Overcoming the Inherent Sources of Liability of Foreignness

Measuring and Compensating the Disadvantage of Being Foreign

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Abbreviations

FDI	-	Foreign Direct Investment
FSA	-	Firm-Specific Assets
MNC	-	Multinational Corporation
MNE	-	Multinational Enterprise
RBV	-	Resource-Based View
VIF	-	Variance Inflation Factor

Chapter One

1 Introduction and Overview

1.1 Introduction

International business theorists have highlighted the potential advantages of foreign ventures in host-country markets (Caves 1971, Hymer 1976, Kindleberger 1969). They suggest that multinational subunits have a competitive advantage compared to their local competitors. According to existing theories of multinational enterprises (MNEs), firm-specific advantages are important factors in determining the performance of international ventures (Dunning 1981, Rugman 1981). The resource-based view suggests that a firm's unique resources and heterogeneous capabilities can generate competitive advantages, which can lead to sustainable superior returns (Barney 1991, Rugman and Verbeke 2002). These resources may include brand names, skilled labor, knowledge of technology, and efficient production processes (Wernerfelt 1984). The theory assumes that a multinational enterprise has somehow developed a firm-specific advantage in its home market, usually in the form of internally developed, intangible assets that endow the firm with some superior knowledge. Expansions outside the firm's domestic market, given that local production is advantageous, will then take place through horizontal or vertical integration.

In addition, multinational firms may utilize their network of foreign subsidiaries to create

new sources of competitive advantage (Bartlett and Ghoshal 1989, Frost 1998, Hedlund 1986, Kogut 1989, Porter 1990, Sölvell and Zander 1995, Birkinshaw 1997, Zander 1997, Niosi 1999, Cantwell and Janne 1999, Pearce 1999, Patel 1999). Increasingly, theory on this front has revolved around the capacity of foreign subsidiaries to generate knowledge and innovations in response to stimuli resident in the heterogeneous host-country environments where they operate. Related theory on firm internationalization suggests that internalization can occur in response to imperfections and externalities in the goods and factor markets (Rugman 1981). According to Hennart (2001), these externalities can come from structural market imperfections (as suggested by Hymer 1976l) and from natural market imperfections (as suggested by Rugman 1981). The theory of internalization (Buckley and Casson 1976, Rugman 1982) currently seems to be generally accepted as an explanation for multinational enterprise. Thus, multinational corporations exist because of their ability to transfer and exploit knowledge more effectively and efficiently in the intra-corporate context than through external market mechanisms. This "internalization of intangible assets" argument, originally advanced by Hymer (1976), has been subject to numerous confirmatory empirical tests and is now widely accepted as the "received theory" on why multinational corporations exist (Buckley and Casson 1976, Caves 1971, Ghoshal 1987, Kindleberger 1969, Porter 1986, Teece 1981).

Nevertheless, the existing literature points out that firms operating in foreign countries also face disadvantages when acting in host markets (Hymer 1976). As the expertise and reputation of a multinational corporation (MNC) is typically shaped by its home-country environment, its products and practices may not fit seamlessly into host countries with different cultural, social, economic, political, religious, and regulatory traits and roots

(Ghemawat 2001, 2003). Foreign market entry is not without costs. When firms diversify beyond their national borders, they must adapt and adjust to many facets of the foreign culture, including regional consumer preferences, a strong home bias of host-country consumers, and prejudice against the foreign venture's country of origin (Reierson 1967; Nagashima 1970; Diamantopoulus, Schlegelmilch, and Du Preez 1995; Hsieh 2004). Despite so much talk of globalization, a borderless world (Ohmae 1990) has not yet been achieved. Consumer preferences are not globally homogenous, as suggested most prominently by Levitt (1983). Social and cultural borders remain sticky. Enterprises that are active in foreign markets need to understand local needs and the differences between home- and host-country rules, market peculiarities, and consumer preferences.

Thus, foreign ventures can face significant disadvantages when competing with local competitors in an unfamiliar host-country environment. This disadvantage, sometimes called the "liability of foreignness" (Zaheer 1995), refers to the unavoidable costs foreign companies incur that companies operating in their home environment do not (Hymer 1976). The liability of foreignness is the problem of being an outsider and being blocked from access to local resources that are crucial in foreign markets. An obvious example is firms that attempt to enter markets located in countries with political systems where relationships and contacts are key to success. Domestic companies have an advantage in this situation because they have accumulated the relevant local knowledge about native political, economic, and social conditions at virtually no cost. Foreign firms lack this form of embeddedness (Hannan 1998). The resulting disadvantage manifests itself in more frequent errors, lower market performance, or delayed decision making by the foreign venture (Zaheer 1995, Zaheer and Mosakowski 1997, Lord and Ranft 2000, Hennart et al. 2002, Mudambi and Zahra 2007).

