3)^* \geq 0,\ (\lambda_4)^* \geq 0, \tag{3.32}$$

$$(\lambda_3)^* = A - B - C\overline{x^f}, \tag{3.33}$$

$$(\lambda_4)^* = C\ . \tag{3.34}$$

Eq. (3.33) means that the net expected profit arising from investment in the host country less the sum of the perceived risks of the host country and the opportunity cost of investing in the home country is non-negative. Eq. (3.34) illustrates that the marginal profit of investment in the home country is not negative. If these two conditions hold, the SME may invest in the host country as a WOFV while investing in the home country as well, the total investment just uses up its capital constraint.

3.2.3.2 Boundary cases

(5) $\theta^* = 0,\ (x^f)^* = \theta^* \overline{x^f} = 0,\ 0 < (x^h)^* < X$

In this situation, the SME decides not to invest in the host country and its investment in the home country does not exceed its capital constraint. Again, solving this problem results:

$$(\lambda_1)^* = (\lambda_3)^* = (\lambda_4)^* = 0\ \ , \tag{3.35}$$

$$(\lambda_2)^* \geq 0 \ , \tag{3.36}$$

$$(\lambda_2)^* + A \geq 0 \ , \tag{3.37}$$

$$C = 0 \, . \tag{3.38}$$

Inequality (3.37) and Eq. (3.38) illustrating that the net expected profit of investing in the host country being not positive, and the net marginal profit of investing in the home country being zero are the conditions of this investment behavior.

(6) $0 < \theta^* < 1$, i.e. $0 < (x^f)^* = \theta^* \overline{x^f} < \overline{x^f}$, $0 < (x^h)^* < X$, and $(x^f)^* + (x^h)^* = X$

Through some manipulations, we obtain the explicit expression of θ^* as:

$$(\lambda_1)^* = (\lambda_2)^* = (\lambda_3)^* = 0 \tag{3.39}$$

$$(\lambda_4)^* \geq 0 \tag{3.40}$$

$$\theta^* = \frac{A - C\overline{x^f}}{B} \, . \tag{3.41}$$

Simply, it means that when the net expected profit adjusted through opportunity costs of investing in the host country, is less than the perceived risks of investing in the host country, the SME will not invest via a WOFV.

3.2.3.3 Interior case

(7) $0 < \theta^* < 1$, i.e. $0 < (x^f)^* = \theta^* \overline{x^f} < \overline{x^f}$, $0 < (x^h)^* < X$, and $(x^f)^* + (x^h)^* < X$

In this case, the optimal strategy for the SME is to invest in both countries, in particular via a JV in the host country. Solving this problem induces the following results:

$$(\lambda_1)^* = (\lambda_2)^* = (\lambda_3)^* = (\lambda_4)^* = 0 \tag{3.42}$$

$$\theta^* = \frac{A}{B} \tag{3.43}$$

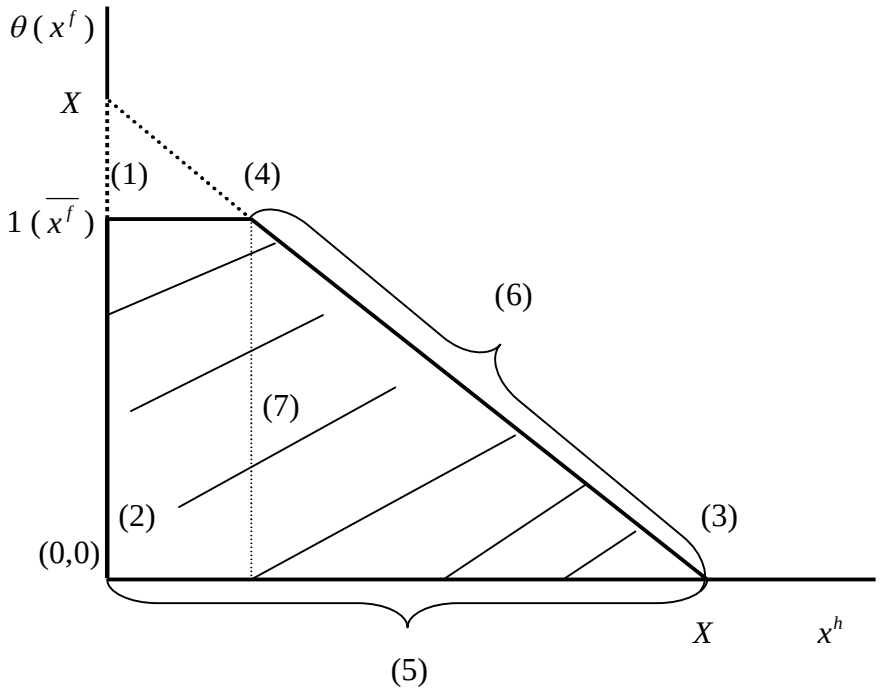
$$C = 0 \tag{3.44}$$

Eq. (3.43) and (3.44) indicate that when the SME's marginal profit of investing in the home country becomes zero, and the net expected profit of investing in the host country is less than the estimated risk, the optimal choice for the SME is to form a

JV. The optimal ownership ratio is the ratio of the net expected profit to the perceived risk of investing in the host country.

The above different cases we have discussed can be simply depicted by the following Figure 3.1.

Figure 3.1 The possible solutions to the optimization problem



3.3 Implications and propositions

3.3.1 Comparative static analyses

The boundary case (6), which is more consistent with reality, provides a solid basis for practical implications that can be developed into concrete propositions to support real entry mode choice decisions. To answer the question to what extent interesting external factors influence entry mode choice, we have to look at θ^* and its relations to these factors more closely.

Let us start with the risk attitude of the decision maker. In fact, existing empirical results have demonstrated that entry mode choice is related to risk aversion (Osland

et. al 2001, Bhaumik 2003). To go into this matter we first express θ^* in case (6) explicitly and differentiate it with respect to the risk adverse parameter γ, doing so results:

$$\theta^*_{\gamma} = -\frac{(\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f)(1-t^f) - (p^h q_1^h(x^h) - r^h)(1-t^h)\overline{x^f}}{\gamma^2(1-t^f)^2(q^f)^2\sigma^2} = -\frac{\theta^*}{\gamma} < 0. \qquad (3.45)$$

Due to the fact that θ^* is positive, we can conclude a negative relationship between risk aversion and entry mode choice. This qualitative result is widely accepted in the prior academic research as well as in practice. However, what about the sensitivity of the optimal ownership ratio with respect to risk aversion? To answer this question we can consider the elasticity of θ^* with respect to risk aversion parameter γ:

$$El_{\theta^*\gamma} = \frac{\partial\theta^*}{\partial\gamma}\frac{\gamma}{\theta^*} = -1. \qquad (3.46)$$

Obviously, a change of the risk aversion parameter γ leads to a proportional change of the optimal ownership ratio θ^* but in the opposite direction. With this specification of the qualitative cognition, we can conclude the first proposition.

Proposition 3.1: *Given a sufficient incentive to invest in the host country via a JV ($0 < \theta^* < 1$), then the more risk averse the decision maker is, the less likely he adopts a high equity entry mode, such as a WOFV. A reduction of existing risk aversion, e.g. due to a replacement of the decision maker with a less risk averse one, leads to a proportional increase in the optimal ownership ratio θ^*.*

The risk of an international engagement is represented in the model by the variance of aggregate profit from foreign and home operations, which is incurred mainly by the variance of the expected price in the host country market. To analyze this relationship, we differentiate the optimal ownership ratio θ^* with respect to the standard deviation σ of the price. Given $\theta^* > 0$ it is:

$$\theta^*_{\sigma} = -2\frac{\theta^*}{\sigma} < 0. \qquad (3.47)$$

To quantify this relationship we once again calculate the elasticity:

$$El_{\theta^*\sigma} = \frac{\partial\theta^*}{\partial\sigma}\frac{\sigma}{\theta^*} = -2, \tag{3.48}$$

which indicates that a change in the estimated operation risk in the host country leads to an over-proportional change in the optimal ownership ratio in the opposite direction. Accordingly, the decision of entry mode choice is sensitive to the estimated risk of the host country market.

Proposition 3.2: *Given a sufficient incentive to invest in the host country via a JV ($0 < \theta^* < 1$), then the higher the estimated operation risk in the host country is, the less likely the decision maker adopts a high equity entry mode, such as a WOFV. A reduction in the estimated operation risk in the host country, e.g. due to less uncertainty about the host country market as a result of learning effects or due to the maturity of the host country market, leads to an over-proportional increase in the optimal ownership ratio θ^*.*

Existing papers (e.g. Müller 2001, Eicher and Kang 2002) postulate that the expected profit affects entry mode choice. In the above model, the opportunity cost of investing $\overline{x^f}$ in the home country is deducted from the expected profit of foreign operation. This is the so-called "opportunity cost" -adjusted net expected profit, which equals the following expression:

$$\pi_{adj} = (\mu q^f(\overline{x^f}) - r^f\overline{x^f} - F^f)(1-t^f) - (p^h q_1^h(x^h) - r^h)(1-t^h)\overline{x^f} \tag{3.49}$$

It is easy to see that when the net expected profit adjusted by the "opportunity cost" is assumed to be a variable, it will be positively related to θ^*:

$$\theta^*_{\pi_{adj}} = \frac{1}{\gamma(1-t^f)^2(q^f)^2\sigma^2} > 0 \tag{3.50}$$

Furthermore, by calculating the elasticity of the optimal ownership ratio θ^* with respect to the adjusted net expected profit π_{adj}, we can describe the quantitative relation between both as:

$$El_{\theta^*\pi_{adj}} = \frac{\partial\theta^*}{\partial\pi_{adj}}\frac{\pi_{adj}}{\theta^*} = 1. \tag{3.51}$$

This leads to proposition 3.3.

> ***Proposition 3.3:*** *The optimal entry mode choice is positively affected by the "opportunity cost" -adjusted expected net profit of operation in the host country market. The higher the profit a SME can gain by investing in the host country compared with what it could earn by investing in the home country, the more likely a high equity entry mode is adopted. A change in the adjusted net expected profit* π_{adj} *leads to a proportional change in the optimal ownership ratio* θ^* *in the same direction.*

As postulated by the American Marketing Association, the profit potentially inherent in the structure of a market or industry could be measured by the attractiveness of a market. In fact, many papers have studied, at least implicitly, the influences of market attractiveness on entry mode choice by examining those factors that could be used to measure market attractiveness. Such factors include, for instance, market size (Chung and Enderwick 2001, Eicher and Kang 2002, Nakos and Brothers 2002), and industrial barriers to entry (Siripaisalpipat and Hoshino 2000, Chen and Hennart 2002).

A close look at Eq. (3.49) tells us that the "opportunity cost" -adjusted expected net profit of foreign operation is positively correlated with expected price μ and expected sales $q^f(\overline{x^f})$ in the host country. On the other hand, it is negatively correlated with income tax rate t^f, fixed costs of investment F^f, as well as cost rate r^f in the host country. Furthermore, the so-called "opportunity cost" of investing x^f in the host country is positively related to price p^h and marginal productivity $q_1^h(x^h)$[7]; it is negatively related to income tax rate t^h and capital cost rate r^h in the home country. Together with proposition 3.3 we can conclude that the optimal ownership ratio θ^* is positively affected by those factors which positively contribute to the adjusted expected profit, in particular μ, $q^f(\overline{x^f})$, t^h, and r^h. Furthermore, it is negatively affected by factors t^f, r^f, F^f, p^h, and $q_1^h(x^h)$. Factors such as the potential sales, the output price, the income tax rate, the capital cost rate,

[7] $q_1^h(x^h) = \partial q^h(x^h)/\partial x^h$

together with the estimated risk are meaningful measures of market attractiveness. Therefore, we can make the following proposition describing the impact of the market attractiveness on entry mode choice. Feenstra (1998) confirms this result by explaining the American foreign direct investment (FDI) in China.

> ***Proposition 3.4(a):*** *The more attractive the host country market, the more likely a SME adopts a high equity entry mode; vice-versa, the more attractive the home country market in comparison with the host country market, the less likely a high equity entry mode is adopted.*

However, to know that there is a negative relationship between optimal ownership ratio θ^* and some observable factors, such as capital cost rate r^f and income tax rate t^f in the host country, is just half of the story. The crucial question, not least in view of strategic decision making in economic policy, is, how sensitive the optimal ownership ratio is with respect to r^f and t^f.

By reformulating equation (3.41), we can show that θ^* is a strictly downward-sloping linear function of r^f:

$$\theta^* = -\frac{\overline{x^f} r^f}{\gamma(1-t^f)(q^f(\overline{x^f}))^2\sigma^2} + \frac{(1-t^f)(\mu q^f(\overline{x^f}) - F^f) - (1-t^h)(p^h q_1^h(x^h) - r^h)\overline{x^f}}{\gamma(1-t^f)^2(q^f(\overline{x^f}))^2\sigma^2} \tag{3.52}$$

To simplify this expression we let $a = \frac{\overline{x^f}}{\gamma(1-t^f)(q^f(\overline{x^f}))^2\sigma^2} > 0$ and $b = \frac{(1-t^f)(\mu q^f((\overline{x^f})) - F^f) - (1-t^h)(p^h q_1^h(x^h) - r^h)\overline{x^f}}{\gamma(1-t^f)^2(q^f(\overline{x^f}))^2\sigma^2} > 0$, therefore Eq. (3.52) can be formulated as $\theta^* = -ar^f + b$. Even though the slope of the linear function θ^* is constant, the elasticity varies along the respective curve (Perloff 2001). Thus, we have three crucial cases:

a) If $r^f = 0$ then $\theta^* = b > 0$. This is the extreme when the other variables are constant. At point (0, b) we get $El_{\theta^* r^f} = (\partial\theta^* / \partial r^f)(r^f / \theta^*) = 0$, i.e. perfect

inelasticity. A moderate change of capital cost rate r^f does not induce a substantive change of θ^*.

b) If $r^f \to (b/a) > 0$ then $\theta^* \to 0$ given $a > 0$ and $b > 0$. If $r^f = (b/a)$ and all the other variables are constant, we get $El_{\theta^* r^f} = (\partial\theta^* / \partial r^f)(r^f / \theta^*) \to -\infty$, i.e., perfect elasticity. Thus a small decrease of r^f induces a big jump in θ^*.

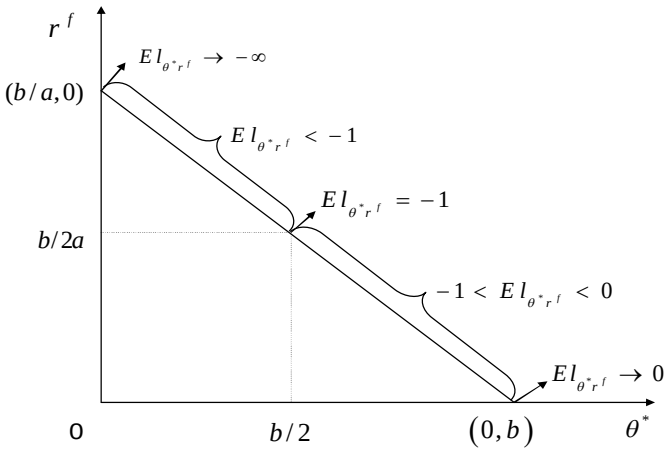
c) Given a) and b) there must be a particular r^f, for which $El_{\theta^* r^f} = -1$. After some transformations, we find this occurs when $r^f = (b/2a)$ and $\theta^* = (b/2)$. Here a one percent increase of r^f induces a one percent decrease in optimal ownership ratio θ^*.

The quantitative relationship between θ^* and r^f is depicted in Figure 3.2. The higher r^f, the more sensitive the optimal entry mode decision is, and the more the SME decision maker should endeavor to prepare this decision accurately, e.g. by taking into account special market studies or by consulting appropriate experts, in order to minimize the risk of selecting a "wrong" mode. To avoid frustrating foreign investors, decision makers in economic policy in the host country should be very careful when thinking about increasing capital cost rates, i.e. interest rates. The "critical" r^f in this respect is where the elasticity is equal to -1 (see Figure 3.2). To exceed this critical value may induce fatal effects on the investment climate. Below this threshold, the choice of entry mode is less sensitive with respect to r^f, i.e. the SME decision maker can decide by concentrating on other factors. This leads to the following proposition.

Proposition 3.4(b): *Within the interval (0, b/a), the capital cost rate r^f – ceteris paribus – induces a varying sensitivity of optimal ownership ratio θ^*. Meeting $r^f \in [0, b/2a)$ entitles the SME decision makers to deal with the choice of the entry mode more liberally due to the inferior elasticity. However, if $r^f \in (b/2a, b/a)$ the decision makers in SMEs as well as the economic policy maker of the host country are well advised to pay special attention to this factor due to its over-proportional negative effect on the optimal*

ownership ratio θ^*, and thus the overall investment behavior of foreign companies.

Figure 3.2 Elasticity of optimal ownership ratio with respect to capital cost rate



In an analogous manner we can also investigate the dependency of θ^* on income tax rate t^f. The basis is the following elasticity:

$$El_{\theta^* t^f} = \frac{\partial \theta^*}{\partial t^f}\frac{t^f}{\theta^*} = \frac{t^f}{(1-t^f)}\left[1-\frac{C}{A-C}\right] = \frac{-A'(t^f)^2 + (A'-2C)t^f}{A'(t^f)^2 + (C-2A')t^f + A' - C}, \qquad (3.53)$$

where $A' = \dfrac{A}{(1-t^f)}$.

Having assumed that $t^f \in [0,1)$ we can check how changes of t^f within this interval affect the sensitivity of the optimal entry mode choice. Again, we have to consider three crucial cases:

a) If $t^f \to 1$ then $\theta^* \to 0$ and $El_{\theta^* t^f} \to -\infty$ (perfect elasticity). In this situation, the other variables being constant, the SME will not invest in the foreign country. At the same time, a small decrease in the current income tax rate might induce a considerable increase of optimal ownership ratio θ^*.

Consequently, countries with comparatively high income tax rates can affect the long-term willingness of SMEs to think about high equity entry modes by reducing the income tax rate level, at least moderately.

b) If $t^f = 0$ then $\theta^* = [(A' - C)/(\gamma(q^f)^2\sigma^2)] \in (0,1]$ and $El_{\theta^* t^f} = 0$ (perfect inelasticity). If the income tax rate decreases to 0, the optimal ownership ratio approaches its maximum. However, this maximum is not inevitably equal to 1. In fact, it depends on other variables such as the adjusted expected profit π_{adj}, the risk aversion parameter γ, the potential sales $q^f(\overline{x^f})$, and the estimated risk σ^2. If t^f is near 0, a small change in t^f does not induce appreciable changes in θ^*.

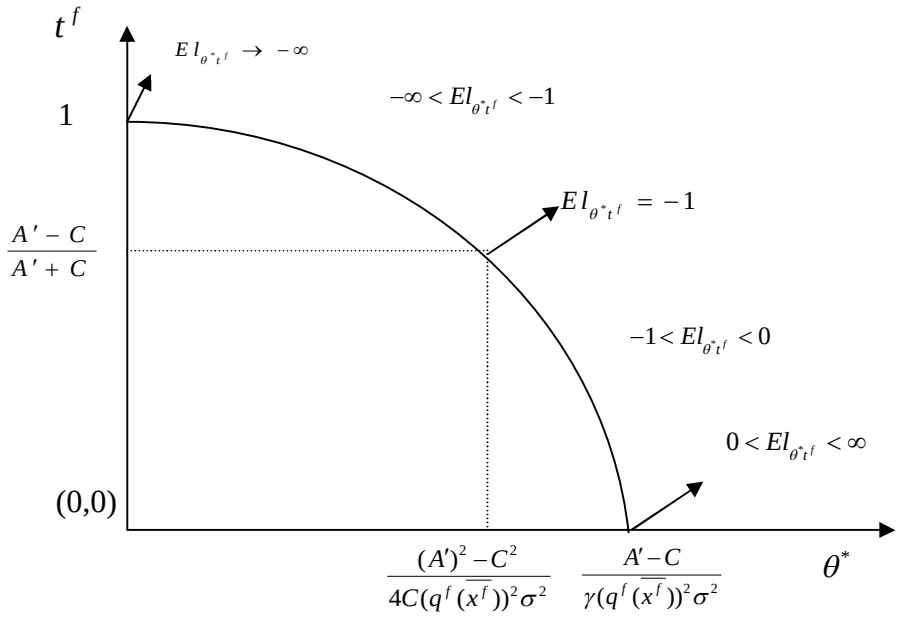
c) Given a) and b) there must be a particular t^f, where $El_{\theta^* t^f} = -1$. This applies for $t^f = (A' - C)/(A' + C)$. From $0 < \theta^* < 1$, we get $A' - C > 0$ and can conclude that $t^f \in (0,1)$. The corresponding optimal ownership ratio is $\theta^* = ((A')^2 - C^2)/(4C\gamma(q^f(\overline{x^f}))^2\sigma^2)$.

The quantitative relationship between θ^* and t^f is summarized in Figure 3.3 (for simplicity we ignore the exact form of the curve with respect to t^f). The curve indicates that the higher the income tax rate t^f, the more sensitive the optimal ownership ratio is, and the more the SME decision makers should pay attention to this factor. When t^f approaches 1 neither JVs nor WOFVs can be considered, i.e., without any objectives besides profit maximization a SME would not invest in the host country. On the other hand, the lower the t^f is, the less sensitive the optimal entry mode is. Nevertheless, as shown above, $t^f \to 0$ does not imply that WOFV is the optimal entry mode. In this case, other factors have to be taken into account. This leads to our last proposition.

Proposition 3.4(c): *With other variables being constant, a change in t^f from 0 to 1 induces a varying sensitivity in optimal ownership ratio θ^* with respect to t^f. In particular, if t^f is lower than a "critical" value $(A' - C)/(A' + C)$, the optimal entry mode is less dependent on t^f but more dependent on other factors, to which the SME decision makers should pay attention. On the other*

hand, if t^f exceeds this threshold, one should be aware of the possible effects of t^f on the optimal entry mode. The same applies for economic policy in the host country regarding the implications for the foreign investment climate. Finally, when t^f takes a value close to 1, a non-equity entry mode should be taken into consideration, unless there are some relevant non-profit objectives.

Figure 3.3 Elasticity of optimal ownership ratio with respect to income tax rate



3.3.2 Comparison with prior results

The present chapter follows the prominent concept of understanding a firm's boundary issue as an optimal ownership allocation problem, taking into account both the benefits and the costs of control as suggested, e.g. by Grossman and Hart (1986), Hart and Moore (1990), and Feenstra and Hanson (2004). There are also some other papers, such as the recent one by Helpman et al. (2004), which is based on Grossman and Hart's (1986) concepts too. However, some evident differences, especially those regarding the implications resulting from the respective models, are worth mentioning.

Helpman et al. (2004) treated the choice between export and FDI as a proximity-concentration trade-off problem, in the course of which the decision is made by comparing the relevant benefits and costs of each alternative. By assuming a simple

constant elasticity of substitution (CES) preference form and unit wages in every country, the authors expressed the net profit of each alternative, namely domestic sales, export, and FDI. The equilibrium conditions in their context yields the cutoff productivity points of each alternative, which explains high productivity induces more FDI and less export (e.g. see the figure in Helpman et al. 2004 p. 302). Therefore, by means of comparative static analysis together with an empirical study, the authors concluded that high productivity, high trade friction, and high firm heterogeneity induce more FDIs. In contrast to our approach, Helpman et al. (2004) started with the existence of different alternatives of conducting business: domestic sales, export, and FDI. However, the choice is made mainly between export and FDI. Our approach starts from an ex ante unclear form of doing business overseas which is explicitly determined by the ownership ratio. The focus generalizes to all possible alternatives, i.e. from the lowest equity modes to the highest equity modes. On the other hand, we converge by applying the concepts of cost-benefit-risk to structure and analyze the model. In fact, the results of Helpman et al. (2004) are more predictive in terms of organization (e.g. productivity) and industrial structure, whereas ours are more predictive with regard to the decision maker and the country environment.

3.4 Discussion

SMEs' entry mode choice is modeled with a neoclassical method. The underlying reasons or advantages of modeling like this are twofold. Firstly, the SMEs are usually small in size and have a simple organizational structure, e.g. the owners are usually the managers; therefore one can assume that the firm as a whole makes strategic decisions without incurring any agency cost (Milgrom and Roberts 1992). Secondly, modeling like this allows us to investigate in depth, not only how the firm interacts with its external environment (e.g. tax, interest rate), but also how the decision maker himself influences the decision-making. One might doubt the expedience of this model in comparison with the existing game theoretical ones when it is evaluated separately. As a matter of fact, this model is more close to reality in respect to SMEs; in particular, it is an indispensable part of our systematic

model, in which the interactions among the decision maker, the organization, and the environment are highlighted in the process of decision-making.

Of course, the SMEs' entry mode choice could be modeled differently. In our model, the choice of entry mode is made by a one-shot decision of optimal ownership ratio; however, in practice this decision might involve a multiple-stage analysis, in which the latter-stage decision is made by taking the result of the former-stage into account (Kumar and Subramanian 1997). Therefore, the analysis could be based on a continuous time scenario.

The implications of how exogenous factors influence entry mode choice in our model are derived with a sensitivity analysis. This method allows identifying the impact of one independent variable on the decision variable, but it ignores the impact of other independent variables on the dependent variable (Varian 1999). Actually, as we have analyzed in chapter 2, entry mode choice is dependent on the simultaneous impacts of various factors. Therefore, other methods, e.g. a scenario analysis suggested by Ross et al. (2005), might deduce other implications in our context.

Tax plays an important role in financial decisions as well as in the form of an organization (i.e. sole proprietorship, partnership, JV or WOFV)(Weston and Copeland 1992). Tax changes the firm's financial structure through leveraging (Ross et al. 2005). Therefore, introducing leverage (i.e. financial market) into our model might induce more theoretical and practical implications. In addition, as we have concluded, the host country government might take some measures to attract foreign direct investment, e.g. tax subsidies. The interesting point is to analyze how tax subsidies will influence the demand and supply of foreign direct investment as well as the change of social surplus of the host country. Microeconomic theories have provided a profound foundation for such an analysis (Varian 1999).

Interest rate is a central part of financial management as well, since it represents the opportunity cost of investment. The consideration of interest rate can not be separated from the firm's internationalization, e.g. entry mode choice (Ross et al. 2005). If we adopted a multiple-stage model of decision-making, the impact of

interest rate on entry mode decision will be based on a continuous time horizon (Weston and Copeland 1992).

3.5 Conclusion

By analyzing the existing theories as well as empirical studies on entry mode choice, we found an explicit need for models suited to the SMEs. Starting from relevant characteristics of SMEs we developed a simple mathematical model, which indicates how the choice of entry mode could actually be made. In this model, the decision maker maximizes his utility of decision-making by choosing an optimal endogenous ownership ratio that defines the entry mode. Special attention was devoted to the investigation of qualitative and quantitative relationships between the optimal ownership ratio and some important factors. These factors have been explored from different aspects, in particular those of the decision maker and the economical environment, in which the former is embedded. In addition, in comparing the differences between our results and those of comparable models, the differences seem to arise from different model structures and assumptions. By analyzing the quantitative relationships between the optimal ownership ratio and the factors considered, we were able to draw some useful conclusions for decision makers in economic policy in view of an active stimulation of foreign investments.

However, the explanatory power of the model strongly depends on the underlying assumptions. Relaxing one or more of our assumptions could possibly lead to alternate implications. For example, if we relax the assumption that the decision maker's objectives are in line with those of the company that he is representing, then we have to consider managerial discretion. In addition, entry mode choice could be explained differently if we consider the situation that, the allocation of the profits between the SME and its partner is dependent not only on the ownership ratio but also on other factors, e.g. the power of each party. Last but not least, the assumption on decision maker's CARA is not completely reasonable in practice, replacing it with a Constant Relevant Risk Aversion (CRRA) might induce other implications.

Chapter 4 Large Firms' Market Entry Mode Choice: Managerial Discretion and Expense Preference

In chapter 3 the SMEs' entry mode choice is modeled in a context of competitive markets for inputs and outputs, together with an alignment of management and ownership. However, in practice, many large firms are not operating in such an environment. There is an explicit separation of ownership from management as well; the markets for outputs and inputs in the host or the home country may not be perfectly competitive at all. The question that remains unclear is how large firms should choose their entry mode in such a situation.

The separation of ownership from management and a non-perfect market have at least two significant consequences, e.g. a complex organization structure and thereby specialization, and the existence of managerial discretion and managerial expense preference (Williamson 1965, Leibenstein 1966, 1975, Jensen and Merkling 1976, Milgrom and Roberts 1992, Jensen 2000). This chapter aims therefore to study how large firms' entry mode choice will be made in the framework of these consequences.

The remainder of this chapter is structured as follows. Section 4.1 introduces the consequences of the separation of ownership from management. Section 4.2 explains the framework of the new managerial discretion model of entry mode choice. Section 4.3 describes the strategic decision of entry mode choice by the board of directors. Section 4.4 presents the managers' tactic decisions and the possible deviation from profit maximization in the process of implementing the strategic decisions made by the board. Section 4.5 concludes this chapter with a comparison of our model and the results with the existing literature and an outlook for future research as well.

4.1 Separation of ownership from management

4.1.1 Two significant consequences

The separation of ownership from management has been widely acknowledged in the existing literature (Williamson 1965, Jensen and Merkling 1976, Milgrom and Roberts 1992, etc.). One of the most significant consequences arising from the separation of ownership from management is the complex organizational structure and thereby the specialization. In such a complex organization, the board of directors usually makes some strategic decisions on behalf of the shareholders, and monitors the performance of the managers to guarantee the realization of the shareholders' desires. The managers, not like those in the SMEs, are not the residual value receiver anymore; they work on salaries, rewards and other private interests. Their effort focuses on implementing the strategic decisions by making tactic decisions.

Another significant consequence is the conflicting interest and incentive of managers and shareholders over a firm's strategic issues such as market entry (Williamson 1965, Leibenstein 1966 and 1975, Jensen 1986, 2000). The managers, in such a context, will have great latitude of decision-making in the process of implementing the strategic decisions made by the board, which allows them to employ and/or allocate resources in favor of private interests at the cost of the firm's benefits. This great latitude of decision-making is defined as managerial discretion (Williamson 1965, Jensen and Merkling 1976, Milgrom and Roberts 1992, Jensen 2000). Additionally, the managers, being not the residual value receivers for firms' economic activities, might pursue a strategy of maximizing personal utility by favoring excessive expenses in salaries, a larger staff, unnecessary rewards, privileges, office settings, etc. Not like those in traditional economics, the managers take therefore a positive attitude toward these expenses and this phenomenon is called expense preference (Williamson 1965, Leibenstein 1966 and 1975, Tosi et al. 1999).

4.1.2 Managerial discretion models

Economists have long debated the large firms' objectives for decision-making. Papandreou (1952) argued that profit maximization was an unnecessary special assumption and that a more fruitful theory of the firm should employ a general preference function. Many other economists have introduced various managerial discretion models to challenge the traditional profit-maximization hypothesis, e.g. the utility maximization model by Williamson (1965), the revenue maximization model by Baumol (1967), and the growth maximization model by Marris (1964). The various managerial discretion models differ from each other in terms of the objective function, the constraints, or even both. Non-perfectly competitive markets considered in a decision-making context together with the separation of ownership from management have been stressed as the reasons for the large firms' deviation from profit maximization (Williamson 1965, p.39).

Williamson's (1965) utility maximization model intended to present a general preference function as suggested by Papandreou (1952). The model suggested that in manager-controlled firms, the manager's utility of decision-making is dependent not only on the firm's value but also on his pecuniary and non-pecuniary benefits, which can arise through the managerial discretion of resource allocation. The core concept of Williamson's managerial discretion model is expense preference.

Rees (1974) extended Williamson's model by introducing three different possibilities of staff expenditure indulgence. In addition, Yarrow (1976) theoretically advanced the managerial discretion model by standardizing the constraints. Furthermore, a wide range of studies supported the existence and the significant impact of managerial discretion and managerial expense preference on firms' strategic decision-makings, empirically and theoretically. See Edwards (1977), Hannan (1979), Awh and Walter (1985), Drake (1995), Bertero and Rondi (1998), Hasan and Lozano (1999), Yung (2001), Gropper and Hudson (2003), Rodriguez and Lovell (2004), and Morellec (2004) for example.

Managerial discretion of revenue maximization instead of profit-maximization has also been widely identified since the original work by Baumol (1967). Nava and Nitzan (1988) developed this revenue-maximizing model by replacing the constraint

of a minimum profit level with a maximum one. Blinder (1992 and 1993) provided a pure revenue maximization hypothesis in explaining why Japanese firms can win American firms in their bilateral trades. Empirically, Deneffe and Masson (2002) tested the hypothesis of profit maximization on hospitals and concluded (resulting from regression analysis) that hospitals maximize a combination of profits and size (number of patients).

The concepts of managerial discretion and expense preference have been and continue to be applied to discuss firms' strategic decisions. For example, they are frequently discussed in the literature of managerial compensation (Yun and Mueller 1997, Finkelstein and Boyd 1998, Tosi et al. 1999), and other strategic operational decisions, e.g. acquisition by Yung (2001). In these articles, managerial discretion and expense preference are found to be significant drivers of the distortion of the organizational goal of profit maximization.

Explicitly, there are numerous literatures, which have studied the impact of managerial discretion and expense preference on firms' strategic decisions. However, only sporadic literature has taken the first consequence of the separation of ownership from management, i.e. the specialization, into consideration in the process of firms' decisions. Additionally, the application of these two consequences for a firm's entry mode decisions is even scarcer (Stulz 1990, Yung 2001). This scarcity, however, does not indicate a lack of significance.

4.2 The framework of large firms' entry mode choice model

4.2.1 Managerial discretion of the revenue maximization

As is widely accepted, the manager has private interests during the process of decision-making, which may be inconsistent with those of the firm. The decision maker's private benefits are composed of two parts, pecuniary and non-pecuniary. The pecuniary part includes those like salary, bonus, and rewards among others. In the corporate compensation system, the salary is usually fixed and is independent of a specific decision made by the manager (Williamson 1965). However, the rewards and other variable compensations, as considered later, are usually dependent on the

revenue increment. This variable pecuniary compensation motivates the decision maker to direct their discretion in favor of their private interests, which is usually at the cost of the firm's profit maximization. Therefore, we assume that the manager's utility is dependent on the firm's revenue. The existing literature as well as the practice, as explained in the following, justifies this assumption.

Managerial compensation is usually related with revenue increment rather than profit (Wildsmith 1973, Jensen 1986). A motivation of revenue increment rather than profit maximization accelerates foreign market entry, and even the choice of entry mode. Jensen (1986) argued:

> *"Managers have incentives to cause their firms to grow beyond the optimal size. Growth increases managers' power by increasing the resources under their control. It is also increased with increases in managers' compensation, because changes in compensation are positively related to the growth in sales" (Jensen 1986, p.324-5).*

This favor of revenue increment is confirmed by a recent survey executed by IBM in 2004. This survey report[8] reads as:

> *"NEW YORK--IBM detailed on Monday the results of a survey indicating that CEO priorities have shifted from cutting costs to generating more revenue. Based on face-to-face interviews with about 450 CEOs and business unit heads of large global companies, the survey showed that corporations would feel comfortable investing in new ventures this year in order to drive new revenue growth. Asked to prioritize how companies plan to strengthen their financial position, CEOs indicated that revenue growth would take precedence over cutting costs. This is a shift from the priorities in the 2003 study, when most business managers focused more on wringing costs out of existing businesses to weather the economic downturn, IBM said. In Europe and Japan, however, top executives showed about equal emphasis on cost cutting and revenue growth, the 2004 survey showed".*

[8] By Martin Lamonica, CNET News.Com, published on ZDNet News: Feb 24, 2004. *http://news.zdnet.com/2100-3513_22-5163955.html*

However, this revenue increment preference is subject to some constraints. As the top executives in Europe and Japan reported, both the cost cutting and revenue growth are points to concern. Therefore, a minimum profit level is at least one of the constraints to this revenue increment preference.

4.2.2 Expense preference

In respect to the manager's non-pecuniary benefits, as Williamson (1965) listed, the feeling of dominance, security and professional excellence are those mostly reported to be significant. The feeling of dominance is dependent on status, power, and prestige. The realization of the feeling of dominance is achieved mainly through the empowering of the manager. This empowerment, in the context of entry mode choice, is obtained by a higher level of control in the cooperation with a foreign partner. However, a higher control of foreign operation exposes the firm to higher risk (Anderson and Gatignon 1986); consequently, this higher risk brings a higher expenditure for control. In addition, the managers usually give more attention to security in an unstable environment (Williamson 1965). Again, the realization of security is not costless. Therefore, the manager's non-pecuniary benefits cannot be realized without the sacrifice of the firm's benefits.

Due to the information asymmetry and the latitude of decision-making in the process of entry mode choice, the manager has the possibility of spending some extra costs on, (i.e. which should have been used to improve the firm's performance) or allocating a part of the firm's value to, his private interest.

Of course, the manager cannot do whatever he wishes. Besides his private benefits, the manager cannot completely ignore the firm's benefits. Over emphasizing private interests in the process of decision-making may induce, as a result, a bad performance. This can lead to a takeover, and therefore the loss of employment. The most frequently applied constraints are those such as a minimum level of profit, firm value, or a maximum cost level.

4.2.3 Definition of entry modes

Grossman and Hart (1986) proposed that corporate governance could be defined by the ownership of the firm. Sequentially, Anderson and Gatignon (1986) classified entry modes into two types, namely high-equity modes and low-equity modes, according to different levels of ownership. Additionally, in chapter 3, we have defined entry modes by an endogenous variable, i.e. the ownership ratio of the joint project in the host country. A high ownership ratio interprets a high equity entry mode, such as a WOFV, a low ownership ratio means a low equity entry mode, such as a JV.

Additionally, to enter into a foreign market via a WOFV, there are at least two options, i.e. to establish a WOFV by the investing firm itself, this, in the existing literature, is usually defined as a Greenfield WOFV, or by acquiring a local firm (Buckley and Casson 1998, Görg 1998). In this chapter, the investing firm is assumed to have decided to invest in the home and host country. Therefore, he has to decide to either enter via a JV, a Greenfield WOFV or even via acquiring a local firm.

The only difference between entering via a JV with the local firm and entering via acquiring the local firm is assumed to be the premium involved for the acquisition activities. Additionally, the investing firm is usually assumed to have a more superior technology than that of the local firm (Mueller 2001). Therefore, the investing firm will adopt its own production technology no matter under which entry mode. The difference between the two entry modes and a Greenfield WOFV is the different market structure faced by the investing firm, and the impact of the coexistence of different technologies on the market.

4.2.4 The structure of market and time

Before the investing firm enters into the host country, there is one monopolistic firm in the host country producing the same product as the investing firm. The investing firm operates in a competitive market in its home country. If the investing firm has decided to invest via cooperating with or acquiring the local firm, then it plays as a monopoly in the host country market. By this, we simply assume that the

local firm in the host country will vanish after the investing firm's entry via a JV or via an acquisition. Therefore, the investing firm will have a similar market structure no matter whether it forms a JV or acquires the local firm. On the other hand, if it has decided to invest via a Greenfield WOFV, then it competes and plays a Cournot game with the local firm in the host country market.

In the first stage, the board of directors (i.e. on behalf of the firm) decide the mode of entry strategically (i.e. sets a certain interval of ownership ratio), and set a minimum profit level given their understanding of the market and technologies. This decision is made under assumption that the firm cares more about the development of the firm, i.e. profit maximization (Milgrom and Roberts 1992). In the second stage the managers decide the concrete volume of investment given the decisions made by the board in the first stage. In contrast to the board of directors, the managers care more about their benefits, pecuniary or non-pecuniary, than the firm's profit. Therefore, in the process of deciding the concrete volume of investment, the managers intend to maximize their utility of decision-making.

4.3 The strategic decision of the board

4.3.1 Notations and assumptions

For the sake of simplicity, we assume that the board makes the choice of entry mode by considering the profitability of each alternative only. Additionally, due to information asymmetry, the board of directors makes the strategic decisions based only on the estimates of the market demand and the firm's technology. No other firm, except for the investing firm, will enter into the host country market. The two firms produce homogenous products and sell all the products produced without storage. Additionally, we assume that the directors do not know in advance if the managers will employ a portion of expenditure or firm value for their private benefits.

1. Assume the board estimates an inverse market demand function, $p = a - bq$ when it plays as a monopoly, and $p = a - b(q_1 + q_2)$ when it plays as a

duopoly, where a is positive and constant. Without loss of generality, we assume $b=1$, which implies the slope of demand curve is -1.

2. θ, the ratio of the investing firm's investment in the foreign country, is defined as $\theta \in (0,1]$. $\theta^* \in (0,1)$ indicates an entry via a JV, and $\theta^* = 1$ implies an entry via a Greenfield WOFV or an acquisition.

3. The investing firm is assumed to have a superior technology with marginal production cost $c_1 > 0$. On the other hand, the local firm is assumed to have an inferior technology with marginal production cost $c_2 > 0$, therefore we have $c_2 > c_1 > 0$ (Mueller 2001). No matter which mode the investing firm adopts, it will produce with its own superior technology. m is the premium arisen from the acquisition activity. Therefore, to the knowledge of the board, the estimated cost of the investing firm's operation in the host country consists of production cost and acquisition premium if it happens. If the investing firm has decided to invest via the other mode rather than acquisition, then the premium m takes null.

4.3.2 The profit of investing via JV

By assuming that the allocation of the profit between the investing firm and its partner is according to the ownership ratio only, the profit function of the firm is therefore:

$$\pi_1^{JV} = \theta\left[pq - c_1 q\right], \text{ with } p = a - q \ , \tag{4.1}$$

where q is market supply. Solving this problem, we obtain:

$$q^* = \frac{a - c_1}{2}, \tag{4.2}$$

$$p^* = \frac{a + c_1}{2}, \tag{4.3}$$

$$\text{and} \quad (\pi_1^{JV})^* = \theta \frac{(a - c_1)^2}{4}. \tag{4.4}$$

As the JV is a monopolist in the market, it will decide the quantity of supply and the correspondent price as (4.2) and (4.3) respectively to maximize its profit. The investing firm's profit due to its investment is therefore the expression of (4.4).

4.3.3 The profit of investing via acquisition

The only difference between acquiring the local firm and forming a JV with the local firm has been assumed to be the cost premium m of the acquisition activity. Therefore, the results have similar structures with above analysis, and they are:

$$\pi_1^{acq} = (pq - c_1 q) - m, \text{ with } p = a - q, \tag{4.5}$$

$$q^* = \frac{a - c_1}{2} \tag{4.6}$$

$$p^* = \frac{a + c_1}{2}, \tag{4.7}$$

$$\text{and } (\pi_1^{acq})^* = \frac{(a - c_1)^2}{4} - m \quad . \tag{4.8}$$

Similarly, to obtain a maximum profit, the new firm as a monopolist (after acquisition of the local firm) will supply the quantity of (4.6) at price of (4.7). The investing firm's profit due to its investment is therefore expressed by (4.8).

4.3.4 The profit of investing via Greenfield WOFV

The investing firm has a profit function:

$$\pi_1^{WOFV} = pq_1 - c_1 q_1, \text{ with } p = a - (q_1 + q_2), \tag{4.9}$$

where q_1 and q_2 are the supplies of the two firms. The local firm's profit function is

$$\pi_2 = pq_2 - c_2 q_2, \text{ with } p = a - (q_1 + q_2). \tag{4.10}$$

Solving this problem, we obtain:

$$q_1^* = \frac{a + c_2 - 2c_1}{3}, \tag{4.11}$$

$$q_2^* = \frac{a - 2c_2 + c_1}{3}, \tag{4.12}$$

$$p^* = \frac{a + c_1 + c_2}{3}, \tag{4.13}$$

$$\text{and } (\pi_1^{WOFV})^* = \frac{(a + c_2 - 2c_1)^2}{9}. \tag{4.14}$$

Differently, when the investing firm established a Greenfield WOFV in the foreign country, it will compete with the local firm for the market, i.e. they will play a Cournot game. (4.11) is the investing firm's optimal supply to the market via taking into account the quantity of supply by the local firm. (4.12), similarly, is local firm's optimal quantity of supply. As a result, the investing firm's maximum profit is expressed by (4.14).

4.3.5 The choice of entry mode strategy

To make the strategic choice of entry mode, the board compares firstly with the two alternatives of cooperating with the local firm, i.e. either via a JV or via an acquisition.

Due to the same market structure after cooperation, Eq. (4.4) and (4.8) (i.e. the profits of these two alternatives) have a similar structure. Intuitively, if the investing firm is in the majority in the JV, i.e. θ is near its maximum value 1, the local firm is very small, and if the cost premium of acquiring the local firm is not so low, then the profit by investing via a JV may be much higher than that by acquiring the local firm. On the other hand, if the investing firm is very small, the local firm is large and in the majority in the JV, and if, the premium of acquisition is not so high, then the profitability of acquiring the local firm will be higher than that of forming a JV. Therefore, we can conclude that the firm's entry mode strategy is dependent on the firm's size and the premium of acquisition.

Then the firm compares Eq. (4.4) with Eq. (4.14), i.e. the profits of the JV and Greenfield WOFV respectively. Eq. (4.14) indicates that the profit of the Greenfield WOFV depends on the marginal costs of the two firms, in other words, their production technologies.

Firstly, we consider no big gap between the two firm's technologies, i.e. c_1 and c_2 are approximately equal. Then Eq. (4.14) can approximately read as

$(\pi_1^{WOFV})^* = \frac{(a-c_1)^2}{9}$. In this case, if the investing firm cooperates with the local firm via a half-half model, i.e. $\theta = \frac{1}{2}$, or even θ is a little bit smaller than half, the investing firm can still make more profit via forming a JV with the local firm.

However, if the investing firm has a much superior technology, i.e. c_2 is much higher than c_1, then the profit acquired by investing via a WOFV may be greater than that of a JV with the local firm being in the majority. Intuitively, even if the investing firm is not so large, the advanced technology and thereby the cost advantage can still earn it a large market share and consequently a prosperous profit after entry. Therefore, it will be worthwhile of entering by itself.