The puzzle that emerges from these theories is this: On the one hand foreign ventures may be more likely to possess certain advantages that could help them outperform local competitors. But, this does not mean that local firms cannot identify, develop, and/or adapt these advantages as well. No customer benefit is safe from competition (see, e.g., Bhide 1986, Ghemawat 1986, Williams 1992). On the other hand, foreign ventures suffer a disadvantage stemming from their unfamiliarity with the host market conditions; obviously, domestic firms do not have this handicap. Thus, several questions arise:

- How severe is the disadvantage of being foreign?
- Does it negatively influence the firm's competition with domestic competitors?
- Can it be compensated for by the use of certain strategic instruments or organizational capabilities?

These questions constitute the research guideline for this thesis. I suggest that one must examine both the effects of the liability of foreignness *and* a firm's use of compensating factors to reduce the related disadvantage in order to understand the whole range of factors that moderate a company's foreign market activity.

1.2 Contribution to the Literature

The above description of the problems firms face in entering a host-country market illustrates that although it has not been much investigated, the topic is of significant economic importance. It is clear that to be successful in a foreign market, it is crucial for a firm to understand the liability of foreignness and to identify effective strategies to overcome it.

However, certain studies have been conducted using liability of foreignness as a theoretical argument to explain certain firm behavior in host-country markets or related differences between foreign- and domestic-owned companies, but there are only a few empirical approaches that try to evaluate the degree of liability of foreignness (Zaheer 1995, Mezias 2002a, Nachum 2003). Existing approaches analyze the overall impact but neglect to rule out the impact of other liabilities, as suggested by Mezias (2002b). In particular, these studies do not take into account the impact of firm-specific assets that may be helpful in avoiding the additional costs of being foreign to compete successfully in host-country markets (Caves 1971). Foreign companies can use firm-specific assets to compensate for their lack of embeddedness. In addition, current theoretical and empirical approaches that investigate the liability of foreignness do not examine strategic instruments that can reduce a foreign firm's unfamiliarity with local market peculiarities, which is a source of disadvantage.

The main reason for foreign ventures' unfamiliarity with local custom and conditions, and the related economic disadvantage such unfamiliarity implies, is the lack of relevant information (Zaheer 1995, Eden and Miller 2001, Mezias 2002b). Interestingly, this lack of information is a two-way street: foreign ventures lack the information about host-market peculiarities and local consumer preferences that is necessary to allow them to adjust their products to domestic "demand standards" and local consumers lack the information they need to adequately evaluate the quality of the offered foreign product.

Thus, the purpose of this thesis is twofold. First, when examining the current state of research, it becomes obvious that there is no exact empirical approach for identifying the degree of liability of foreignness and its impact on firm performance. Such an approach would prove extremely useful in illuminating whether or not firms active in host-country markets

have a performance disadvantage and, if so, how severe it is. The use of proxy variables, such as the number of labor lawsuit judgments a company has incurred, as employed by Mezias (2002b), is inadequate in this regard as their use ignores the compensating impact of firm-specific assets (Caves 1971).

Second, and more important, this thesis identifies strategic instruments that are helpful for foreign companies in overcoming their unfamiliarity with local peculiarities and the resulting disadvantage in host markets. Taking as a given that the liability of foreignness constitutes a very real disadvantage, it is extremely important for a company to identify and develop strategic and tactical instruments that will help overcome this disadvantage. In investigating potential instruments that can compensate for a lack of relevant information, I rely on instruments known to be capable of reducing information asymmetries, for example, the communication of product characteristics and environmental scanning strategies. I propose that applying this know-how to the liability of foreignness problem should help identify valid instruments that can aid foreign ventures, as well as domestic consumers, in overcoming their lack of relevant information. In short, if foreign companies understand the reasons for information asymmetries that cause the liability of foreignness, they will be able to identify helpful instruments to overcome their disadvantage in host markets.