Obviously, if the local firm has a superior technology (even this is usually not the case in practice, and it is contradictory with the previous assumption), the investing firm will find it more favorable to cooperate with the local firm rather than to enter by itself.

To compare Eq. (4.8) with Eq. (4.14), we first transform Eq. (4.14) to $(\pi_1^{WOFV})^* = \frac{(a-(2c_1-c_2))^2}{9}$. It is not difficult to identify that if the investing firm makes more profit via a Greenfield WOFV, then there should be a significant difference between $2c_1 - c_2$ and $c_1 + m$, or equivalently, a large gap between $c_1 - c_2$ and m. This could occur in two cases, i.e. either the technology gap is significant or the acquisition premium is very high.

Therefore, to summarize we write the first proposition as

> ***Proposition 4.1*** *The firm's entry mode choice is influenced by the market structure before and after entry, what technologies the firms have, the firm size, and the incurred costs during the process of market entry.*

This finding is consistent with Buckley and Casson (1998) and Görg (1998), however, this finding complements their conclusions by considering the firm size and the costs incurred in the process of market entry.

4.4 The managers' tactic decisions

4.4.1 Notations and assumptions

As analyzed above, due to the separation of ownership from management, the managers have a desire and ability of spending extra expenditure on or allocating a portion of the firm's value to private interests at the cost of the firm's profit. To investigate how the managers' expense preference and managerial discretion may drive their decisions to deviate from the firm's goal of profit maximization, and how the external constraints, such as a minimum profit requirement set by the board of directors, can correct the deviations, we make the following assumptions and notations.

1. Assume for simplicity that the board of directors, in the first stage, has decided strategically to enter via a JV, this means that the investing firm will be a monopolist in the host country market after entry. The board has defined a certain interval of ownership ratio for the joint project, and has set a minimal expected profit π_0 for the managers to achieve. Given the decisions made by the board, the managers will decide tactically, in the process of implementation, the concrete volume of investment by taking the overall performance, both at home and abroad, into account.
2. The JV has a same simple production technology $q^f(\overline{x^f})$, and $\overline{x^f}$ is the only input. r^f and r^h, and F^f and F^h are defined in a same way as that in chapter 3. Additionally, $q^f(x^f) = q^f(\theta\overline{x^f}) = \theta q^f(\overline{x^f})$ is the investing firm's portion of output due to its investment in the host country.
3. The actual cost incurred in the host country, C^f, is now a function of the extra (discretional) expenditure, S, which is employed by the managers to create private benefits, the production costs, and the acquisition premium if it happens, i.e. $C^f(r^f\overline{x^f}, S, m)$, where $c_1 = r^f$. Assume further that C^f is strict convex function of S. The impact of the increase of S on the cost C^f is therefore twofold: it decreases the total cost due to its positive contribution to production efficiency, however if it is too high, it may also increase the

total cost. In case of the investing firm enters via a JV, S is undertaken only by the investing firm but not by its foreign partner. Therefore, as analyzed later, the impact of the increase of extra expenditure on output price and revenue in the host country are twofold too. Due to information symmetry, the investing firm's operation in the home country does not incur any other cost rather than production cost. $C^h(x^h)$ represents the cost in the home country.

4. $p^f(C^f)$ is the output price in the host country set by the managers, and p^h is the output price in the home market, which are non-negative and given. p^f is assumed to be a strict concave function of C^f, i.e. $\partial^2 p^f / \partial (C^f)^2 < 0$. Hereafter the abbreviation p^f will be applied for simplicity.

5. R^f and R^h are the investing firm's revenues due to its investments abroad and at home respectively, with $R^f = p^f q^f(x^f) = p^f q^f(\theta \overline{x^f})$, $R^h = p^h q^h(x^h)$. The investing firm's aggregate revenue is $R = R^f + R^h$. Therefore, we can assume that R is a function of the investing firm's capital investments, $x^f = \theta \overline{x^f}$ and x^h in the two countries and the extra expenditure S while keeping the other variables constant, i.e. $R(\theta \overline{x^f}, x^h, S)$. In addition, assume R is a strict concave function of the extra expenditure, S.

6. $x^h > 0,\ 0 < \overline{x^f} < X$, and $\theta\ \overline{x^f} + x^h = x^f + x^h \le X$, where X represents the investing firm's capital capacity too. These assumptions simply indicate that no matter which mode the board of directors decides to use, the investing firm's capital investment in two countries cannot exceed its own capital capacity.

7. β is the portion of the firm's benefits, e.g. revenue, employed by the managers for emolument (Williamson 1963), and $0 < \beta < 1$.

8. t^f, t^h are again defined in a same way as we did in chapter 3.

9. π^f, π^h are the firm's profits from its investments abroad and at home respectively, $\pi^f = (R^f - C^f))(1-t^f)$, and $\pi^h = (R^h - C^h)(1-t^h)$. The firm's aggregate profit from this investment decision is $\pi = \pi^f + \pi^h$.
10. $U(S, R(\theta\overline{x^f}, x_1^h, S))$ is the manager's utility function of decision-making. The utility function is composed of two components, namely the discretional extra expenditure and the revenue. In addition, we assume that U takes a simple linear form: $U(S, R(\theta\overline{x^f}, x^h, S)) = S + \beta R(\theta\overline{x^f}, x^h, S)$. Therefore, the manager's utility is positively related to the discretional expenditure and the revenue.

4.4.2 The managers' decision-making problem

With the above setup, the managers' decision-making problem can be expressed as:

$$\underset{\{S,\theta,x^h\}}{\text{Max}} \; U(S, R(\theta\overline{x^f}, x^h, S)) \tag{4.15}$$

$$\text{s.t.} \quad \pi - \pi_0 \geq 0, \tag{4.16}$$

$$\theta \leq \overline{\theta}, \tag{4.17}$$

$$\theta > 0, \tag{4.18}$$

$$x^h \geq 0, \tag{4.19}$$

$$S \geq 0, \tag{4.20}$$

$$\theta\overline{x^f} + x^h \leq X \; . \tag{4.21}$$

Inequality (4.16) indicates that the consequent profit due to the managers' decision of investment should be at least not less than the minimum profit set by the board. (4.17) and (4.18) explain that the ownership ratio (i.e. thereby the volume of investment) should be in the interval preset by the board as well. Therefore, (4.16), (4.17) and (4.18) can be interpreted as the "behavioral constraints" preset by the board. The manger's decision will be evaluated in particular by the minimum profit requirement; not meeting this criterion induces a replacement or punishment. With inequality (4.17) and (4.18), we assume that the board has defined in the first period

that $\theta \in \left(0, \bar{\theta}\right]$. Of course, one can also assume that $\theta \in \left[\underline{\theta}, \bar{\theta}\right]$, where $\underline{\theta} > 0$. The constraint (4.21) is a "budget constraint", i.e. the firm's investment cannot exceed this capital capacity. To maximize his utility through increasing revenue, the manager will always utilize all the available capital capacity, in another words, the constraint is always binding, i.e. $\theta\overline{x^f} + x^h = X$. We can therefore safely replace this equation into the objective function without losing any generality. Remember, we have also assumed that the firm has decided to operate in the two countries, i.e. $x^h > 0$, and $x^f = \theta\overline{x^f} > 0$. In addition, the manager is assumed to be able to employ positive expenditure S to obtain private interest, i.e. $S > 0$. Therefore, the corner solution (i.e. $(\theta^* = 0,\ (x^h)^* = 0,\ S^* = 0)$) is excluded, i.e. inequalities (4.18), (4.19), and (4.20) are not binding.

To solve this problem we use the Kuhn-Tucker theorem and formulate the Lagrangean function as:

$$L(S, \theta, \lambda_1, \lambda_2) = S + \beta R(\theta\overline{x^f}, X - \theta\overline{x^f}, S) + \lambda_1(\pi - \pi_0) + \lambda_2(\bar{\theta} - \theta) \qquad (4.22)$$

The first order conditions are:

$$\frac{\partial L}{\partial S} = 1 + \beta\frac{\partial R}{\partial S} + \lambda_1\frac{\partial \pi}{\partial S} = 0, \qquad (4.23)$$

$$\frac{\partial L}{\partial \theta} = \beta\frac{\partial R}{\partial \theta} + \lambda_1\frac{\partial \pi}{\partial \theta} - \lambda_2 = 0 \qquad (4.24)$$

The complementary slackness conditions are:

$$\lambda_1 \geq 0,\ \pi \geq \pi_0,\ \lambda_1(\pi - \pi_0) = 0, \qquad (4.25)$$

$$\lambda_2 \geq 0,\ \bar{\theta} - \theta \geq 0,\ \lambda_2(\bar{\theta} - \theta) = 0, \qquad (4.26)$$

The solutions of this decision-making problem can be described by four scenarios, which will be analyzed sequentially.

4.4.3 Distortions of investment

4.4.3.1 Scenario 1: ineffective constraints ($\pi^* > \pi_0$, and $\theta^* < \overline{\theta}$)

By this, we mean that the constraints are not binding, in other words, the decision maker's choice of entry mode is not affected by these two constraints. This scenario is understandable. When the preset profit π_0 is low enough or there is no strict constraint exerted on the short run performance, and the upper bound of the ownership ratio interval preset by the board is always high enough, for example it takes the maximum value of 1, the managers' decision on investment will then not be heavily influenced by either of these two constraints. In mathematical terms, from Kuhn-Tucker theorem, we therefore obtain $\lambda_1^* = \lambda_2^* = 0$.

Replacing $\lambda_1^* = \lambda_2^* = 0$ into equations (4.23) and (4.24) one obtains:

$$\frac{\partial L}{\partial S} = 1 + \beta \frac{\partial R}{\partial S} = 0 \Rightarrow \frac{\partial R}{\partial S} = -\frac{1}{\beta} < 0 \tag{4.27}$$

$$\frac{\partial L}{\partial \theta} = \beta \frac{\partial R}{\partial \theta} = \beta (p^f \frac{\partial q^f}{\partial (x^f)} - p^h \frac{\partial q^h}{\partial (x^h)}) \overline{x^f} = 0 \tag{4.28}$$

Eq. (4.27) tells us that in order to maximize his utility, the manager, when facing no "behavioral constraints", will try to increase his employment of expenditure to the point where its contribution to the revenue increment as well as profit is negative. This is obviously an abuse of the expenditure.

Eq. (4.28) has two implications. Firstly, when facing an unconstrained choice of investment, the manager tends to invest in the foreign country until the marginal revenue of investment becomes zero instead of being equal to its marginal cost. That is to say, he over-invests in the host country in the sense of profit maximization. The second point is that the manager stops the increment of capital investment in the host country until the capital investment can bring homogenous returns of revenue in the two countries. This occurs because the manager has a good incentive to increase the revenue rather than the profit. This implication is somewhat different with that of chapter 3, where the manager will stop his increment of investment in the host country until the profit-earning abilities instead of the revenue earning abilities in

the two countries are equal. This arises because we have assumed that the manager's discretion during the process of entry mode choice shifts from profit maximization to revenue maximization, and the managers allocate a portion of the firm's value to private interests.

Assuming that the marginal cost curve takes a traditional positive and increasing slope, Figure 4.1 clarifies this deviation of entry mode choice from profit maximization explicitly. From this figure, θ_{π}^{*} is the optimal investment level in terms of profit maximization, θ_{R}^{*} is the optimal investment level in terms of revenue maximization. Due to the strict concavity assumption of R in respect to θ and the fact that the marginal cost of investment is greater than zero, we obtain obviously that $\theta_{R}^{*} > \theta_{\pi}^{*}$, i.e. the managerial discretion of revenue maximization drives the manager to select a higher than optimal level of investment in the host country in the sense of profit maximization. Alternatively speaking, the manager over invests in the foreign country.

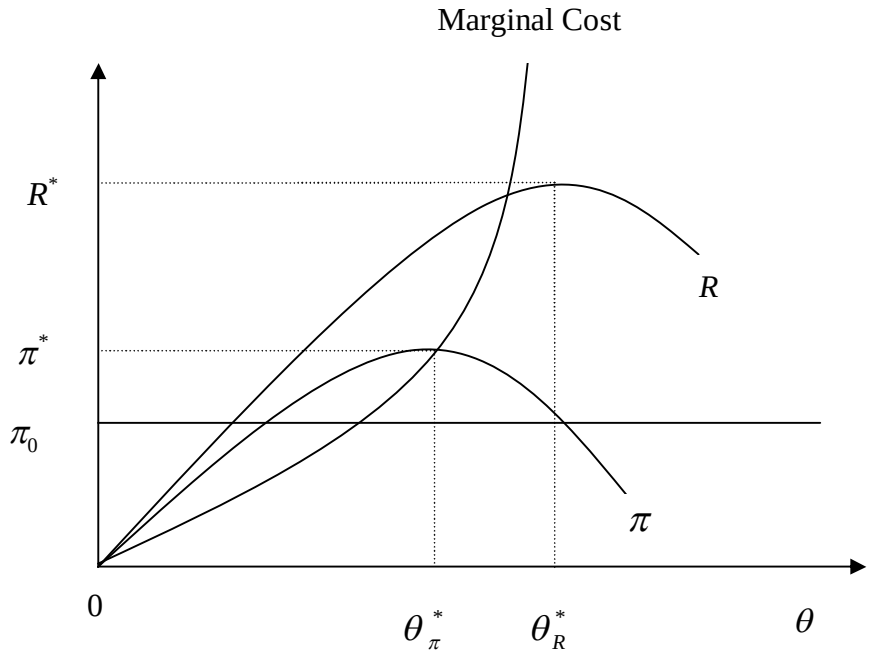
Analogously, we can conclude that S_{R}^{*}, the level of extra expenditure, at which the revenue is maximized, should be greater than S_{π}^{*}, i.e. the level of expenditure at which the decision maker maximizes the profit. However, the actually employed level of expenditure, S^{*}, due to the concavity of R in respect to S, and together with (4.27), should be greater than S_{R}^{*}. In summary, $S^{*} > S_{R}^{*} > S_{\pi}^{*}$.

Consequently, we can deduce the first proposition describing this distortion explicitly.

> ***Proposition 4.2*** *If the manager faces neither a constraint of minimum profit nor a constraint of maximum ownership for his investment decision, he will over-invest in terms of profit maximization in the foreign country to maximize his pecuniary and non-pecuniary benefits. Meanwhile, due to his positive preference toward expenditure, he will abuse (i.e. in comparison with the level of expenditure at which the revenue or profit is maximized) the controlling instruments, i.e. staff expenditures among others, to earn non-pecuniary benefits.*

This proposition is consistent with that of Williamson (1965) and Jensen (2000), in which the authors found that the separation of management from ownership induces the existence of agency cost and therefore the distortion of profit maximization in the output decisions.

Fig. 4.1 Distortion of entry mode choice from profit maximization



4.4.3.2 Semi-effective constraints

By this, we mean that either the preset minimum profit requirement is effective while the preset maximum ownership ratio being ineffective, or vice versa. Therefore, we have two scenarios, which will be discussed in turn.

Scenario 2: $\pi^* > \pi_0$ ***and*** $\theta^* = \overline{\theta}$

This scenario indicates that the decision maker's choice of market entry is subject to a strict constraint concerning its maximum ownership ratio imposed by the board, but no strict constraint exerted for the firm's profit, at least in the short run.

According to the Kuhn-Tucker theorem, if $\pi^* > \pi_0$ and $\theta^* = \overline{\theta}$, we have $\lambda_1^* = 0$, and $\lambda_2^* \geq 0$. Inserting the multipliers into Eq. (4.23) and Eq. (4.24) we obtain:

$$\frac{\partial L}{\partial S} = 1 + \beta \frac{\partial R}{\partial S} = 0 \Rightarrow \frac{\partial R}{\partial S} = -\frac{1}{\beta} < 0 \tag{4.29}$$

$$\begin{aligned} \frac{\partial L}{\partial \theta} &= \beta \frac{\partial R}{\partial \theta} = \beta (p^f \frac{\partial q^f}{\partial (x^f)} - p^h \frac{\partial q^h}{\partial (x^h)}) \overline{x^f} = \lambda_2^* \geq 0 \\ &\Rightarrow p^f \frac{\partial q^f}{\partial (x^f)} \geq p^h \frac{\partial q^h}{\partial (x^h)} \end{aligned} \tag{4.30}$$

Eq. (4.29) explains that the manager, when facing an effective constraint of the maximum ownership ratio (i.e. $\theta^* = \overline{\theta}$) but not an effective minimum profit constraint (i.e. $\pi^* > \pi_0$), will over consume his expenditure to the point where its contribution to revenue increment is negative. To earn extra non-pecuniary benefits the manager behaves as if the maximum ownership constraint (i.e. $\theta^* = \overline{\theta}$) does not exist. This is obviously an abuse of expenditure in the sense of profit maximization as well as revenue maximization.

Eq. (4.30) indicates that due to the effective maximum ownership ratio constraint (i.e. $\theta^* = \overline{\theta}$) the decision maker's choice of entry mode may or may not help the decision maker to achieve revenue maximization. Moreover, the distortion of profit maximization remains uncertain. If the marginal revenue of capital investment equals its marginal cost of investment, then there is no distortion of profit maximization at all.

Conjointly, we develop the third proposition as:

> ***Proposition 4.3*** *When the manager faces only an effective constraint on the maximum ownership ratio (i.e. $\theta^* = \overline{\theta}$), he will choose a specific pair of $\{\theta^*, S^*\}$, which maximizes his utility of decision-making. The decision maker's choice of S^* satisfies $S^* > S_R^* > S_\pi^*$, which represents an abuse of expenditure in terms of both profit maximization and revenue maximization. However the decision maker's choice of investment θ^* does not necessarily violate the organizational goal of profit maximization or the managerial discretion of revenue maximization.*

Scenario 3: $\pi^* = \pi_0,\ \theta^* < \bar{\theta}$

This scenario indicates that the decision maker's choice of market entry is subject to a strict constraint on the minimum profit level exerted by the board. On the other hand, his choice is not subject to a restriction of the maximum ownership ratio. From Kuhn Tucker theorem, we derive that $\lambda_1^* \geq 0,$ and $\lambda_2^* = 0$. Inserting these two multipliers into Eq. (4.23) and Eq. (4.24) we obtain:

$$\frac{\partial L}{\partial S} = 1 + \beta \frac{\partial R}{\partial S} + \lambda_1^* \frac{\partial \pi}{\partial S} = 0 \tag{4.31}$$

$$\frac{\partial L}{\partial \theta} = \beta \frac{\partial R}{\partial \theta} + \lambda_1^* \frac{\partial \pi}{\partial \theta} = 0 \tag{4.32}$$

Eq. (4.31) and (4.32) do not explicitly indicate the sign of marginal revenue of expenditure or that of capital investment. However, due to β being positive and λ_1^* being non-negative, we can deduce from (4.31) that

$$\lambda_1^* = \frac{-(1 + \beta \frac{\partial R}{\partial S})}{\frac{\partial \pi}{\partial S}} \geq 0 \text{, which in turn implies either}$$

$$(1)\ \begin{cases} \dfrac{\partial \pi}{\partial S} > 0 \\ 1 + \beta \dfrac{\partial R}{\partial S} \leq 0 \Rightarrow \dfrac{\partial R}{\partial S} \leq 0 \end{cases} \text{ or } (2)\ \begin{cases} \dfrac{\partial \pi}{\partial S} < 0 \\ 1 + \beta \dfrac{\partial R}{\partial S} \geq 0 \Rightarrow \dfrac{\partial R}{\partial S} \geq -\dfrac{1}{\beta} \end{cases}. \tag{4.33}$$

Usually, non-positive marginal revenue does not induce a positive marginal profit except for a negative marginal cost, which is not the case in our context. Therefore, (1) describing the conditions, under which the decision maker maximizes his utility of decision-making, is not feasible. (2) determines the actual level of S^* employed in the process of investment. To maximize his private interest the manager will increase his employment of expenditure to the point where the marginal profit of this expenditure becomes negative, and where the marginal revenue is greater or equal to a negative value. This means that the profit maximization is explicitly violated and the realization of revenue maximization remains unclear.

From Eq. (4.32), we can deduce that

$$\lambda_1^* = -(\beta \frac{\partial R}{\partial \theta} / \frac{\partial \pi}{\partial \theta}) \Rightarrow \text{ either (1) } \begin{cases} \frac{\partial R}{\partial \theta} \geq 0 \\ \frac{\partial \pi}{\partial \theta} < 0 \end{cases} \text{ or (2) } \begin{cases} \frac{\partial R}{\partial \theta} \leq 0 \\ \frac{\partial \pi}{\partial \theta} > 0 \end{cases}. \quad (4.34)$$

As analyzed the (1) of (4.34) indicates that the actual investment θ^*, at which the decision maker maximizes his utility of decision-making, brings a non-negative marginal revenue but a negative marginal profit. This is to say that if the manager's utility could be maximized through the choice of entry mode, he will definitely over invest in the host country, i.e. choose a higher than optimal level of investment in terms of profit maximization. At this investment level, he may even achieve the discretional goal of revenue maximization. Therefore, a minimum profit limitation alone cannot regulate the manager's over investment behavior effectively, i.e. this is unable to force him to return to profit maximization. To get an alignment with their interests of profit maximization, the owners need other monitoring or incentive mechanisms. The (2) of (4.34) is explicitly not a feasible situation in our context.

In light of this, we conclude with the following proposition:

Proposition 4.4 *When his decision on the volume of investment in the host country is constrained only by a minimum profit ($\pi^* = \pi_0$) set by the board, the manager will abuse the expenditure violating the profit maximization (this level of expenditure does not necessarily violate the revenue maximization) to maximize his utility on the one hand. He over invests in the host country in terms of profit maximization on the other. At this investment level, however, the revenue maximization may or may not be violated. This means that the minimum profit requirement set by the board limits, in a certain extent, the manager's discretion of revenue maximization, which brings him the extreme pecuniary benefits. However, this minimum requirement is not effective enough to enforce the decision maker back to profit maximization. Therefore, it requires additional monitoring or incentive mechanisms to regulate the manager's investment behavior (Jensen 1986, 2000).*

4.4.3.3 Scenario 4 effective constraints ($\pi^* = \pi_0,\ \theta^* = \bar{\theta}$)

This scenario shows that the decision maker's choice of entry mode choice is constrained both by the minimum profit requirement and by the maximum ownership. Mathematically, we have $\pi^* = \pi_0,\ \theta^* = \bar{\theta}$, and $\lambda_1^* \geq 0, \quad \lambda_2^* \geq 0$ consequently. Through some manipulations of (4.23) we obtain:

$$\lambda_1^* = -\frac{(1+\beta\frac{\partial R}{\partial S})}{\frac{\partial \pi}{\partial S}} \geq 0 \quad . \tag{4.35}$$

$1+\beta(\partial R/\partial S)$ is nothing but the manager's marginal utility of employing one more unit of expenditure, $\partial\pi/\partial S$ is the marginal profit of this expenditure. From (4.35) we can conclude that the manager's employment of expenditure must bring him a non negative marginal utility (i.e. $(1+\beta\frac{\partial R}{\partial S}) \geq 0$) and a negative marginal profit (i.e. $\frac{\partial \pi}{\partial S}$<0) to the firm. This means explicitly an abuse of expenditure. However, at this expenditure level, whether the revenue maximization is being violated or not is still ambiguous. This is because the expenditure has two contributions to the manager, i.e. it brings the manager's non-pecuniary benefits directly, and it increases the manager's pecuniary benefits indirectly through the increment of revenue.

With λ_1^* being non-negative and $0 < \beta < 1$, (4.24) results either (1) $\begin{cases} \partial R/\partial\theta \geq 0 \\ \partial\pi/\partial\theta \geq 0 \end{cases}$ or (2) $\begin{cases} \partial R/\partial\theta \geq 0 \\ \partial\pi/\partial\theta < 0 \end{cases}$. (1) indicates that the manager's choice of investment violates neither the profit maximization nor the revenue maximization, i.e. the two constraints are effective enough to regulate the manager's expenditure preference and its discretion of revenue increment. (2) indicates however that the manager's investment violates the firm's interest of profit maximization, but leaves the manager's discretion of revenue maximization non explicitly violated.

The above analyses lead to the final proposition which reads as:

Proposition 4.5 *When the manager faces both an effective minimum profit requirement and an effective maximum investment constraint, he will still abuse the expenditure to earn non-pecuniary benefits as if the constraints do not exist at all. However, at this expenditure level the violation of managerial discretion of revenue maximization is ambiguous. Meanwhile, whether his choice of investment will violate the organizational goal of profit maximization or not is ambiguous; for sure is that the managerial discretion of revenue maximization is not violated. As concluded in Proposition 4.4, some additional incentive mechanism or regulating instruments are necessary to be introduced to regulate the expenses preference as well as the managerial discretion.*

4.4.4 Summary

The above discussions on the possible scenarios are depicted in Figure 4.2. Additionally, the possible distortions of investment due to managerial discretion and expense preference are summarized in Table 4.1.

With Table 4.1, it is clear that no matter which scenario we find ourselves in, the expense preference always drives the manager to abuse the expenses to achieve non-pecuniary benefits; this abuse of expenditure will usually deviate from the shareholders' interests of profit maximization. However, our discussion on the above four scenarios indicates us explicitly that a minimum profit requirement for the management can regulate the over investment problem significantly, even it cannot reinforce the manager back to profit maximization completely. In addition, the conclusions imply the top management in practice that to regulate the managers' expenditure preference and expansion preference more effectively, additional measures are necessarily to be adopted rather than the minimum profit requirement and the maximum ownership ratio only, auditing mechanism and incentive mechanism are for example.

Figure 4.2 The possible solutions to the optimization problem

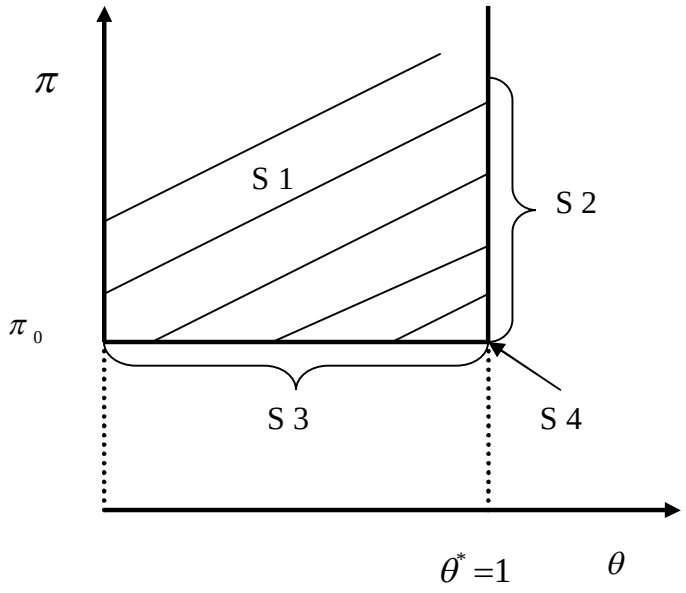


Table 4.1 The distortions of entry mode choice

	Constraints	Consumption of expense	Distortions of investment
Scenario 1	Ineffective upper bound of ownership ratio ($\pi^* > \pi_0$) Ineffective minimum profit requirement ($\theta^* < \overline{\theta}$)	Over consumption in terms of revenue and profit maximization	Over investment in the sense of profit maximization
Scenario 2	Effective upper bound of ownership ratio ($\pi^* > \pi_0$) Ineffective minimum profit requirement ($\theta^* = \overline{\theta}$)	Over consumption in terms of both revenue maximization and profit maximization	Distortion of profit maximization or revenue maximization remains unclear
Scenario 3	Ineffective upper bound of ownership ratio ($\pi^* = \pi_0$) Effective minimum profit requirement ($\theta^* < \overline{\theta}$)	Over consumption in terms of profit maximization, but unclear with revenue maximization	Over investment in the sense of profit maximization
Scenario 4	Effective upper bound of ownership ratio ($\pi^* = \pi_0$) Effective minimum profit requirement ($\theta^* = \overline{\theta}$)	Over consumption in terms of profit maximization, but unclear with revenue maximization	Distortion of profit maximization remains unclear

4.5 Conclusions

As indicated, this model starts with the separation of the ownership from management, which is a common phenomenon of large firms. Two significant consequences of this particular organizational structure are identified, i.e. the specialization, and managerial discretion as well as expense preference. The latter consequence, i.e. the managerial discretion and expense preference, has actually been widely discussed in the existing literature (Williamson 1965, Jensen and Merkling 1976, Jensen 1986, 2000). By applying these two consequences, we have developed a two-stage model of entry mode choice. The board of directors, on behalf of the shareholders, makes a strategic choice of entry mode in the first period by comparing the profitability of each alternative. Taking into account those decisions made in the first stage, the managers make the investment decisions tactically to maximize their utility of decision-making in the second stage.

Analyzing the model implies that the board of directors' choice of entry mode is influenced by the market structure, firm size, production technology, and the costs incurred in the process of market entry among others. In the process of implementing of the strategic decisions made by the board, the managers' decision of investment will deviate definitely from the first best result, i.e. profit maximization, if their behaviors are not constrained. Even if the board sets an effective minimum profit constraint together with a maximum investment constraint, it is still not sure that the managers' investment decision will not deviate from the first best results. This is just a reflection of the conflicting interests between the managers and the board of directors, and this is a result of the managerial discretion and expense preference.

The contributions of this model to entry mode theory lay at least three aspects. Firstly, it would appear that none of the existing literature has taken the two consequences (i.e. expense preference and managerial discretion) of the separation of management from ownership simultaneously in the context of entry mode choice. Secondly, the two-stage model puts large firms' entry mode choice in a context closer to reality. Finally, this way of modeling allows us to investigate explicitly how the organizational structure influences the choice of entry mode.

Our model has been based on the existing agency theory literature, e.g., Williamson (1965), Jensen and Merckling (1976, 2000). In comparison with Williamson (1965), our model has a different structure. In Williamson (1965), the decision maker decides the optimal quantity of supply through maximizing his utility, which depends on the firm's value and an extra expenditure, subject to only a minimum profit constraint. However, in our model entry mode choice is defined as a two-stage decision-making problem, in which the manager's decision on investment affects not only the expenditure but also the revenue, which bring him non-pecuniary and pecuniary benefits respectively. The manager's decision is constrained not only by a minimum firm value, a preset maximum investment level, but also by its financial capacity. In some sense, our model can be regarded as an extension of Williamson (1965).

Jensen and Merkling (1976, 2000) explained mainly how the change of ownership structure incurs agency cost and influences firms' optimal expansion paths. In comparison with Jensen and Merkling (1976, 2000), our model differs from it in at least fours aspects. Firstly, our model solves firms' entry mode choice problem with a consideration of a special governance structure, e.g. ownership from management, but not a separate ownership structure as that in Jensen and Merkling (1976). Secondly, in Jensen and Merkling (1976, 2000), the decision maker's utility is dependent on the pecuniary and non-pecuniary benefits, which are perfect substitutes, however, the manager's utility in our model is dependent on a sum of pecuniary and non-pecuniary benefits. Thirdly, our analysis of the model is more algorithmic than graphical. Finally, our model concludes that the separation of ownership from management, therefore managerial discretion and expenses preference, induces an abuse of expenditure and an overinvestment. However, Jensen and Merkling (1976, 2000) concluded that separated ownership structure shrinks the firm's optimal expansion path.

Of course, part of our results is consistent with those of the existing literature. The significant influence of technology and market structure on entry mode choice, the significant impact of managerial discretion and expense preference on the deviation of profit maximization, and the necessity of introducing additional monitoring or

incentive mechanisms to enforce the managers' behavior to align with the organizational interests are for example.

The results offer rich implications for the firms concerned. Firstly, the board of directors, when they make the entry mode decisions, should consider not only the objective factors (e.g. market demand and supply, firm size and technology among others) but also the subjective factors (e.g. the existence of the deviated interests of the managers and the discretion of decision-making among others). Secondly, to enforce the manager's behavior back to shareholders' interests, some additional regulating instruments or mechanisms rather than only setting a minimum performance requirement or a range of choice (i.e. a maximum ownership ratio) need to be introduced, e.g. auditing, incentive mechanism, and/or a penalty among others (Laffont and Martimort 2002). Additionally, reducing the managerial discretion is essentially an efficient way to reduce distortions. The way of modeling entry mode choice offers new insight as well. By considering the complex organization structure, the firm's strategic decisions can be studied in a way, which is closer to reality.

Future research could be directed to relax some of our strict assumptions (e.g. the market structure of the host country), which aims to simplify the analysis. Studying this problem at hand by using the explicit expressions of production technology, price, and others, deserves consideration. Comparative static analyses to see how the entry mode choice is influenced by the external parameters quantitatively are worthwhile examining too. Of course, this problem could be studied under other contexts, e.g. a principal-agent model or an incentive mechanism. Last but not least, further empirical studies could be arranged to verify the propositions inferred from this model.

Chapter 5 Organization and Foreign Market Entry Mode Choice

In chapter 4, the large firms' entry mode choice was analyzed with a special focus on the influence of the decision maker. Compared with the firm discussed in chapter 3, the firms in chapter 4 have a complex ownership structure and more power in the market. In such a complex organizational context, consideration of the decision maker and the internal efficiency are necessary but not sufficient to describe the entry mode choice in-depth. Technically, a quantitative model itself is insufficient to explain the strategic decision in such a complex context. Therefore, this chapter shifts the focus from the individual decision maker and the internal efficiency, to the complex organization itself and its fitness within the surrounding environment through applying a qualitative analysis.

This chapter is structured as follows. Section 5.1 introduces the relevant literature, e.g. the organization capability model considered by Madhok (1996, 1997), which focuses on the analysis of the organization in the context of market entry. Section 5.2 studies how other organizational characteristics rather than the organizational capability could influence entry mode choice. As well, propositions are developed to describe the directional relationships to entry mode choice. This chapter closes with some implications as well as guidelines for future research.

5.1 Review of the literature

Most of the existing literature that concerns the organizational aspects during the process of entry mode choice aimed at identifying the possible influences of some organizational characteristics on entry mode choice in distinct contexts. The most frequently discussed organizational characteristics are firm size (Erramilli and Rao 1993, Reuber and Fisher 1997, Evans 2002, Leung et al. 2003), organizational experience (Evans 2002, Brouthers 2002, Herrman and Datta 2002, King and Tucci 2002), and organizational culture (Cristina and Esteban 2002, Leung et al. 2003).

The inferred relationships between these organizational characteristics and entry mode choice can conflict with each other. The possible relationships identified are positive, negative, or irrelevant. For an extensive discussion, see chapter 2.

Within the literature, which studied entry mode choice by taking the organization as the core of analysis, Madhok's (1996 and 1997) organizational capability (OC) theory is worth explaining in more detail.

5.1.1 The OC theory

Madhok (1996 and 1997) developed the OC theory to explain the firms' boundary issues. The OC theory motivates itself by the inadequateness and incompleteness of both the TC theory and the internalization theory in explaining firms' boundary decisions. Furthermore, this theory bases itself on the well-known resource-based (RB) theory (Penrose 1959, Conn er 1991, Prahald and Conner 1996) and the knowledge-based theory of the firm (Kogut and Zander 1993), in which the firm is a collection of productive resources, both physical and human oriented, which are organized by the administration.

The firm, in the OC theory, is defined alternatively as a bundle of knowledge and the underlying process therein (Madhok 1997). The firm is a rent seeker, i.e. it is rational in rent maximizing. The firm's economic activities are assumed to be flows of know-how or know-how related resources. Therefore, an exploitation and exploration of a firm's organizational capability in maximum is the goal and criterion of the boundary decisions. In the context of Madhok (1996 and 1997), the organizational capabilities, as the "precursor" Richardson (1972, p.888) defined implicitly, are the knowledge, experience, and skills of the firm. This definition is reflected by the relevant OC attributes later developed in Madhok (1998).

This definition of the firm as well as its application for firm's boundary decisions are compared with the TC theory and the internalization theory in the following.

On comparison with the TC theory and the internalization theory

It appears that Madhok believes although being not a completely new theory of firm, the OC theory does step forward on a firm's governance or boundary analysis

by its increased completeness, adequateness and being more realistic in comparison with the TC theory or the internalization theory (Madhok 1996 and 1997).

The OC theory differs or advances the TC theory and the internalization theory in explaining the corporate governance or boundary issues in the following aspects:

1. it is less restrictive in its assumptions. Unlike the restrictive assumptions of the TC theory or the internalization theory on asset specificity, opportunism, and bounded rationality, the OC theory assumes only bounded rationality,
2. it shifts the unit of analysis from the transaction and transaction characteristics to the firm itself and its capabilities. The corporate governance is treated as a tradeoff between the exploration and exploitation of firm capabilities. This methodology is different from that of the TC theory, in which the corporate governance is solved as a cost efficiency problem,
3. it incorporates the managing of value (i.e. the generic value as well as the embodied value, or the value and its supporting structure), both in erosion and in enhancement, into corporate governance or boundary analysis. Meanwhile, it does not deny the efficiency of costs. As summarized by Madhok (1997, p.56): *"the corporate governance decision should be made on basis of tradeoffs: between value and costs considerations, between ownership and location effects, between capability exploitation and development, between TC and capability-related considerations"*.

5.1.2 Applications to entry mode choice

The OC theory indicates that corporate governance or a firm boundary issue depends on the net benefit of internalizing a transaction within a firm. The net benefit is the gross benefit of internalizing a transaction deducted by the relevant costs. The gross benefit is the sum of the value added and the costs avoided through internalizing a transaction within the firm. The cost of internalizing a transaction is the sum of the internal governance costs and the internal costs associated with firm capacities (i.e. the difference between internal production costs and external production costs).

The internalization of a transaction is taken as a process of resource transfer or knowledge transfer in the context of the OC theory. Motivated by this concept, Madhok (1997) developed some propositions predicting the choice of entry mode. The entry mode choice is dependent on the property of firm-embodied knowledge, whether it is more ownership specific (i.e. face high potential loss in transferring to another firm), or more location specific (i.e. face high potential loss in transferring to other country). If the firm-embodied knowledge is more ownership specific, then a subsidiary is preferred; otherwise, collaboration is preferred. When the firm-embodied knowledge is both ownership specific and location specific, the efficient entry mode is dependent on which specificity is stronger. In addition, the OC theory predicts that in a dynamic environment, collaboration will be more preferred when the operation is motivated by future value exploration orientation. The underlying assumption is that collaboration is helpful to develop a future capability base (Madhook 1997, p.51).

Madhok (1998) empirically shows that the OC attributes are more relevant than the TC attributes or the internalization attributes in explaining entry mode choice. The OC attributes are mainly a firm's historical experience as well as the cultural distance.

The OC theory is more in tune with today's dynamic and competitive environment in explaining entry mode choice. Because it focuses more on value exploitation and exploration, and therefore the competitive advantage for the corporate governance decisions, and it is more consistent with the current firms' behaviors as suggested in chapter 4.

However, the OC theory has also some limitations in explaining entry mode choice, which have been summarized in chapter 2.

5.1.3 The implications for entry mode study

The existing empirical studies on the influence of organizational characteristics on entry mode choice have exhibited great inconsistencies. These inconsistencies, as analyzed in chapter 2, could arise from the different methods applied, the different samples used, the different expectations on the side of analysts, or the different

analysis contexts. The directional effects of organizational characteristics on entry mode choice are greatly dependent on the special context of decision-making.

Complementing the long run competitive capability with the short run organizational efficiency as a goal and criterion of organizational entry mode choice will be more complete in theory, and yields better measurability in practice. This is to take the concept of organizational performance as a goal and criterion of entry mode choice (Evan 1993). Alternatively, both the costs and the benefits should be considered equally during the process of strategic decision-making (Brent 1997).

Accepting that organizational capability is a long-run goal and criterion of entry mode choice, other sources of organizational capabilities need to be identified. As suggested by Porter (1985), organizational strategy, cost reduction, technology and product differentiation, market focus, and competition are all possible sources of organizational capacities.

The OC theory is more normative rather than descriptive. This theory has very limited explanatory power in explaining how the entry mode choice should actually proceed.

5.2 Organizational attributes and entry mode choice

5.2.1 Organizational performance, value system, and market entry

A large section of the literature has been devoted to the study of the relationship between a firm's degree of internationalization and performance. The representative relationships concluded were a trigonometric wave by Sullivan (1994), a converted "U" shaped by Hitt et al. (1997), a converted "J" shaped by Gomes and Ramaswamy (1999), and a standard "U" by Ruigrok and Wagner (2003). Despite the variety of shapes, the existing studies show strongly that there is a correlation between a firm's performance and internationalization.

The organizational performance (OP) covers two aspects, namely the long run organizational competence and the short run economic efficiency. The organizational effectiveness (OE) is the most widely applied measure of the OP, and it serves also as a good substitute. Actually, organizational scientists do not

differentiate the OP from the OE explicitly (Robbins 1983, Evan 1993). The OE is an important criterion of behavior (Tourinho and Neno 2003). However, organizational scientists do not usually agree with each other on how the OE should be measured, i.e. what essentially determine the OE (Robbins 1983, Evan 1993).

Evan (1976 and 1993) suggested a systematic methodology of evaluating the OE. By this method, he defined the OE as a capability of an organization to cope with all four systematic processes (i.e. inputs, transformation, outputs, and feedbacks) relative to goal seeking behavior, no matter how explicit or implicit this may be. He also developed nine ratios as the objective measures of the OE (Evan 1993, p.377). This systematic method originates, at least partially, from the concept of value chain and value system by Porter (1985), where the author suggested that organizational competitive advantages depend not only on the firm specific value chain activities but also on the value system, of which the firm is a part.

The value chain activities include the primary activities creating the value directly (i.e. the inbound logistics, operation, outbound logistics, marketing and sales, and service), and the supportive activities (i.e. the procurement, technology development, human resource management, and firm infrastructure). The value system is an expanded value chain including the firm's upstream supplier and the downstream buyer (Porter 1985).

The existing literature has widely recognized that the inefficiency of value chain activity thereby the instability of the value system asks for an adjustment of firms' strategies, e.g. market entry. Kogut (1984) illustrated that the global strategies succeed by creating certain economies along and between value-added chains. Li and Whalley (2002) have shown that a change of value chain asks for a reevaluation of firms' strategies. Mol et al. (2005) argued that the instability of the value system (i.e. arising due to the existence of a value chain envy, which is a result of the difference between the value created and value captured by a certain value chain activity) induces a new entry or a merger and acquisition. They empirically supported the following argument:

"Instability of the value system will lead to value chain envy and will consequently elicit strategic responses by other actors, who will try to occupy the more desirable stages by engaging in new entry or vertical integration".

A big literature has found that an instable environment (political, institutional, or market-oriented) leads to a high equity entry mode. Rasheed (2001) empirically found that the more instable the environment is, a higher equity mode of entry is required to remain efficient. Meyer (2001) argued that an instable institution of entry mode choice induces a high level of equity mode. Nieminen et al. (2001), through a survey on 139 Finish and 97 Austrian companies, found that high-commitment modes were frequently used in the markets that contain more instability. Similarly, Shenkar and Luo (2003) argued that the more unstable the market structure, the more complex the project, then the more likely that the entry mode will be a foreign direct investment, i.e. the higher equity entry mode is adopted. Analogously, we can infer the first proposition describing the influence of the instability of value system, i.e. this instability may arise from the inefficiency of value chain activities, on entry mode choice.

Proposition 5.1: *The more unstable the value system (i.e. the instability may arise from the inefficiency of value chain activities) is, the higher the equity mode of entry requested.*

Recognizing the fact that the inefficiency of value chain activities, and therefore the instability of value system, call for an adjustment of firms' strategic decisions, this proposition, as far as the existing literature concerned, firstly analyzes the firm's boundary issue in a value system context. A directional relationship between the inefficiency of value chain activities and entry mode choice is proposed explicitly. A good example is that in practice many firms integrate the supply chain activities vertically to increase the efficiency of supply, i.e. to reduce the high cost, to control the quality, and to ensure the stability of supply (Nissen 2001).

5.2.2 Organizational philosophy

As analyzed above, the corporate strategy is one of the important sources of competitive advantage. The organizational behaviors are the results of

organizational philosophy and thereby the organizational strategy (Mawhinney 1984, Bucklin et al. 2000). Therefore, the organizational philosophy is an important attribute that influences the organizational behavior. Unfortunately, there is very little literature identifying its influence on entry mode choice explicitly.

However, there is a big literature indicating that the firm's global strategy has an influence on entry mode choice. Based on the TC theory, Hill et al. (1990) established an eclectic framework to explain entry mode choice. They integrated the strategic factors and the environmental factors into their analytic framework. However, the global strategies, in their framework, are differentiated into three branches, namely the multi-domestic strategy, the global strategy, and the global coordination strategy. Under the multi-domestic strategy, as they argued, the global firm needs to set up all functions (e.g. marketing, production, distribution and so on) in every country to adapt to different market environments. Therefore, a low degree of control is required. Under the global strategy, they claimed that the global firm disperses various functions, e.g. production, distribution and sales, into different countries, a high level of control is necessary to coordinate all the functions efficiently. The global coordination strategy exists in a duopoly context where the players enter into a market only for coordinating, the mode of entry is not dependent on a calculable profit but on the firm's overall value. Therefore, a high level of control is required for this consideration.

Some other economists analyzed global strategic factors from different angles within a similar framework. Kim and Hwang (1992) analyzed the influence of global strategy on entry mode choice with the framework of Hill et al. (1990). Put differently, global concentration, global synergies, and global strategic motivation are three global strategic considerations in the context. Alternatively, Aulakh and Kotabe (1997) analyzed the influence of global strategy together with the other two aspects, namely transaction cost and organizational capability, on channel integration. The global strategy was studied from the perspectives of the global market position, the overall cooperative objectives and the differentiation strategy. Of course, there are some other economists, who have studied this problem from a different perspective (Kogut 1988, Klein et al.1990).

Obviously, all these studies reinforce the concept that entry mode choice is influenced by a firm's global strategy. However, the firm's other strategies might be more influential on entry mode choice in a new context. For example, it is difficult to imagine that a firm with a strategy of transforming itself to retailing industry will invest for production in a foreign country.

Behavior economists as well as organizational scientists argued that organizational behavior is influenced by organizational philosophy and thereby the corporate strategy (Simon 1957, Mawhinney 1984, Pennings 1986, Cyert and March 1992, and Bucklin et al. 2000). It is hard to imagine that a firm with a philosophy of doing things their own way will invest via a JV with its partner being in the majority. Additionally, Purcell and Stephen (2000) have identified that the organizational philosophy is a critical factor influencing Japanese tourism firms' choice of entry mode in Australia. Therefore, we recognize the influence of organizational philosophy and thereby the corporate strategy on entry mode choice as follows:

> ***Proposition 5.2*** *The choice of entry mode is influenced by the firms' corporate strategies, which are shaped by its philosophy of what and how things should be carried out. Firms with a philosophy of doing things their own way will adopt a WOFV rather than a JV for their foreign investment.*

5.2.3 Organizational experience

Cost reduction is another important source of competitive advantage. Cost reduction is a result of organizational learning, i.e. organizational experience (Robbins 1983, Bruton et al. 1994). However, the influence of organizational experience on entry mode choice, as indicated in chapter 2, is quite controversial. Additionally, there are different versions of explanations on this phenomenon, which will be discussed in the following sub-section.

Two schools explaining the conflictions

The influence of the organizational experience on a firm's strategic decisions, e.g. globalization, is quite controversial in the theories and the empirical studies. There are mainly two schools, which explained the influences of organizational experience

on organizational internationalization differently. One is the “humanity” theory of the firm (Stopford and Wells 1972), the other is the “ethnocentrism” theory of the firm (Wiechmann and Pringle 1979).

The incremental or gradual process theory of a firm’s internationalization originated from Johanson and Wiedersheim-Paul (1975), Johanson and Vahlne (1977, 1992), and Coviello and Munro (1997) can be explained via the “humanity” theory of the firm. This “humanity” theory postulates that successful experience in foreign market increases the confidence of further investment. Therefore, firms will increase their resource commitment with the increase of experience in the foreign market.

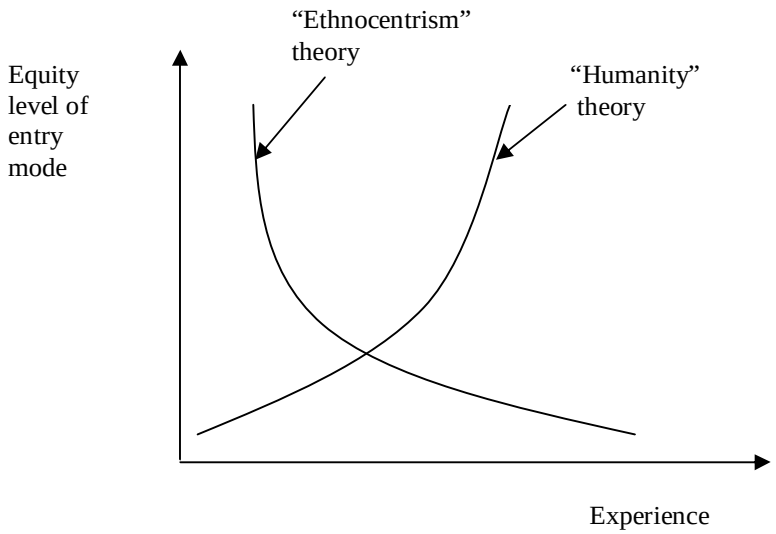
However, this “humanity” explanation on a firm’s internationalization is challenged by the “ethnocentrism” theory of the firm. This “ethnocentrism” theory argues that a firm prefers to make things done in its own way at first; because they believe that by doing so, they can exploit their competitive advantages more effectively. Being more familiar to the local people, values and/or cultures, the firm may loose its control whenever the exploitation of its competitive advantages is not threatened (Wiechmann and Pringle 1979).

As discussed in chapter 2, these two schools have been applied to explain the choice of entry mode and both find empirical supports. Figure 5.1 depicts these two controversial schools explaining the influence of organizational experience on entry mode choice in one diagram.

Explicitly, these two schools have both explained the choice of entry mode from the perspective of the traditional learning curve effect (Bruton et al. 1994, Hitt et al. 1997). They are two ways of viewing one issue. Both have shown the evolution of equity involvement with the increasing experience accumulated in the foreign market. The difference arises from the distinct assumptions on the philosophy of doing business. The manager in the “humanity” theory of the firm prefers to adopt a low equity mode when he has low experience; however, the manager in the “ethnocentrism” theory of the firm reacts differently. Both explanations predict a unilateral effect of experience on the equity involvement in their entry mode

choices, either positive or negative. Both assumptions are reasonable and exist in reality.

Figure 5.1 The "Humanity" and "Ethnocentrism" theory of the firm



A "U" shaped relationship between organizational experience and performance

There is a considerable volume of published literature, which has studied the influence of the organizational experience on a firm's performance. These studies found that the organizational learning accompanies the process of a firm's internationalization, which influences thereby the firm's performance (Haleblian and Finkelstein 1999, Ruigrok and Wagner 2003).

In terms of the predicted directional relationship between the organizational experience and the performance, many researchers supported a "U" shaped relationship (e.g. Haleblian and Finkelstein 1999, Ruigrok and Wagner 2003).

Ruigrok and Wagner (2003) argued that the process of internationalization incurs both costs and benefits. If one considered only the costs of the internationalization, he leads to the traditional learning curve result; however, when one considers both the costs and the benefits of the internationalization, he leads to the "U" shape. In detail, when a firm internationalizes its business in a culturally similar country, the internationalization brings a high performance through the benefits of the economies of scale. In this regard, the organizational experience is positively related to performance. However, if a firm started to internationalize in a culturally distinct

country, the internationalization incurs a high cost of reconfiguring itself to adapt to the distinct environment. This high cost of reconfiguring results in a low performance; in this sense, the organizational experience contributes negatively to performance. Passing a threshold, where the benefits obtained from its internationalization equate the costs of the reconfiguration, the firm starts to earn a net benefit from the reconfiguration, i.e. the experience contributes positively to the performance again.

Haleblian and Finkelstein (1999), however, explained this "U" shaped relationship with a behavioral learning theory. This theory is motivated through the distinct influences of the "antecedent" and the "consequence" on a current decision-making. The "antecedent" refers to the present environment, and the "consequence" refers to the past. Under this theory, the prior experiences differentiate, from the perspective of their relevance to current decision context, into two categories: similar experience and dissimilar experience. The decision maker is named a novice when he has very little experience, and an expert later when he has accumulated very rich experience. The decision maker takes different actions on the experience of globalization, either generalization or discrimination. The novice has a high frequency of applying prior experience inappropriately for current decisions through generalizing a dissimilar experience or misinterpreting a similar one. Therefore, the experience shows a negative relationship with performance at first. With more experience accumulated, the novice becomes an expert, he makes fewer mistakes in applying the prior experience for current decisions, and therefore the performance improves with the experience accumulated. The above-described process results a standard "U" shaped relationship.

These two ways of explaining the "U" shaped relationship differ from each other; however, they are essentially not contradictory. The directional relationship between the organizational experience and performance depends essentially on the difference of the costs and the benefits, which are the results of applying prior experience for current decision-making. These two methods imply an alternative way of understanding the influence of organizational experience on entry mode choice rather than the time frame explanation of Erramilli (1991).

A "U" shape between organizational experience and entry mode choice

The process of a firm's internationalization incurs both benefits and costs. In terms of the organizational experience, an appropriate application of prior experience during the process of internationalization brings the firm benefits through economies of scale. However, reconfiguring or an inappropriate application of the prior experience for the current entry mode choice may also bring with it high costs. When the benefits cannot cover the corresponding costs, the firm will decrease its level of resource commitment in the foreign market, i.e. the entry mode choice is negatively related with the prior experience, and vice versa. Therefore, we conclude the last proposition describing the influence of the organizational experience on entry mode choice.

Proposition 5.3 *The organizational experience has a "U" shaped relationship with entry mode choice. The directional relationship between entry mode choice and the organizational experience depends on the comparison of the benefits with the costs, which are the results of applying the prior organizational experience for the present decision. When the benefits cover the costs, the organizational experience will increase the firm's resource commitment in the foreign country, i.e. a high equity entry mode is adopted, and vice versa.*

5.3 Conclusion

This chapter, as a part of our systematic model, has focused on how the organization itself as well as its external environment influences the entry mode choice. Based on the weaknesses of the OC theory in explaining the entry mode choice as well as on the conflicting results in the theoretical and the empirical studies, this chapter has proposed the predictive influences of some organizational characteristics on entry mode choice.

Above all, the organizational characteristics, i.e. organizational philosophy and organizational experience, are assumed to be critical, and they were discussed in details. The managers in practice are well advised, according to the concluded propositions, that choice of entry mode should be consistent with the existing corporate philosophy, alternatives which conflicts with the corporate philosophy will

not be adopted in the end. If the firm has relevant experience obtained from other markets, due to the fact that applying this experience for the current market might incur a huge transferring cost, a low equity entry mode is suggested. However, if the firm has prior experience obtained directly from this market, a high equity entry mode could be considered. Of course, experience is not the only thing to be considered in the process of decision-making.

The interesting proposition concluded through a qualitative analysis is that the instability of the value system, i.e. the inter-organization system, pushes the firm to integrate horizontally or vertically in order to achieve stability and thereby efficiency. This conceptual analysis gives modeling entry mode choice with a focus on the inter-organizational relationships quantitatively a good indication.

Additionally, these findings inspire an empirical research to investigate their validities, which will be implemented in chapter 7.

Chapter 6 Syntheses of the Systematic Analyses on Entry Mode Choice

In the previous chapters, entry mode choice was analyzed through applying a systematic methodology with a longitude consideration. This chapter aims to summarize the results concluded in previous chapters in order to conceptualize the systematic framework of entry mode choice.

Therefore, this chapter is structured as follows. Section 6.1 summarizes all the propositions developed in previous chapters. Section 6.2 conceptualizes the systematic framework of entry mode choice.

6.1 Summary of the propositions

Totally 14 propositions, as summarized in Table 6.1, were developed to predict the influences of each system component on entry mode choice in this dissertation.

Propositions 3.2 to 3.4(c) explain how the environment influences entry mode choice. Proposition 3.1 however indicates the influence of the manager's risk aversion on entry mode choice. Propositions 4.1 to 4.5 illustrate the influence of the decision makers on entry mode choice. Explicitly, propositions 5.1 to 5.3 imply how the organization might affect entry mode choice.

These propositions present an outline of a systematic approach and indicate to the manager in practice what kind of factors should be considered during the process of entry mode decision and how they might influence their decisions.

Table 6.1 Propositions review

Components	Attributes	Proposition No.	Brief description
Decision maker	Risk aversion	3.1	Negatively related to entry mode choice
	Managerial discretion and expenses preference	4.1-4.5	Board of directors choose entry mode strategically. Managers' expenses preference induces an abuse of expenditure and thereby over investment. Managerial discretion of revenue maximization also leads to over investment, and distorts the profit maximization. A minimum profit constraint and an ownership constraint cannot ensure a first best result of investment. Both constraints cannot prevent the abuse of expenditure effectively as well.
Organization	Organizational performance (organizational effectiveness)	5.1	The more instable the value system (i.e. instability arising from the inefficiency of value chain activities) is, the higher the level of control (i.e. equity mode of entry) is requested.
	Organizational philosophy	5.2	Organizational philosophy influences choice of entry mode, a firm with a philosophy of doing things their own way will invest via a WOFV rather than a JV, or a JV in the majority rather than in minority.
	Organizational experience	5.3	A "U" shaped relationship between the organizational experience and the equity level of entry mode
Environment	Estimated risk in the host country	3.2	Negatively related to entry mode choice
	Profitability in host country	3.3	Positively related to entry mode choice
	Attractiveness of host country market	3.4 (a)	Positively related to entry mode choice
	Capital cost rate in host country	3.4 (b)	Negatively related in a certain interval
	Tax rate in host country	3.4 (c)	Negatively related in a certain interval

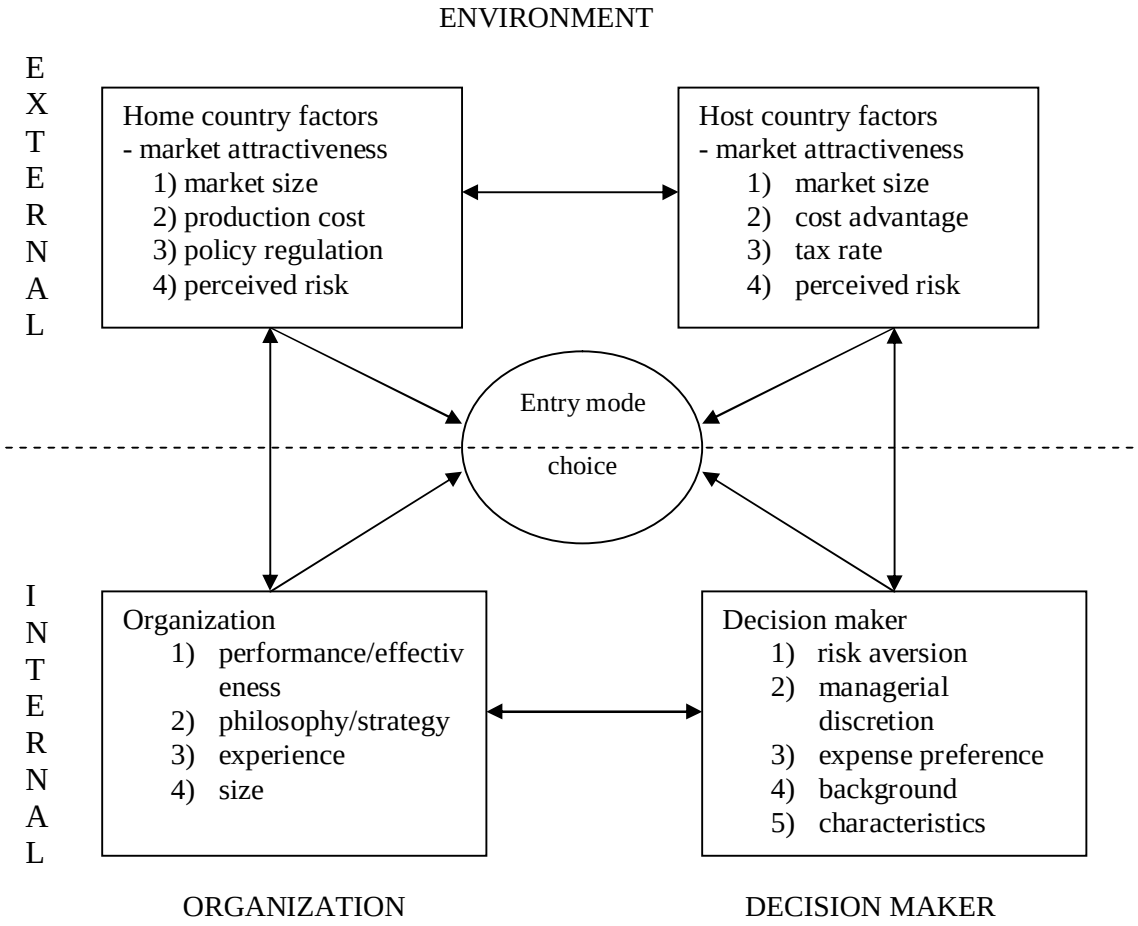
6.2 A conceptually systematic framework of entry mode choice

6.2.1 Exploring the determinants of entry mode choice

As summarized in Table 6.1, the factors to be considered during the process of entry mode choice can be explored from each systematic component respectively,

namely the decision maker, the organization and the environment. Root (1987, p.9) explored, however, the influential factors from a perspective of the organizational boundary, i.e. the internal and the external organization. Referring to this organizational boundary idea, we suggest a thorough evaluation on the relevant factors by employing a systematic approach during the process of entry mode choice. Figure 6.1 presents this systematic approach, which is, of course, rather heuristic than algorithmic, by this we mean that the factors to be considered are not limited to what have been studied and displayed.

Figure 6.1 Factors influencing entry mode choice



This framework puts a firm's strategic decisions, e.g. entry mode choice, into a systematic context. More importantly, this framework suggests an alternative way of exploring the determinants of entry mode choice. Following this systematic analysis rather than the OLI framework, the OC framework, the TCA framework, or intuitive judgment, the decision maker will make fewer mistakes in ignoring important

factors in the process of entry mode decision. Additionally, recognizing that the entry mode choice is a conjoint art of the decision maker, the organization, the environment, and their interactions, the decision maker will less likely over emphasize the impact of one or two aspects by underestimating other aspects.

6.2.2 Formulating the process of entry mode choice

The above subsection has suggested to the manager in practice how to explore the important factors in face of entry mode decisions. However, the question that remains unclear is that how entry mode decisions should be made in procedure?

Integrating the organizational factors discussed in chapter 5, the decision makers related considerations in chapter 4, and the environment related factors in chapter 3 Figure 6.2 describes a new process-oriented model of entry mode choice. This process-oriented model complements the content-oriented analyses in previous chapters.

This model, as described in Figure 6.2, consists of five stages. Firstly, evaluate the organizational performance. As suggested by Proposition 5.1, the organizational performance provides not only the condition but also the constraint to entry mode decision. As analyzed above, the instability of value system arouses usually vertical integrations (Mol et al. 2005). Additionally, to realize the economic efficiency firms usually integrate horizontally to exploit their competitive advantages in depth (Porter 1985, Müller 2001). Therefore, diagnosing the organizational performance indicates not only the necessity of new market entry but also a narrower scope (i.e. in comparison with Root (1987) and Young et al. (1989)) of entry modes to be considered.

The second step is to check the contingent environment of entry mode choice, e.g. market size, tax rates, tariff, host country government policy, and technology, which were identified to be influential on entry mode choice by Proposition 3.2, 3.3, 3.4, and 4.1. Through this, we can reject those entry modes that are explicitly not fit for the environment.

The following step is to check the remaining entry modes within the organizational philosophy, the organizational strategies as well as the organizational

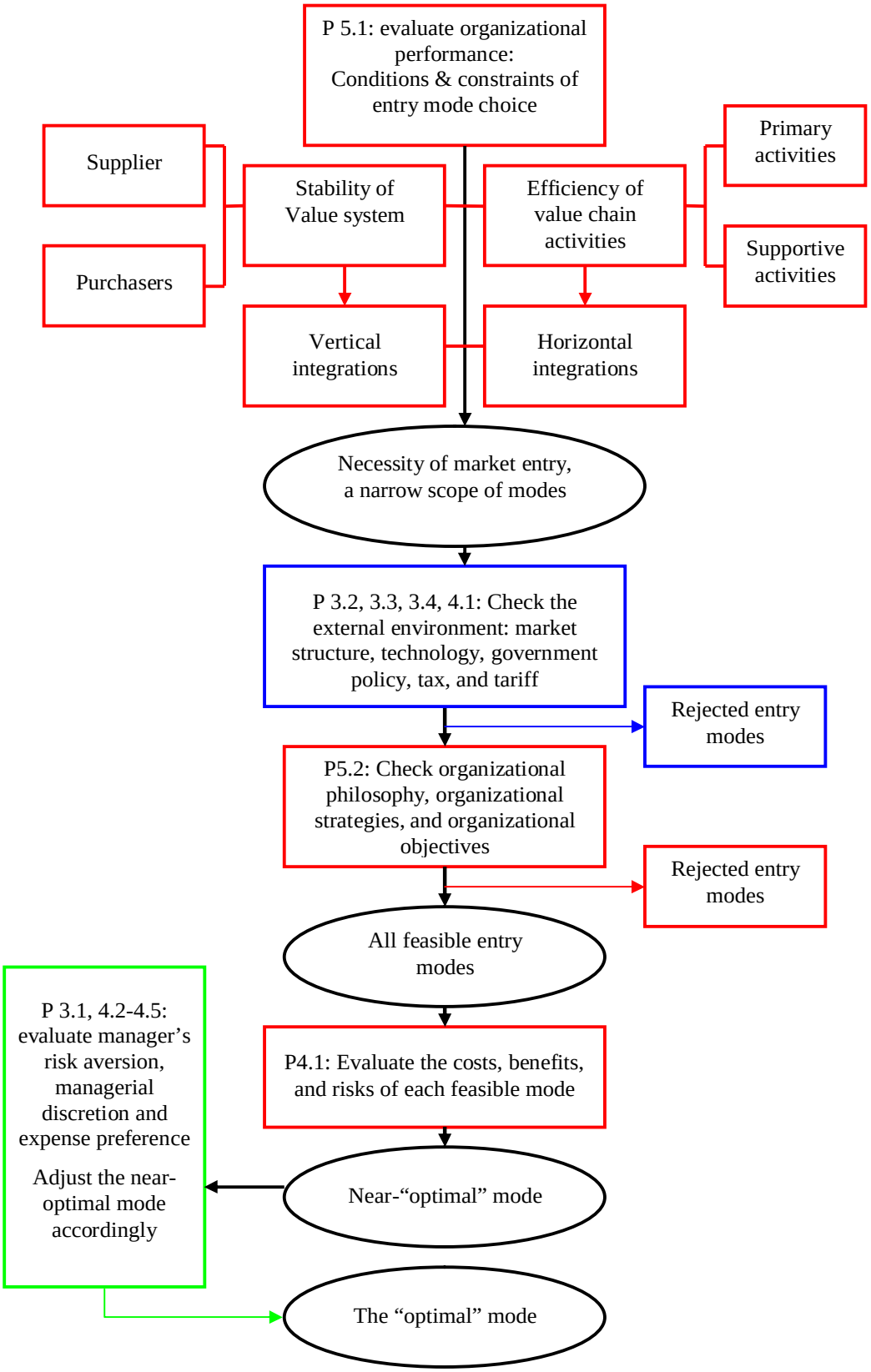
objectives, which corresponds to Proposition 5.2. This step together with the previous step will result in a feasible set of entry modes.

To identify the optimal entry mode, we need further to compare the costs, the benefits, and the potential risks of each alternative. However, as indicated in the previous chapters, this cost-benefit-risk analysis leads to an at most near-optimal decision if the manager's risk aversion and the managerial discretion were not absent during the process of entry mode choice (as implied by Proposition 3.1, 4.2, 4.3, 4.4, and 4.5). According to the conclusion that, when there is not an effective monitoring mechanism, the decision makers usually over invest in the host country and hence a corresponding adjustment on the near-optimal entry mode is therefore indispensable to obtain an optimal entry mode.

To express this systematic logic explicitly, Figure 6.2 employs different colors. The blue part concerns the environmental considerations, the green part relates to the decision makers related considerations, and the red part refers to the organizational considerations. Additionally, "P" is the abbreviation of "proposition".

Following this systematic model the managers in practice will reduce the risk of ignoring some important factors in the process of entry mode decision, will save the time and cost for entry mode decision-making, and will also increase the probability of a right entry mode decision being made in the end. In particular, a careful evaluation on the surrounding environment will provide the decision maker a clear picture of the existing conditions as well as constraints of entering into a new market. The consideration of the organization itself will ensure that the choice of entry mode is consistent with the company's strategy, philosophy, etc. This consistency guarantees a sustainable development of the firm. Last but not least, an adjustment on the managerial discretion and the risk aversion will reduce the agency cost significantly in the process of entry mode choice; this ensures that the resulted entry mode deviates not so far from the organizational goal of profit maximization.

Figure 6.2 Procedures of entry mode choice



6.2.3 Why model entry mode choice separately

Figure 6.2 displays the systematic framework. This framework consists of three sub-models, which were developed in chapter 3, 4, and 5 respectively. One reason for modeling a firm's entry mode choice separately and in different contexts is that, firms in different size categories may have different resource capacities and organizational structures. Therefore, they may face distinct conditions as well as constraints for their entry mode choices, i.e. distinct contexts of decision-making. The other reason is the difficulty of analyzing these three parts simultaneously in a general framework without foregoing many insights.

Actually, these three sub-models not only aim at different sized firms but also emphasize, in particular, different systematic components respectively. For example, the prototype model in chapter 3 aims at the SMEs, which are characterized by an alignment of the ownership and the management. Under the assumption of such a simple organizational structure, the model emphasizes therefore particularly on the influence of the surrounding environment on entry mode choice. However, the model in chapter 4 aims at large firms, which are characterized by a separation of ownership from management, and emphasizes particularly on the influence of specialization, managerial discretion, and expenses preference (i.e., which are the results of this particular corporate structure) on entry mode choice. Finally, the organizational analysis in chapter 5 complements chapter 4 with a focus on the organization's external fitness with the environment as well as the organization itself.

Chapter 7 Market Entry Mode Choice: German Firms in China

This chapter aims to verify empirically the deterministic relationships between the systematic components and entry mode choice, which are proposed in previous chapters. Despite this, the factors influencing the firms' market choice will also be exploited in depth.

This chapter is structured as follows. Section 7.1 explains why German firms have focused on China as their FDI destination. Section 7.2 describes the sample, the data upon which the analysis is based, and the methodology applied. Results of analyses together with the comparison with previous findings are given in section 7.3. Finally, this chapter concludes with some implications for the decision maker in practice as well as an outlook for future research.

7.1 Why study German firm's investment behavior in China?

7.1.1 China as an emerging market

With its sustaining high rate of economic growth and political stability, China has become an important emerging market among others like Eastern Europe, Brazil, and Indian. However, China distinguishes itself from the others by its high market potential, low labor cost, and ample business opportunities.

According to Trinh (2004), a report of Deutsche Bank, China is estimated to have around 76 million prosperous consumers in 2001, less than the 236 million of American, and the 110 million of Japan, however more than the 70 million of Germany. However, in 2015, as estimated, China will have 700 million prosperous consumers. This figure significantly surpasses the estimated 284 million prosperous consumers of America.

According to the World Investment Prospects 2004 (a survey of 500 global senior executives to explore the corporate expectations for FDI) of the Economist Intelligence Unit, China is viewed as the top emerging market for FDI. A US$ 80 billion FDI is forecasted to flow into China in the year 2008. The relative strengths and weaknesses of the potential FDI destination countries and regions are reported in Table 7.1.

Table 7.1 Analysis on key FDI destination countries

	China	Euro area	Japan	Russia	USA	India	New EU entrant	Brazil
New consumer market	49	9	2	5	7	9	15	4
Low cost labor	50	2	0	3	1	29	12	3
New partnership possibilities	20	22	5	5	14	12	14	3
New corporate market	23	22	3	5	17	7	15	4
Access to highly skilled labor force	6	22	7	3	14	30	10	2
New opportunities in outsourcing	16	9	1	3	7	46	12	4
Acquisition opportunities	15	20	2	5	13	8	22	9
Research and development activity	11	20	5	4	22	24	6	3
Great efficiencies in supply chain	17	26	6	2	22	10	9	3

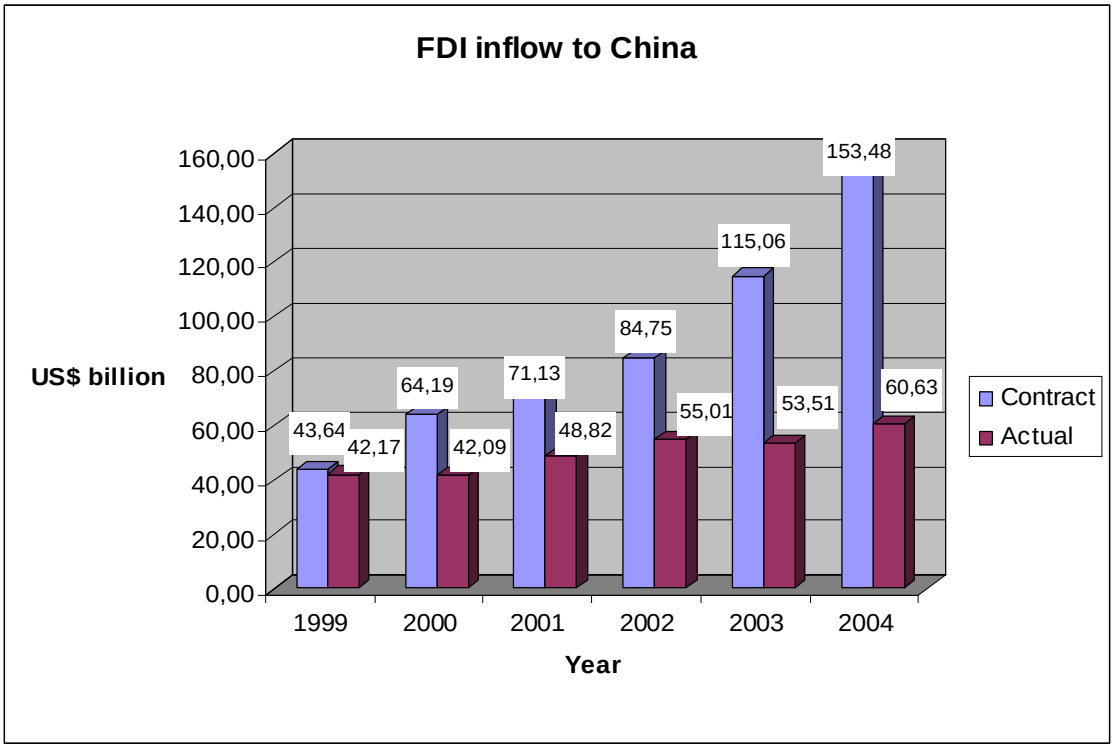
Source: World Investment Prospects: The revivals of globalization (page 11), Economist Intelligence Unit 2004

7.1.2 FDI in China

China has become the second biggest FDI destination country in the world, and its economic growth benefits from this increasing FDI inflow (Kerr and Peter 2001, Pan 2003, Wei et al. 2004). The total FDI inflow in 2004 amounts to US$ 60.63 billion, which exceeded the expected value of US$ 58 billion (e.g. Trinh 2004, World investment prospects 2004). This makes the estimated US$ 80 billion of FDI

inflow to China in 2008 reasonable. Additionally, China has increased its FDI inflows in recent years. Figure 7.1 shows this trend explicitly.

Figure 7.1 FDI inflow to China (1999-2004)



Data source: The Ministry of Commerce of the People's Republic of China.

7.1.3 German investment in China

Germany has become an important trade partner of China since the 1990s, meanwhile it was the seventh biggest FDI source country of China in 2003. The German investment in China has increased from Euro 800 million in 1995 to an estimated Euro 7.9 billion in 2003 (Trinh 2004). A steady growth of German FDI in China is shown in Figure 7.2.

However, this estimated Euro 7.9 billion investment in China consists only 1.2% of the total value of German FDI. The bulk German investment still goes to the EU or America, each attracting about 40%. This allocation is presented in Figure 7.3.

What is surprising is that Trinh (2004) forecasted a prospect of Euro 18-20 billion of German investment in China in next six years, until 2010. This inference is based on a survey of 23 top German firms listed in the DAX 30.

Trinh (2004) described the origin and destination of German investors in China in Figure 7.4 and Figure 7.5. Clearly, automotive, machinery (i.e. electronic machinery included) and chemistry are three main industries of German investment in China.

Undoubtedly, China will become one of the most important FDI destination countries for German firms. The recent treaties signed during German chancellor Schroeder's visit to China in 2003, promoting and protecting German investment in China, strengthen this trend. Therefore, it is clearly necessary to study how German firms make their entry mode decisions, and how should they make such decisions in order to ensure successful entries into the market.

Figure 7.2 German investment in China (1995-2003)

Figure 7.3 Overall German investment distribution

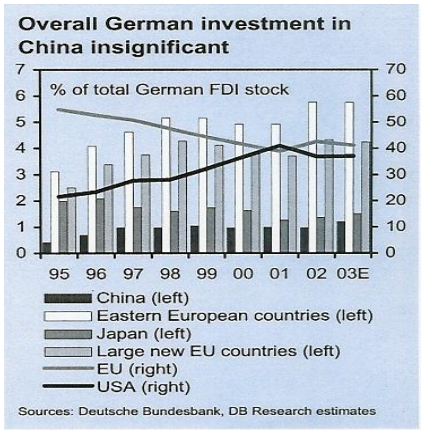


Figure 7.4 Origin of German Investment

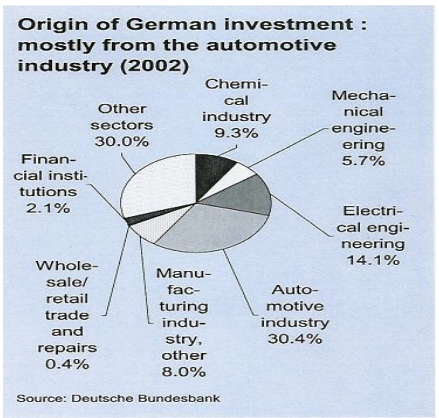


Figure 7.5 Destination of German investment

Sources: Trinh (2004), "Foreign direct investment in China-good prospects for German companies? China special", *Deutsche Bank Research*, Aug 24, 2004, 1-11.

7.2 Data and methodology

7.2.1 The sample

The sample consists of 20 extensive interviews with senior managers of German firms. The interviews were recorded and transcribed to paper. This sample is developed from a contact list offered by German Industry Commerce Office. The sample was randomly selected. In total, 45 firms were contacted.

The firms interviewed vary widely in their respective industries and sizes. The interviewees also occupy different positions in their respective firms, e.g. sales and marketing, production and logistics, acquisition and merges, and owners for instance. In addition, these firms are in different stages of their developments in China, 15% of them just start their business with China via export/contracting, 25% of them have their representative offices in China, 60% of them have invested in China either via a JV or via a WOFV. Table 7.2 describes the sample in detail.

The sample is a good representative of the total population of the German firms investing in China. This argument is based on two criteria, namely the distribution of industrial sectors and the distribution of firm sizes. According to Buch et al. (2003), among the 1500 German investors in China, approximately 74.1% are from manufacturing sectors. As showed in Table 7.2, our sample is consisted of 17 firms, which already invested in China or at least have a representative office. Among these 17 firms, 13 of them are from manufacturing sectors (i.e. 76.4%). In respect to firm size, Trinh (2004) identified that 10-20% of German investors in China are SMEs, in our sample, 3 firms among these 17 investors are SMEs (i.e. approximately 17.6%).

7.2.2 The questionnaire and variables

Questionnaire

The interviews followed a semi-structured questionnaire, which consists of open as well as closed questions. This structure is based on a good understanding of the difference between qualitative and quantitative analysis (Oppenheim 1992 p.115,

Malhotra 1996, Bill 2000). The overall questionnaire has 12 questions. Most of the interviews lasted more than 30 minutes exceeding the preset 25 minutes.

Table 7. 2 Sample profile

		No.	Employees	Interviewee title	Industry
Entry mode	1	1	1100	Managing director	Automotive
		2	18000	Assistant Chairman	Food
		3	160	Owner	Logistics
	2	1	1272	APC sales manager	Machinery
		2	8391	Export manager	Machinery
		3	200	Managing director	Machinery
		4	80	Owner	Machinery
		5	1637	Managing director	Retailing
	3	1	18173	Vice president	Automotive
		2	12600	APC General manager	Furniture
		3	708	CEO	Garment
		4	73221	CEO Shanghai	Media
		5	260	Managing director	Machinery
	4	1	4500	Vice CEO and CFO	Banking service
		2	4100	Company speaker	Building
		3	120000	Manager	Consulting
		4	2100	Managing director	Machinery
		5	500	Managing director	Machinery
		6	1600	Production manager	Machinery
		7	600	CEO China	Office products

Note: As coded later, 1, 2, 3, 4 in the column of entry mode represent export/contracting, representative office (RO), joint venture (JV), and wholly owned foreign venture (WOFV) respectively.

Dependent variable

As defined in chapter 3 and 4, entry mode is defined by the ownership ratio; and it is a continuous variable ranging from zero to one. Entry mode is the dependent variable.

Prior literature usually classify entry modes by applying the measure of resource commitment level thereby the level of control (Anderson and Gatignon 1986, Klein

et al. 1990, Leung et al. 2003, and Helpman et al. 2004). As widely accepted, a high level of control involves regularly a high level of risk (Anderson and Gatignon 1986), therefore the risk involved is also a meaningful measure of classifying entry modes. It is reasonable to assume that the decision makers will increase their time consumption on their entry decisions with the increase of resource commitment and the risk. As a result, three dimensions (i.e. the resource commitment, the risk and the time) can be applied to classify entry modes into four clusters as depicted in Table 7.3. These four alternatives have been widely discussed in prior literature, and they are the most usually adopted entry modes in practice (Erramilli and Rao 1993, Tschoegl 1997, Meyer 2001).

Table 7.3 Key characteristics of entry mode alternatives with coding

Entry mode	Code	Constructs		
		Resource commitment	Risk	Time of decision
Trade/contracting (Tr.)	1	quite low	quite low	quite short
Representative office (R.O.)	2	Low	low	short
JV	3	high	high	long
WOFV	4	quite high	quite high	quite long

Independent variables

Firm size. This is an important characteristic variable of an organization. There is no generally accepted definition for SMEs (Lu and Beamish 2001). In addition, there is no generally accepted definition for large firms or MNEs either. According to the American Small Business Administration (SBA), the most widely used definition in terms of the number of employees of SMEs is that those firms with less than 500 employees are SMEs (Lu and Beamish 2001). Therefore, firms above this level of employment can be obviously clustered as large firms. According to our sample, 75% of the observations are above this level. Analyzing the influence of firm size on entry mode choice under such a 2-equivalent-distance scale does not offer deep insights. Therefore, a 3-equivalent-distance scale is introduced to collapse those firms with more than 500 employees into two further groups, namely the large firms with employees from 500 up to 9999, and MNEs with employees exceeding 10000. The coding of firm size in terms of employees is given in Table 7.4.

Perceived risk. In the existing literature, this factor is widely assumed as an important country factor influencing entry mode choice (Anderson and Gatignon 1986, Errmalli and Rao 1993, Rasheed 2001, Brouther et al. 2002, Cristina and Esteban 2002). This factor contains multiple facets, e.g. political risk or legal risk (Williamson 1985, Gatignon and Anderson 1988), environmental uncertainty (Anderson and Gatignon 1986, Rasheed 2001), cultural risk (Geringer and Herbert 1991), and operational risk (Rasheed 2001). For simplicity, an assessment of the overall country risk of investing in China is asked during the process of the interviews. This risk is classified into three categories, namely low risk (coded 3), medium risk (coded 2), and high risk (coded 1).

Market potential. This is also an important factor indicating the host country characteristics, and it was also widely examined in the existing empirical entry mode studies (Agarwal and Ramaswami 1992, Agarwal 1994, Chen and Hu 2001). A 3-equivalent-distance scale measure is also introduced to classify this variable. If the market is perceived to be very big, then it is coded 3, medium 2, and small 1.

Tax regime. This is another important factor measuring the characteristics of the host country (Decker and Zhao 2004 b, c). This factor was also widely studied in the existing empirical literature (Boskin and Gale 1986, Tung and Cho 2000, Kerr and Peter 2001). Similarly, a 3-equivalent-distance scale is applied to measure the extent of this variable's favorability.

Risk aversion. The decision maker's characteristics are assumed to influence the entry mode choice significantly (Hermann and Datta 2002, Pan 2003, Decker and Zhao 2004 b,c). However, the decision maker's attitude toward risk, i.e. risk orientation or risk aversion, has not been widely studied in the relevant literature (Pan 2003).

Applying a 3-equivalent-distance scale, the above independent variables are coded in Table 7.4. These variables can be read as categorical even though they were originally continuous.

Table 7.4 3-equivalent-distance scale coding of independent variables

Codes / Components	1	2	3
Risk Aversion	Slight	Strong	Very strong
Tax Regime	Unfavorable	Favorable	Very favorable
Potential Market Size	Small	Big	Very big
Firm Size	SMEs (N<= 499)	Big sized (N<= 9999)	MNEs (N>= 10000)
Perceived Risk	Low	High	Very high

Note: N denotes the number of employees.

7.2.3 The data

As suggested, there are some general assumptions for empirical tests, parametric or non-parametric (Pallant 2001, Stevens 2002). Violation of them may or may not influence the power and/or the reality of the analysis results significantly.

According to Pallant (2001) and Stevens (2002), parametric tests have some general assumptions: continuous rather than categorical measure of dependent variable, random sampling, independence of observations, normal distribution of the data, and homogeneity of variance. However, non-parametric tests have far less restrictive assumptions on the data: random sample and independence of the observations only.

Obviously, the first three conditions of parametric tests (i.e. continuity of the dependent variable, random sampling, and independence of observations) are satisfied by our data; and therefore, nonparametric methods can be applied to test the hypotheses. We need to further examine the normality of data distributions and the homogeneity of variance to ensure that parametric methods applicable.

The normal distribution of scores of each independent variable on the dependent variable can be checked via a graphical or via non-graphical method. However, with a small or moderate sample size, it is difficult to tell whether the non-normality is real or apparent because of the considerable sampling error. Therefore, a non-graphical test is preferred (Stevens 2002, p.264). Additionally, the author argued

that Shapiro-Wilk test was the most powerful one in detecting the departures from normality (Stevens 2002, p.264), the results of which are reported in Table 7.5.

Table 7.5 Tests of normality

		Firm size			**Risk averse**			**Market size***		
Entry Mode		Statistic	df	Sig.	Statistic	df	Sig.	Statistic	df	Sig.
	1	0.945	4	0.683	0.684	5	0.006			
	2	0.769	11	0.004	0.895	10	0.191			
	3	0.828	5	0.135	0.833	5	0.146	0.857	18	0.011
		Income tax **			**Perceived risk*****					
Entry Mode		Statistic	df	Sig.	Statistic	df	Sig.			
	1				0.825	9	0.039			
	2	0.911	10	0.287	0.780	9	0.012			
	3	0.730	10	0.002						

*: No observations when Market size=1, and the range of Market size=2 is 2.
**: No observations when Income tax=1.
***: Entry mode is constant when Perceived risk=3. This has been omitted.

A non-significant result (Sig. value of more than 0.05) indicates normality. Table 7.5 indicates that firm size, risk aversion are roughly normally distributed except that one group in each variable is non-normally distributed. Controversially, market size, income tax, and perceived risk are non-normally distributed.

What are about the homogeneities of variance? The results of the homogeneity tests are recorded in Table 7.6. All of the significant values are greater than the critical value of 0.05; therefore, none of them violates the homogeneity of variance.

Table 7.6 Test of homogeneity of variances

Firm size	Levene Statistic	df1	df2	Sig.	**Risk aversion**	Levene Statistic	df1	df2	Sig.
	1.257	2	17	**0.310**		0.719	2	17	**0.502**
Market size	Levene Statistic	df1	df2	Sig.	**Income tax**	Levene Statistic	df1	df2	Sig.
	0.023	1	18	**0.880**		0.107	1	18	**0.747**
Perceived risk	Levene Statistic	df1	df2	Sig.					
	2.104	2	17	**0.153**					

7.2.4 The methodology

Qualitative and quantitative studies are the two most frequently used methodologies in marketing. These two methodologies are complementary rather than compete; however, both have their strengths and weaknesses (Gordon and Langmaid 1988, Malhotra 1996).

According to Gordon and Langmaid (1988), qualitative research is mainly applied to understand rather than to measuring the marketing behavior, and it is extremely helpful in describing complex behavior in detail. In addition, qualitative research takes advantage of flexibility, depth of understanding, and of penetrating the rationalized or superficial response. This method has been widely applied in marketing research to form hypotheses or to increase understanding since the late 1970s. However, this method suffers from the fact that its results are easily misused if they are regarded as conclusive or if they are used to generalize from the population of interest (Malhotra 1996). Quantitative analysis, on the other hand, is more rigorous and conclusive; but it suffers from the lack of understanding the true behavioral process (Malhotra 1996).

For the reasons stated above, both qualitative and quantitative methods will be applied to complement each other in our context.

Regarding the quantitative method, both parametric and non-parametric methods will be applied to test the propositions suggested in previous chapters. Even if the normal distribution assumption is violated as indicated earlier, a parametric method might still be applicable. This is because, as Stevens argued, the violation of normal distribution has only a slight effect on the level of significance (Stevens 2002, p.261). Similarly, Pallant (2001, p. 98) argued that many statistic writers think that most of the parametric approaches tolerate minor violations. Additionally, the parametric methods are assumed to be more powerful and sensitive than their non-parametric cousins, and it is always better to use a parametric technique if it is possible (Pallant 2001, p.255). A corresponding non-parametric method is also applied to validate the results of the parametric method.

Parametrically, the one-way Analysis of Variance (ANOVA) is used. This method is applicable for the following reasons: firstly, among all the parametric techniques

(e.g. Cross-tabulations, T-test, and Analysis of Covariance), the ANOVA techniques are used especially when the independent variables have more than two groups. In particular, the one-way ANOVA is applicable while there is only one independent variable, the two-way ANOVA is used while there are two independent variables, and the multivariate ANOVA is used when there is more than one dependent variable. Secondly, it was widely applied in the entry mode literature (Li et al. 2001, Brouthers et al. 2002).

Non-parametrically, the Kruskal-Wallis test is the corresponding alternative to the one-way ANOVA (Pallant 2001, p.263). It allows one to compare the scores on a continuous variable for three or more groups. There are only two variables in each test, a continuous dependent variable, and a categorical independent variable with three or more categories.

Qualitative tests aim to improve the understanding of and thereby lead to the theses on the possible influences of the organizational factors, e.g. organizational philosophy and organizational experience, on entry mode choice, which were proposed in chapter 5.

7.3 Analyses and results

7.3.1 Factors influencing choice of China for FDI

FDI destination choice is not a new topic in international marketing. The existing literature claims that the factors from the perspectives of politics, economics, culture, and population are important considerations when selecting a market for international activities (Paliwoda and Thomas 1998).

However, what factors motivate the German firms to invest in China? The answers to this question are presented in Table 7.7.

Inspecting the answers carefully, one is not surprised to see the variety of factors that influence the choice of China as FDI destination. The relevant factors are mainly organization specific, environment specific and market specific. This finding is consistent with the existing literature as indicated in chapter 2 (see page 18) and is similar with that of Gilmore et al. (2003). However, surprisingly and on a different

note, a contingent factor (i.e. the availability of a right local representative) was another aspect that influenced German firms' decision to enter China.

Table 7.7 Factors influencing German firms' choice of China for FDI

Category	*Factors*	*Frequency*	*Percent -age*	*Descriptive words*
Organization-specific factors	Globalization strategy	4	20%	Global strategy, follow this global trend
	Client-driven strategy	7	35%	Stay with clients, follow our clients, BMW, Siemens, Volkswagen
Environment-specific Factors	Economic development	2	10%	Leading economy, conditions better and better, huge economy
	Government /policy	2	10%	Central and efficient, free market, government investment in agriculture industry
	Business community	1	5%	MNEs present, not alone
	Employment policy	1	5%	Not risky of firing people
	Competitor -driven	1	5%	Our competitor has already produced in China
	Chinese people	3	15%	Ambitious, commercial, flexible, good willingness to work
Market-specific Factors	Transaction cost	1	5%	High tariff
	Production cost	3	15%	Cost only 25% of Germany (labor intensive industry)
	Market price	2	10%	We procure from china for low price, to be competitive in Chinese market
	Product quality	1	5%	Procure for good quality and low price
	Delivery/ Close to market	4	20%	Close to market, easy technology adaptation
	Market size	10	50%	Greatest, huge, dynamic, growing, attractive, no.1 in next 10 years in our industry
Decision-maker	Contingent personnel	3	15%	We met Dr…, we met a distributor, I am familiar with China
Sum	15			

Note: In case one interviewee may have more than one argument for their presence in China, the sum of the frequency may therefore be larger than the sample size 20.

As suggested by Erramilli (1991), market selection and entry mode choice are intertwined. Therefore, the above-identified factors confirm this belief and thereby the systematic framework of entry mode choice.

Table 7.7 indicates also that market specific factors are the most important considerations during the process of market choice. In accordance with Gilmore et al. (2003), the market specific factors cover those cost-related ones, like material and labor. However, our results show that the revenue-related factors, such as market price and market size, and the service-related factors, such as the delivery time, and being close to market, are equally important. Not surprisingly, market potential is the most important incentive of German firms' decision to invest in China, 50% of the interviewees argued that their presence in China is due to the big market potential.

Table 7.7 also points out that the organizational strategy, i.e. the strategy of following clients and the strategy of globalization, is another important cluster influencing market choice. Thirty five percent of the interviewees stated that their clients droved them to China, 20% argued that going to China was just a part of their globalization strategies.

Many firms (small, medium, or even big) decided to be present in China just because their MNE clients such as BMW, Volkswagen, and Siemens are there. This finding is consistent with the arguments of several network economists. Lindqvist (1991) suggested that the choice of a small firms' entry mode is influenced by their close relationships with customers. Bell (1995) recommended that the small firm's network relationship could lead to a client following. Coviello and Munro (1997) again found that a network together with the experience increased by network relationships facilitate the small firms' potential market entry as well as the resource commitment level for their foreign market entry.

In terms of the environmental factors, economic development index, political stability, and government favorability are found to be influential to market choice. Besides, it is amazing enough that 15% of the interviewees argued that their basis for investment in China was due to the Chinese people. They thought that Chinese people are ambitious, hard working, and commercial.

These results have important implications for the policy makers in the host country. Firstly, German firms have decided to enter into China mainly for the huge market conditioned on its political stability, and aggregate economic growth. This motivation confirms the result of IBM's survey that the global CEOs are focusing more and more on revenue increment rather than cost controlling (see Chapter 4). For such a country as China, where the growth of the economy significantly benefits from FDI, it is very important to keep political stability no matter what the circumstances are. While guaranteeing a continuous economic growth, it is very important to improve its market mechanism. Secondly, many German SMEs' and even large firms' investment in China was driven by those MNEs, such as BMW, Siemens, and Volkswagen. Therefore, it is necessary and important for the government to establish a special organization to monitor these MNEs for their successful development in China. Thirdly, it is necessary to strengthen the school-education system and to improve its social off-school training system to offer highly qualified and skilled employees. Meanwhile, it is necessary to standardize its law of employment to guarantee the employees' benefits in case of employers' free riding behaviors.

At least three managing directors' answers confirm above implications:

"We did not invest in Romania but in Czech, because of the automotive industry in Czech is better,…, we did not invested in India, if you compare India with China the only advantage of Indian is that everybody can speak English", "We did not invest in Russia, because we think Russian is not stable (politically)."

7.3.2 Parametric tests of the hypotheses

The procedures applied

Testing of the hypotheses will follow the standard procedures formulated by Pallant (2001) in the guidelines of applying ANOVA:

1. describe the data and check whether there is any missing data,
2. test for homogeneity of variances: this is to see whether the assumption of variance homogeneity for statistical techniques when comparing groups is

violated or not. Previous results point to no violations, therefore, this step is omitted in the following,

3. ANOVA: this is to see whether there are statistically significant differences among the mean scores of different groups; if yes, implement the next step,
4. multiple comparisons: this is to show which group is different from the other,
5. means plots: this step provides an intuitive way to describe the mean scores of different groups, and to indicate a rough direction of difference.

Risk aversion (Decision maker)

Proposition 3.1 can be translated into:

$$H_0 : \mu_1^{rs} = \mu_2^{rs} = \mu_3^{rs}$$

$$H_1 : \mu_1^{rs} \neq \mu_2^{rs} \neq \mu_3^{rs}.$$

The null hypothesis states that the decision makers with three different attitudes toward risk choose their entry modes homogenously on average. Alternatively, the decision maker's attitude toward risk does not influence his choice of entry mode significantly. If the null hypothesis is rejected, then a significant influence of the decision maker's attitude toward risk on entry mode choice can be concluded.

(1) Data description

Table 7.8 Data description (risk aversion-entry mode)

Risk aversion	N	Entry mode Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
1	5	3.60	0.548	0.245	2.92	4.28	3	4
2	10	2.80	1.033	0.327	2.06	3.54	1	4
3	5	2.00	1.225	0.548	.48	3.52	1	4
Total	20	2.80	1.105	0.247	2.28	3.32	1	4

Table 7.8 indicates at least two important points: firstly, there is no data missed; secondly, the distribution of entry mode of the three groups of decision makers in

terms of risk aversion. Clearly, 50% of the decision makers hold a medium attitude toward risk, and in average they choose an equity mode (i.e. mean score = 2.8). Decision makers with a lower attitude toward risk (around 25%), choose a higher equity entry mode with a mean score of 3.6. The other 25% holding a higher attitude toward risk adopt a lower equity entry mode with a mean score of 2.0. This result roughly indicates a negative relationship between decision maker's risk aversion and entry mode choice.

(2) ANOVA

Table 7.9 ANOVA (risk aversion-entry mode)

Variance	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.400	2	3.200	3.238	0.064
Within Groups	16.800	17	0.988		
Total	23.200	19			

The ANOVA result indicates clearly that the mean scores of these three groups' variances are not significantly different at a traditionally significant level, $\alpha = 0.05$. However, as suggested by Stevens (2002), it is necessary to adjust the α level to compensate the small sample size (N<=30), and $\alpha = 0.1$ is suggested when handling a small sample size (Pallant 2001, Stevens 2002). Under such an adjusted significance level, the null hypothesis is rejected. Therefore, a significant influence of decision makers' attitude toward risk on entry mode choice can be concluded. The multiple comparisons and/or means plots show where the difference lies.

(3) Multiple comparisons

Two groups of test can be used to identify the group differences, namely the planned (or priori) comparisons and the post hoc comparisons. The former is applied to compare a subset rather than a whole set of group pairs. This method does not control the increased risk of Type 1 errors. Alternatively speaking, there is an increased risk of thinking that you have found a significant result when in fact it could have occurred by chance. Through comparing the whole set of group pairs, the latter can reduce the risk of making Type 1 errors largely (Pallant 2001). Therefore, we apply the post hoc tests in our context.

Additionally, a number of post hoc tests are applicable to make multiple comparisons; they differ in nature and assumptions. The two most commonly used post hoc tests are the Turkey's Honestly Significance Difference test and the Scheffe test. Of the two, the Scheffe test is the most cautious method for reducing the risk of type 1 error, but it is less likely to detect a difference between groups. The Turkey's Honestly Significance Difference (HSD) test is therefore the more common used approach (Pallant 2001). The results of the Turkey's HSD tests are presented in table 7.10.

Table 7.10 Multiple comparisons (dependent variable: entry mode)

Turkey HSD

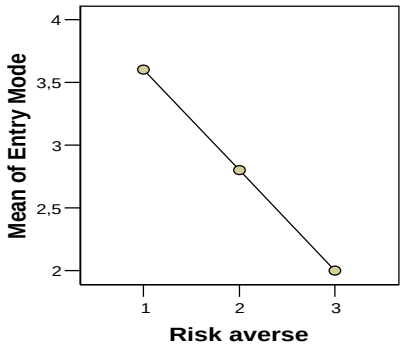
(I) Risk averse	(J) Risk averse	Mean Difference (I-J)	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
1	2	0.800	0.544	0.330	-0.40	2.00
	3	1.600(*)	0.629	0.052	0.22	2.98
2	1	-0.800	0.544	0.330	-2.00	0.40
	3	0.800	0.544	0.330	-0.40	2.00
3	1	-1.600(*)	0.629	0.052	-2.98	-0.22
	2	-0.800	0.544	0.330	-2.00	0.40

* The mean difference is significant at the 0.1 level.

Explicitly, there is a significant difference (at $\alpha = 0.1$) between the high-risk averse and low-risk averse decision maker in terms of their entry modes. In addition, the signs of mean differences resulting from the bilateral comparisons explain that entry mode choice is related negatively with the decision maker's risk aversion. The means plots in Figure 7.6 highlight this relationship.

Proposition 3.1 that predicted a negative relationship between entry mode choice and the decision maker's risk aversion is therefore supported by this empirical study. This finding is also consistent with Pan (2003).

Figure 7.6 Means plots (risk aversion-entry mode)



Firm size (Organization)

Referring to Proposition 4.1, we recognize that different sized firms have different organizational structures, and they choose their entry modes in different contexts; therefore, they adopt different strategies for their entry mode choice. However, the influence of firm size, when it was isolated from other contingent factors (e.g. country policies, firms' strategies, and industry or product specifications) on entry mode choice become ambiguous. Therefore, we develop the following hypothesis for test.

$$H_0 : \mu_1^{fs} = \mu_2^{fs} = \mu_3^{fs}$$

$$H_1 : \mu_1^{fs} \neq \mu_2^{fs} \neq \mu_3^{fs}.$$

This null hypothesis states that three groups of firms (SMEs, large firms, and MNEs) have homogenous mean scores of entry modes. This indicates that the firm size does not influence the choice of entry mode significantly. If this null hypothesis was rejected, it implies that firm size influences entry mode choice significantly.

(1) Data description

Table 7.11 Data description (firm size-entry mode)

Firm size	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
1	4	2.00	0.816	0.408	0.70	3.30	1	3
2	11	3.09	1.136	0.343	2.33	3.85	1	4
3	5	2.80	1.095	0.490	1.44	4.16	1	4
Total	20	2.80	1.105	0.247	2.28	3.32	1	4

Obviously, there is no missing data during the process of test. Fifty five percent of the firms are big sized ones with employees greater than or equal to 500. These firms in average choose JVs as their entry modes in China (mean = 3.09). Twenty percent of the firms are SMEs, and the other 25% are MNEs. The SMEs have a lower average score (mean = 2.0) of entry modes than that of MNEs (mean = 2.8). However, this gap is not very large. Interestingly, in each of these three groups, there is at least one firm entering into China via export/contracting, but the other firm entering via a high equity mode, i.e., JV or WOFV. This indicates that there is no linear relationship between firm size and entry mode choice.

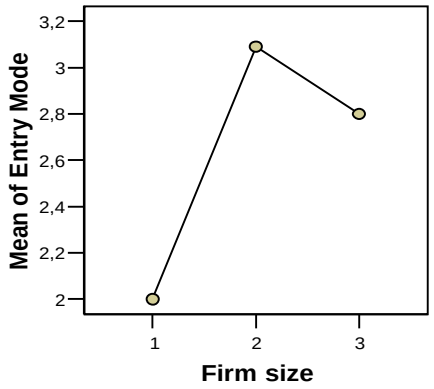
(2) ANOVA

Table 7.12 ANOVA (firm size-entry mode)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3.491	2	1.745	1.506	0.250
Within Groups	19.709	17	1.159		
Total	23.200	19			

The significance value of ANOVA test is 0.250, which is not significant. Thus, the null hypothesis is not rejected. This statistical result is consistent with the implication made from the sample descriptions. Therefore, firm size is not a significant determinant of entry mode choice. Additionally, the means plots in Figure 7.7 prove this result.

Figure 7.7 Mean plots (firm size-entry mode)



The insignificance could arise for two reasons: one is due to the small sample size, and the other is due to the stronger impact of other factors such as industry difference and/or host country policies.

Among the three firms entering into China via export/contact, one is a MNE, which is in food industry; one is a big firm in the automotive industry, and the other is a small firm in the logistics industry. It is not so difficult to understand why the MNE has not decided to invest China yet, by referring to his argument:

> *"China is such a different market (i.e., in the perspective of consumer tastes among others) compared with European markets, we do not have any prior experience about this market, additionally, and we need a long time period to break even".*

In respect to the host country policy, it is well known that the Chinese government does not allow WOFV for the whole car manufacturing; this policy aims to protect its national automotive industry. Even for the automotive part manufacturers, there is a stringent restriction on their ownership ratios in the JVs, and on the number of JVs they can build in China. Therefore, it is not strange to see in our sample, the automotive MNE invested in China via a JV but not a WOFV. Additionally, many other MNEs, such as Volkswagen, BMW, DaimlerChrysler and Robert Bosch, fall into the same class.

Therefore, firm size as a predicting factor of entry mode choice is insignificant. This result is consistent with the findings in Reuber and Fisher (1997) and Evans (2002), where firm size was not concluded to be significant either.

However, this result has nothing to say about the validity of previous understanding that firms in different sizes might choose their entry mode strategies differently.

Market potential (Environment)

In correspondence to proposition 3.4(a), the influence of market size on entry mode choice is formulated as:

$$H_0 : \mu_1^{ms} = \mu_2^{ms} = \mu_3^{ms}$$

$H_1 : \mu_1^{ms} \neq \mu_2^{ms} \neq \mu_3^{ms}$.

This null hypothesis states that firms with different perceptions on the potential of the Chinese market, small, big, or very big, have homogenous mean scores of their entry modes. Alternatively, the host country market potential does not affect the choice of entry mode significantly. Again, if this null hypothesis is not rejected, it means that market potential is not a significant factor influencing entry mode choice.

(1) Data description

Table 7.13 Data description (potential market size-entry mode)

Market size	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
2	2	3.00	1.414	1.000	-9.71	15.71	2	4
3	18	2.78	1.114	0.263	2.22	3.33	1	4
Total	20	2.80	1.105	0.247	2.28	3.32	1	4

It is obvious that there is no missing data during the test. However, due to our small sample size, there are only two attitudes identified toward the potential of the Chinese market, i.e. big or very big. Only 10% of them thought that the Chinese market is big; the other 90% think it very big. Astonishingly, the average mean score of entry modes is lower for those who perceive the Chinese market as bigger. This can be explained by the small number of interviewees who perceived the market as big only, and by the big number of those who perceived the market as very big. The latter disperse widely in their entry modes from export/contracting to WOFV. The average score of entry modes is 2.78. In contrast, between the two firms who perceived the market big only, one invested in China with a WOFV, the other invested with a R.O., the mean score is explicitly higher, i.e. the mean score is 3.0.

Evidently, the slight difference between the two groups' mean scores of entry modes implies that market size, in the context of China, is not a significant determinant of entry mode choice, even though it is an important driver of market choice.

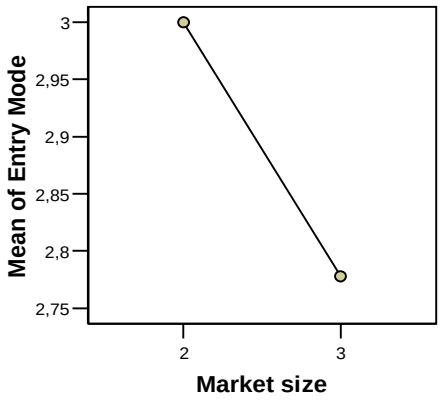
(2) ANOVA

Table 7.14 ANOVA (potential market size–entry mode)

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	0.089	1	0.089	0.069	0.795
Within Groups	23.111	18	1.284		
Total	23.200	19			

The significance value of this test is obviously greater than the criterion of 0.1; the null hypothesis is therefore not rejected. This verifies the implication concluded from the data description. Additionally, the means plots in Figure 7.8 indicate however a slight negative relationship between entry mode choice and market size.

Figure 7.8 Mean plots (market size-entry mode)



Based on large sample surveys, Agarwal and Ramaswami (1992), Agarwal (1994), and Chen and Hu (2002) concluded a positive relationship between entry mode choice and market size. However, Smarzynska (1999, p.15), also through a large sample survey, concluded that:

> *"It has been shown that the market size is an important factor in the decision to undertake FDI. At the same time, it is unlikely to affect the choice of entry mode."*

Our result is explicitly consistent with Smarzynska (1999), in which an ambiguous relationship between entry mode choice and market size was concluded.

Estimated risk of host country (Environment)

In correspondence to Proposition 3.2 we can hypothesize a negative influence of estimated risk of the host country on entry mode choice and formulate it as:

$$H_0 : \mu_1^{er} = \mu_2^{er} = \mu_3^{er}$$

$$H_1 : \mu_1^{er} \neq \mu_2^{er} \neq \mu_3^{er} .$$

The null hypothesis means that the mean scores of entry modes of these three groups of firms, which perceive differently on the risk of investing in China, namely low, high, or very high respectively, are homogenous. Stated differently, the estimated risk of host country does not influence the choice of entry mode significantly. If the null hypothesis is rejected, then it means that the estimated risk of host country is a significant predictor of entry mode choice.

(1) Data description

Table 7.15 Data description (estimated risk-entry mode)

Estimated risk	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
1	9	3.11	1.054	0.351	2.30	3.92	1	4
2	9	2.89	0.928	0.309	2.18	3.60	2	4
3	2	1.00	0.000	0.000	1.00	1.00	1	1
Total	20	2.80	1.105	0.247	2.28	3.32	1	4

This description finds no missing data during the test. Additionally, this description shows that 45% of the interviewees think that the risk of investing in China is low, the other 45% think it high, and the remaining 10% think it very high. The mean scores of entry modes decrease gradually with the increase of the estimated risk of investing in China.

This specifies a negative relationship between these two variables. Apparently, the two interviewees having a very high estimation on the risk of investing in China, adopted a non-equity entry mode, i.e. export/contracting.

(2) ANOVA

Table 7.16 ANOVA (estimated risk-entry mode)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.422	2	3.711	3.999	0.038
Within Groups	15.778	17	0.928		
Total	23.200	19			

The ANOVA test demonstrates that the significant value is less than the traditional level of 0.05. Hence, there is a significant difference among the mean scores of these three groups' entry modes. Therefore, the null hypothesis is rejected.

(3) Multiple comparisons

Table 7.17 Multiple Comparisons (Dependent Variable: Entry mode)

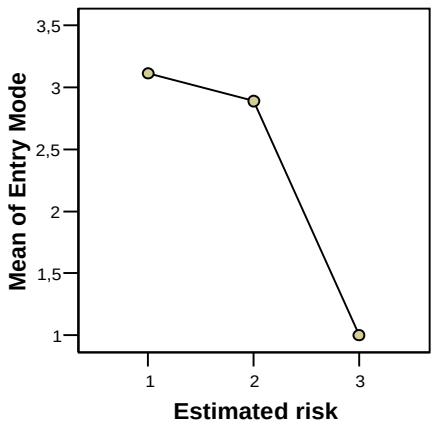
Tukey HSD

Estimated risk	Estimated risk	Mean Difference	Std. Error	Sig.	90% Confidence Interval	
					Lower Bound	Upper Bound
1	2	0.222	0.454	0.877	-0.78	Jan 22
	3	2.111(*)	0.753	0.031	0.45	Mrz 77
2	1	-0.222	0.454	0.877	-1.22	0.78
	3	1.889(*)	0.753	0.056	0.23	Mrz 55
3	1	-2.111(*)	0.753	0.031	-3.77	-0.45
	2	-1.889(*)	0.753	0.056	-3.55	-0.23

* The mean difference is significant at the 0.1 level.

The multiple comparisons explain that those with a higher expectation of the risk of investing in China differ significantly with those with a lower expectation in terms of the mean scores of entry modes. Additionally, the means plots in Figure 7.9 confirm a negative relationship between the estimated risk and entry mode choice; this is consistent with the observation from data description.

Figure 7.9 Mean plots (estimated risk-entry mode)



These results support greatly the normative prediction of Proposition 3.2, where a negative relationship between the estimated risk and entry mode choice was proposed. Additionally, this result is also consistent with prior empirical literature,

Errmalli and Rao (1993), Chen and Martin (2001), and Nakos et al. (2002), are for example. However, there is also prior literature concluding a controversial relationship, Rasheed (2001) found that country risk is positively related to entry mode choice. Furthermore, Oviatt and McDougall (1997) found an insignificant relationship, and Pan (2003) found a dummy relationship between these two variables, for instance.

Tax regime (Environment)

Corresponding to the Proposition 3.4(c), the hypothesis on the influence of tax regime on entry mode choice is expressed as:

$$H_0 : \mu_1^{tr} = \mu_2^{tr} = \mu_3^{tr}$$

$$H_1 : \mu_1^{tr} \neq \mu_2^{tr} \neq \mu_3^{tr} .$$

This null hypothesis states that the average entry modes of these three different groups in terms of different evaluations on the favorability of tax regime in China are homogenous. Put differently, the tax regime does not influence the entry mode choice. Rejecting the null hypothesis suggests a significant influence of tax regimes on entry mode choice.

(1) Data description

Table 7.18 Data description (tax regime-entry mode)

Tax favorability	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
2	10	2.30	0.949	0.300	1.62	2.98	1	4
3	10	3.30	1.059	0.335	2.54	4.06	1	4
Total	20	2.80	1.105	0.247	2.28	3.32	1	4

Again, due to the small sample size, we identify only two attitudes toward the favorability of tax regimes, i.e. 50% of the interviewees evaluate the tax regimes of China favorably, the other 50% think that the tax regimes in China are very favorable. No one thinks that it is unfavorable. Those with a very favorable evaluation have a much higher mean score of entry modes (mean = 3.3) than that of

those with a medially favorable evaluation (mean = 2.3). This implies a positive relationship between the tax regimes favorability and entry mode choice.

(2) ANOVA

Table 7.19 ANOVA (tax regime-entry mode)

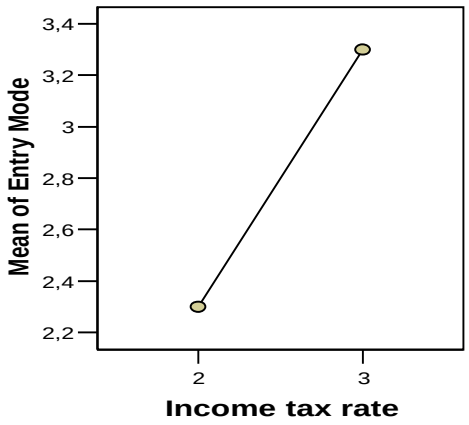
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.000	1	5.000	4.945	0.039
Within Groups	18.200	18	1.011		
Total	23.200	19			

Obviously, the null hypothesis is rejected with a significance level of 0.039, which is even lower than the traditional level of 0.05. This means that these two groups having different perceptions of the tax favorability of China choose their entry modes differently in average.

Because there are fewer than three groups, i.e. nobody thinks the tax regimes in China unfavorable, the post hoc test for entry mode cannot be implemented (Pallant 2001). However, the data description and the means plots in Figure 7.10 show explicitly the direction of this relationship between entry mode and tax regimes.

This empirical result supports the predictive proposition made in chapter 3 that entry mode choice is positively related to the tax incentives of the host country. Additionally, this test corresponds to the outlook in Wilkinson and Nguyen (2003, p.56) that it is necessary to further inspect the influence of host country market characteristics (e.g. tax rules, macro economic parameters) on entry mode choice.

Figure 7.10 Means plots (tax regime-entry mode)



Summing up

The one-way ANOVA analysis results indicate that the decision maker's risk aversion and two country characteristics (i.e., the estimated risk and the tax regime) are three significant determinants of entry mode choice. Market size and firm size are not predictive in terms of entry mode choice in our context. However, this does not mean that the organization itself is irrelevant for the entry mode choice. The qualitative analyses in next section discover a great dependence of entry mode choice on the organization related factors, such as the organizational philosophy and experience.

Moreover, the results validate a negative relationship between the decision maker's risk aversion, the estimated risk and entry mode choice, and a positive relationship between the tax regime favorability and entry mode choice.

7.3.3 Non-parametric tests of the hypotheses

As indicated explicitly in the previous sections, the Kruskal-Wallis test is the non-parametric alternative of one-way ANOVA, it will be applied to confirm the results of one-way ANOVA. All of the assumptions of the Kruskal-Wallis test are satisfied.

The results of Kruskal-Wallis tests are summarized in Table 7.20.

Table 7.20 Kruskal-Wallis tests statistics (a,b,c)

	Risk aversion	Firm size	Market size	Estimated risk	Income tax rate
Chi-Square	4.949	3.094	0.069	5.207	4.504
Df	2	2	1	2	1
Asymp. Sig.	0.084	0.213	0.793	0.074	0.034

a Kruskal-Wallis Test
b Grouping Variable: Risk aversion, firm size, market size, estimated risk, income tax rate respectively.
c Dependent variable is entry mode

If the significance level is a value less than 0.05, then there is a statistically significant difference in the continuous dependent variable across the different groups of each independent variable. This significant difference implies that the independent variable has a significant impact on the dependent variable. However, due to the small sample, we adjust the significance level to 0.1 as we did in the parametric tests. Apparently, risk aversion, estimated risk, and the income tax rate

were fund to be significantly influential. In contrast, the firm size and the market size are not significantly influential.

These conclusions made by Kruskal-Wallis tests are completely consistent with those of one-way ANOVA.

7.3.4 Penetrating the theses

This subsection aims to analyze qualitatively the two propositions, Proposition 5.2 and Proposition 5.3 respectively.

These two propositions illustrate the possible influences of two organizational variables, namely the organizational philosophy, and the organizational experience, on entry mode choice.

Despite the previously analyzed advantages of quantitative analysis, a qualitative method here is adopted for two reasons. Firstly, the organizational philosophy is difficult to quantify; secondly, the organizational experience in the previous empirical literature is studied typically via a quantitative analysis, a qualitative analysis might help to find out the hidden stories in quantitative analyses.

Organizational philosophy

As acknowledged, the influence of organizational strategies (the global strategy in particular) on entry mode choice has been frequently discussed in the existing literature (Kogut 1988, Klein 1990, Hill et al. 1990, Kim and Hwang 1992, and Aulakh and Kotabe 1997). However, to the best of our knowledge, the studies on the influence of organizational philosophy on entry mode choice are quite rare.

The actual role of the organizational philosophy on entry mode choice is well explained by the interviewees' arguments in Table 7.21.

Table 7.21 indicates that two of the twenty interviewees argued their not investing in China via a JV are because of their philosophies of doing things in their own way. One interviewee argued that they decided to have only a representative office in China due to their philosophical belief of specialization, i.e. outsourcing is always cheaper than self-making. This philosophical belief changes their business strategy to be a retailer. Two other employees had explained that they decided to invest via a

WOFV instead of a JV due to the philosophical consideration of doing things fast. Therefore, at least 25% of the interviewees argued that their choices of entry mode, especially between a JV and a WOFV, are determined by their philosophy of how things should being done.

The empirical results therefore support Proposition 5.2.

Table 7.21 Arguments on the choice between JV and WOFV

Current status	Ref.	Firm size	Industry	Why not JV/WOFV
Not entry	1	1	Logistics	**Not WOFV**: the local policy does not permit, necessary
	2	2	Automotive	**Not WOFV**: not invest too much, partner's knowledge and Resource, some negative experience from others
	3	3	Food	**Not JV**: that is our philosophy
Rep. office	1	2	Machinery	**No idea**: At moment, we need to know the market first
	2	2	Retailing	**Neither JV nor WOFV**: outsourcing is always cheaper, we aim to be a retailer
	3	1	Power	**Not JV**: It is easy to do with some people we are familiar, we are afraid of technology copy.
	4	2	Machinery	**Not JV**: In 1990s, the JV is very popular, but many failed, because the culture is different, they want to do things in their own way.
	5	1	Machinery	**Not JV**: that is not our philosophy, do it ourselves first.
JV	1	3	Automotive	**Not WOFV**: to make use of our partners' local advantages
	2	3	Media	**Not WOFV**: JV is the efficient way to expand in China
	3	1	Machinery	**Not WOFV**: not invest too much, but personally I prefer WOFV
	4	3	Furniture	**Not WOFV**: our partner has big knowledge, difficult for a foreigner to get the land in China. But: personally, I insisted a WOFV, because I heard a lot of failure stories of JV
	5	2	Garment	**Not WOFV**: our partner has advantage of communication with government; it is difficult to understand the local decision makers.
WOFV	1	2	Machinery	**Not WOFV**: We are family owned, to make decisions fast
	2	2	Machinery	**Not JV**: we read a lot of reports, usually JV is not successful
	3	2	Machinery	**Not JV**: to make decision faster
	4	2	Office products	**Not JV**: it is difficult to find a right partner in China
	5	3	Consulting	**No idea**
	6	2	Banking	**No answer**
	7	2	Building	**Not JV**: to be responsible for own business

Organizational Experience

A good understanding of Proposition 5.3, i.e. a gradual process of entry mode choice, can be achieved by studying the route map of entrance.

(1) Route map of entrance

The route map describing the stages of each firm's development in China is presented in Table 7.22. This map describes the dynamics of their changes of entry modes.

Table 7.22 Firms' route map of development in China

Current status	No.	Industry	Route map
Export/contracting	1	Logistics	Will invest with JV
	2	Automotive	Will invest with JV
	3	Food	Will invest with WOFV
Rep. office (R.O.)	1	Machinery	No plan of investment in the near future
	2	Retailing	Procurement
	3	Power	Will invest with WOFV
	4	Machinery	Will invest with Tr.
	5	Machinery	In far future, invest with WOFV
Joint Venture (JV)	1	Automotive	JV
	2	Media	JV
	3	Machinery	R.O. – Tr. – JV
	4	Furniture	JV
	5	Garment	R.O. – JV
Wholly owned foreign venture (WOFV)	1	Machinery	Procurement office – R.O. – Tr. – WOFV
	2	Machinery	Export – Tr. – WOFV
	3	Machinery	R.O. – WOFV
	4	Office products	WOFV (production function mainly)
	5	Consulting	R.O. – WOFV
	6	Building	Investment on network
	7	Banking	Export – JV – WOFV
Total	20		

The coexistence of each type of entry modes in the sample explains, although not so powerfully, a gradual process of entry mode choice. The change of entry mode of those firms that have already invested in China explains, more powerfully, a positive

experience impact on entry mode choice. The map shows that firms usually started with a low equity entry mode, such as export/contracting or representative office, then with accumulated experience they switched to a high equity mode, such as a JV, or a WOFV.

One managing director's argument highlights this gradual process explicitly:

> *"We establish a representative office in China to get some knowledge about the people, to know more about the mentality, and to get some knowledge of the market …, later, we will establish a wholly owned venture and get in our Chinese partners as shareholders".*

The route maps of firms' entry mode choice find a great congruence with the idea of the gradual-process school (Johanson and Wiedersheim-Paul 1975 and Johanson and Vahlne 1977).

(2) Choice between a JV and a WOFV

The interviewees' arguments on their choice between a JV and a WOFV help to understand the "U" shaped influence of experience on entry mode choice. Their arguments are given briefly in Table 7.21.

It is clear that 4 answers are non-informative due to the answers being either "no idea" or "none of the alternatives will be adopted". Among the 16 valid answers, 8 decided not to enter via a JV, the other 8 decided not to enter via a WOFV. In addition, among the 8 who rejected WOFV, there are 2 interviewees who are managers, and they personally preferred a WOFV even though their firm decided not to employ this strategy. Thus, 10 of the interviewees actually preferred to enter via a WOFV rather than via a JV.

Among the 10 WOFV supporters, 4 of them argued that their decisions were based on the previous experience, either from the media or from other firms. Among the 6 who supported a JV, 4 of them argued that their choices were to make good use of their partner's advantages of resources and communication.

Therefore, intuitively, the decision makers' choice of entry mode, especially the choice between a JV and a WOFV, is greatly influenced by the prior experience accumulated by themselves or by others. If the initial investment in China was very

successful, or what they learned from the media or other sources is positive, then they will probably increase their investment further or make their investment decisions, and vice visa.

The route maps, especially those of the firms having already invested in China via a WOFV, confirm the positive influence of successful experience on entry mode choice explicitly. This is consistent with the findings of Davidson (1980, 1982), Anderson and Gatignon (1986), Agarwal (1994), Reuber and Fisher (1997), and King and Tucci (2002).

To have a direct intuition on the important influence of successful and unsuccessful experience on entry mode choice, some of the interviewees' personal statements are cited:

> *"We must succeed in one city and then we enlarge to other cities, we do things step by step. We do not do like to calculate the population, estimate the demand and then decide the number of offices to open, otherwise, we will meet the problems of logistics, sales and etc",*
> *"I ever talked with an English guy, he made a JV with a Chinese partner, …, finally, he stopped the JV, he used more time and more money than do it by himself",*
> *"We have read a lot of reports about companies, the joint ventures have not been successful in most cases, and maybe the management culture is too different",*
> *"In 1990s, JVs are very popular, however many JVs failed, because the culture is so different, Chinese want to do things in their own not our way".*

The interviewees' arguments for their choice between a JV and a WOFV complement the positive impact of experience on entry mode choice however also with a negative side. This negative experience may arise from previous failure, directly or indirectly. This negative experience drives German firms to favor a WOFV instead of a JV for their investment.

Therefore, Proposition 5.3 finds a great support in this empirical test. Thus, the "U" shaped relationship is well illustrated.

Furthermore, the finding of these two influential variables during the process of choosing between a JV and a WOFV, namely experience and resource advantage, complements the conclusions made from the theoretical framework in chapter 3, in which the organizational impact on entry mode choice is stressed not enough. However, this has nothing to say about the validity of the theoretical framework. Clearly, no one can expect a theoretical framework to cover all the relevant aspects.

7.4 Conclusion

Based on semi-structured interviews, this chapter tested and illustrated some of the propositions, which were developed in previous chapters. Implicitly, the systematic approach of entry mode choice was investigated.

This empirical study finds great support for our systematical framework, which essentially implies for the managers in practice, that the entry mode choice should be made by considering simultaneously those factors from the perspectives of the decision maker, the organization and the environment, in which the former two are embedded. This result implies additionally for the managers in practice, that it is beneficial for them to follow the decision-making procedures, which are depicted by Figure 6.2, in face of entry mode choices.

The identified influence of organizational experience on entry mode choice indicates to the managers that without sufficient knowledge about the host country a high equity mode of entry may bring a high risk. Similarly, the accumulated irrelevant experience does not help the managers to invest via a high equity mode in the host country.

Additionally, the analytical relationships between entry mode choice and the managerial attitude toward risks as well as expense indicate the shareholders the necessity of monitoring and correcting the managerial choice of entry mode to achieve the highest benefits.

Finally, the analytical results illustrate to the policy makers in the host country how they should adjust their policies in respect of taxes, tariffs, and other investment environmental parameters to attract the foreign direct investment.

Future work can be directed to model and/or empirically test the impact of network, organizational philosophy and organizational experience on entry mode choice. Our results have found explicitly a great correlation between these variables and entry mode choice.

Chapter 8 Conclusions and Outlook

Based on a comprehensive analysis on the existing theories of the firm and its market entry, this dissertation found that the latter is usually based on the former. This relationship provides a clue as to the new methods of modeling market entry, i.e. modeling entry mode choice through applying a new branch theory of the firm. This result suggests a close look at how firms are studied by the organizational scientists rather than by economists only. This dissertation studied how firms should choose their entry mode by following a systematic logic, which was defined and widely applied by the organizational scientists to study firms' strategic issues.

Recognizing the fact that firms in different sizes have different organizational structures and choose their entry modes differently in distinct environments, the entry mode choices of the SMEs and large firms were modeled separately and differently under a systematic framework. The alignment of management and ownership in the SMEs allows investigating how the SMEs interact with its surrounding environment in the process of entry mode choice. Modeling large firms' entry mode choice by taking into account the two significant consequences of the separation of management from ownership induces a longitude analysis with a particular emphasis on the decision makers. The qualitative analyses in chapter 5, for the first time, put the firm itself at the core of analysis, and complement the normative analyses in chapter 3 and 4 with a descriptive one.

The systematic approach of entry mode choice in this dissertation differs from the existing theories or approaches in two aspects, namely the way of modeling entry mode choice and the correspondent results.

This method of modeling entry mode choice is from a new standpoint rather than from the conventional economics or from the behavioral economics only. This work aimed to be just a stool pigeon of further research on entry mode choice with a systematic logic, with which other studies can begin.

In comparison with the large volume of empirical studies in recent years, this systematic approach supplements the less passion for developing the theories of entry mode choice. Comparing with the existing qualitative approaches (e.g. the TCA, the OLI, etc.), this systematic approach models the choice of entry mode quantitatively while taking the concept of efficiency into account; in this sense the present approach complements the existing qualitative ones. Particularly, the way by which the entry mode is modeled quantitatively in this dissertation differs from the existing game theoretic ones, in which the decision is made more from a strategic consideration. Additionally, the systematic framework provides not only a process-oriented analysis of entry mode choice as depicted by Figure 6.2 but also a content-oriented analysis as indicated by Figure 6.1.

In terms of the results concluded from the analysis of this systematic approach, many are consistent with the existing literature, e.g. a negative influence of risk aversion (Osland et al. 2001, Bhaumik 2003), a positive influence of market attractiveness (Feenstra 1998), a "U" shaped influence of organizational experience on entry mode choice (Erramilli and Rao 1991), etc. However, the influence of managerial discretion, managerial expense preference, the organizational philosophy, and the value system instability, on entry mode choice is, for the first time, studied explicitly in this dissertation.

The empirical study in chapter 7 tested, quantitatively and qualitatively, part of the propositions developed in this dissertation and thereby justified significantly the systematic framework of entry mode choice. These results provide significant counsel not only for the managers, the firm concerned, and the policy makers in the host country in practice, but also for the future research.

The existing literature has shown us that entry mode choice is a complicated strategic decision. The determinants of entry mode choice come from not only the inside but also the outside of the firm. To make a right decision, the managers are well advised to adopt a systematic logic, i.e. to identify the influential factors from the perspectives of the decision makers, the organization and the surrounding environment, and to follow a systematic analysis process as described by Figure 6.2. For those larger firms with a complicated organization structure, the existence of

agency costs induces a distortion of managers' investment decisions. The firms concerned are therefore well advised to adopt some measures to monitor and regulate the managerial behaviors and thereby to reduce the agency costs. Additionally, as shown by the empirical test, the significant factors influencing the choice of a foreign market are not only the cost related ones (e.g. transaction costs, production costs, taxes, etc.), the benefit related ones (e.g. market price, high qualified employees, good business community, vertical value chain suppliers, etc.), but also the risk related ones (e.g. stability, estimated risk about the market, etc.). The policy makers of the host country are well advised to take some actions to improve the above relevant aspects in order to attract more foreign direct investment. The establishing of after-school education system to improve the employees' qualifications, lowering the income tax rate, improving the market mechanism are examples of prudent actions that could be used to improve the investment environment.

Our results have also shown that the importance of transaction cost considerations in the process of entry mode decision, due to the development of information technologies and transportation industry, are becoming more and more trivial. On the other hand, the systematic logic provides a new attitude toward the theoretical study of entry mode decision. Based on this systematic logic, future research could be directed to model entry mode choice in a more integrated way. Of course, future research can also apply other trends and strategies for the study of entry mode choice as those being suggested in chapter 2.

Due to the cultural and physical distances between China and Germany, and the different social, political and economic systems, it becomes more dispensable and beneficial for German firms to apply this systematic model for their decisions of market entry in China. Firstly, it becomes more difficult and costly for German firms to monitor the managerial behaviors in China due to cultural and physical distances; therefore it becomes more necessary to consider the decision maker related factors in the process of entry mode decision. Secondly, due to the fact that China is a very huge country having multiple hierarchies in its political system, and that different places in different hierarchies apply different policies, taxes policy and foreign exchange management policy are for example. Furthermore, due to the

national policies in China are usually not so concrete, the authorities of different places could implement the same national policy differently. Therefore, it becomes very important for the German investors to compare different investing environments in the process of entry mode decisions. Last but not least, the Chinese firms and German firms usually have distinct organizational philosophies and organizational strategies. To make a JV with a firm having distinct philosophies usually ends with failure. The empirical results in chapter 7 have shown this point explicitly.

Nevertheless, this dissertation has its limitations; future work can be directed to address the unanswered questions. Modeling of entry mode choice in this dissertation was limited to the consideration of investment and production sectors only; there is no consideration of the consumption sector. Other organizational characteristics rather than what have been discussed in this dissertation may also be important and will need to be considered. Empirically, there are still some propositions, which were developed but not examined; therefore further work can be directed to test them. Last but not least, a large sample sized empirical test may improve the significance of the results concluded in this dissertation.

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Appendix: List of the interviewees

Dipl.-kfm Andreas Hartmann,	Owner of Hartmann International
Dipl.-Betriebswirt Mathias Löwen	Manager of Gildemeister AG
Mr. Wilhelm A. Böllhoff	Managing Director of Wilhelm Böllhoff GmbH & Co. KG
Mr. B. Maier	Owner of B. Maier Zerkleinerungstechnik
Mr. Christian Unger,	General Manager of Bertelsmann (CHINA)
Mr. Detlef Adler	CEO of Seidensticker Group
Mr. Dieter Düringer,	Head of Export Department of CLAAS
Mr. Eckard Heidloff,	Executive Vice President and Chief Financial Officer of Wincor-Nixdorf
Dipl.-Ing Frank-Michael Kuhnt,	Director of Dürkopp Fördertechnik
Mr. Hendrik-Jan Muis,	Managing Director of Gerry Weber
Dr. Heinz T. Petermann,	Manager of PWC Bielefeld
Dr. Dr. Joachim Rieger,	Vice President M&A, Benteler AG
Mr. Lutz Werner	Managing Director of Holter Regelarmaturen
Mr. Max Graf Kerssenbrock,	Assistant Dr.h.c. August Oetker of Dr. Oetker
Mr. Olaf Lehmann	Managing Director Sales & Marketing of SOMMER Group
Dr. Peter G. Ulrich	Manager of DaimlerChrysler AG
Dipl.-kfm Thomas Lauritzen,	Speaker of Schüco International AG
Mr. Thomas Reeker,	General Manager Asia Pacific Schieder Group
Mr. Volker Wagner	Manager of Marketing & Sales Asia Pacific of G. Kromschröder AG
Mr. Wolf D. Meier-Scheuven	Managing Director of BOGE AG
Mr. Ye Weidong	CEO of Növus AG (China)

Questionnaire

Statement

1. To recall your wisdom easily and completely, we will record our discussion in the process of the interview.
2. All information you provided will remain strictly confidential, will not be disclosed in any form to any other organization and will be used for no other purpose than academic research.
3. You are quite busy, your cooperation is greatly appreciated, and your participation is greatly helpful.
4. As a return, as far as we can now, but far from what we intend to, you and your firm will be listed on the contributor list of my dissertation. Some of the results could be shared. Further contact with us is available, and welcomed.
5. In order not to affect your opinion, we strongly suggest you not try to see the hided words; this part is just an addition to your argument.

Time limit: 20 – 25 minutes

Questions:

1. Would you please describe the progress of your company's presence in China? (i.e. when and how did you start your business in China? a representative office or a joint venture? What about now?)
2. Why did you decide to present your company in CHINA?
3. Why did you decide to start your business in CHINA with a form of ____ (i.e. joint venture or what else)? In other words, what are the main considerations for this decision?

4. If you had made some change of the original form of market entrance (for example, from a representative office to a wholly owned venture), what are the reasons for such a decision?
5. The following will discuss some details about the entry mode choice decision:
    - When you made your choice of entry mode in China, how have you thought about the risk of this market?

    (A)Very risky (B) Medially risky (C) Not risky (D) Don't know
    Have you changed your attitude now?
    - When you made your original choice of mode of entry into China, how attractive do you evaluate this market for your products?

    (A) Highly (B) Medially (C) Not (D) Don't know
    How do you think about it now?
    - When you made your original choice of entry mode, how favorable do you think about the income tax rates in China?

    (A) Very (B) Medially (C) Not (D) Don't know
    How about it now?
    - When you made your original choice of entry mode into China, how do you think about the production cost in CHINA?

    (A) Very low (B) Medially low (C) Not low (D) Don't know
    How do you think about it now?
    - When you decided to enter into China with a mode of ___ , how do you think about the transaction costs with CHINA?

    (A) Very high (B) Medially high (C) Not high (D) Don't know
    How do you think it now?
    - Which one did you concern more in the process of entry mode choice decision, production costs or transaction costs?
6. What role do you think the decision maker plays in the process of entry mode decision? Important or not so important?
7. Have you tried to avoid any risk in the process of entry mode decision?
8. Does the board of directors or your boss set you an annual minimum profit requirement? If yes,

1) how much have you considered about this profit requirement in your process of entry mode decision?

2) without the profit requirement, should you had invested a little bit more?

9. Advanced technology and know how are critical to a firm's success. Is there any consideration of technology or know-how in your choice of entry mode? For example, technology protection, technology transmission, and so on.
10. How do you like to make a joint venture with a local firm?
11. Have you followed some predefined process to make your entry mode decision?
12. Have you met some difficulties of communicating with your Chinese partners?

Curriculum Vitae

Xuemin Zhao

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Education

16. 12. 2005	Defense on dissertation
04. 2002 – 12. 2005	Ph.D. student in Microeconomics, management, marketing Bielefeld Graduate School of Economics and Management at Bielefeld University
09. 1997 – 03. 2000	Postgraduate student in Enterprises administration Tianjin Polytechnic University
09. 1993 – 07. 1995	College student in Textiles engineering and foreign trade Tianjin Polytechnic University

Profession

08. 2005 – Now	Thiel Logistics AG
04. 2000 – 03. 2002	Xiamen XiangYu Group, China PRC
07. 1995 – 09. 1997	Mahualong (ChaoYang) Textile Co. Ltd, China PRC