1.3 Structure and Scope of this Thesis

I address these issues from the foreign firm's point of view, covering direct competition between domestic and foreign ventures within the host-country market and also looking at the differences between companies that are successful in host-country markets and those that

have either been less successful or have never left their home market at all. Methodologically, I use a quantitative research approach based on empirical databases from the German automobile market, the Spanish manufacturing industry, and British new ventures in the manufacturing and service sector. I am thus able to test the applicability of the theory for different types of business in different countries.

A separate chapter is devoted to each empirical study. Each of these chapters contains a general introduction placing the topic in the concept of existing research, followed by the applied theory, a description of the dataset, the methodology, and a results section. The findings of each study are summarized and discussed at the end of this thesis, along with their limitations and suggestions for future research.

Chapter 2 introduces the concept of liability of foreignness and describes the theoretical background. I explain the theory behind liability of foreignness as well as the origins and development of the concept, provide a definition and the set up of the theoretical approach this thesis will follow, summarize current research on the topic, and locate gaps in the existing theory, which, if filled, have the potential to improve the concept. I discuss in greater detail strategic instruments helpful in overcoming "stranger" status and lack of embeddedness in foreign markets and to this end, I incorporate the concept of information asymmetries and instruments that have been designed to overcome such asymmetries. I show how helpful this research stream is in identifying strategic tools that allow foreign companies to overcome the liability of foreignness. And, finally, I outline the empirical approaches necessary to prove the theoretical argument.

Chapter 3 provides a detailed and theoretically founded empirical analysis of the degree of

liability of foreignness for foreign car manufacturer in the German car market. Using a cross-sectional database for the year 2003, I examine whether foreign firms have an economic disadvantage in host-country markets based on a lack of embeddedness. Additionally, the concept of economic stress is incorporated in an effort to explore whether foreign firms can use regional economic performance to overcome the liability of foreignness. It is argued that economic stress in a society forces an evaluation of existing patterns of behavior. Thus, in a period of economic stress, host-country consumers will judge the importance of each purchase based on personal criteria and current economic situation rather than on their usual, established paradigms. This scanning by host-country consumers opens a window of opportunity for foreign firms as it reduces the lack of knowledge of host consumers and, subsequently, the degree of liability of foreignness of foreign companies.

The degree of liability of foreignness will be analyzed separately for the West and East German markets. Seemingly-unrelated regression estimation is employed to explore whether foreign firms face a significant disadvantage in sales performance in West and East Germany. Moreover, applying a likelihood-ratio test, I am able to identify whether the degree of liability of foreignness is significantly different between West and East Germany and whether economic stress pushes local consumers to evaluate products more objectively, with less dependence on their usual habits. The results will be of value to firms in the process of deciding *where* to locate as between e.g. West or East Germany. The study should also be of interest to others engaging in research on the liability of foreignness as the findings can be used as a jumping off point for discovering strategic tools that can overcome or reduce the degree of liability of foreignness in the supranational arena.

Chapter 4 covers instruments designed to decrease a foreign venture's lack of

embeddedness in host-country markets. Since there is a lack of empirical literature on strategic tools that decrease the inherent disadvantage of foreign ventures, the aim of this study is to identify such instruments. The chapter investigates the impact of market orientation, especially market research, and the related moderating effect of firm age, as strategic tools to overcome the liability associated with foreignness in host-country markets. It is argued that market research is a valuable tool for scanning the host market and obtaining relevant local knowledge. Furthermore, firm age should moderate the impact of market research on sales volume. It is argued that young firms have a learning advantage and hence can overcome the foreign market barriers much more quickly than can more mature firms. If the theoretical argumentation holds, the better (i.e., more efficient) use of market research by young foreign ventures would not only support the argument that it is easier for such firms to overcome the liability of foreignness than it is for more mature foreign ventures, but also hints at why early internationalizing firms are so successful in host-country markets. Thus, international new ventures show a superior international firm performance because they tend to be younger. A hierarchical regression estimation procedure is applied to test the theoretical predictions. A sample of manufacturing firms active in the Spanish market is used to test the hypotheses empirically.

Chapter 5 builds on the findings in Chapter 4. Based on the empirical analyses of Chapter 4, firm age becomes a moderating variable that is helpful in overcoming one aspect of the liability of foreignness: lack of knowledge about host-country consumer preferences. It is generally believed that all young firms, with their learning advantage, are capable of using market research to overcome this problem; however, not all young firms are equally adept at solving the other side of the liability of foreignness problem, which has to do with the host-

country consumers being ignorant of the foreign firm's product or service. Chapter 5 explores whether certain firm-specific assets, such as marketing and promotion skills, can help reduce this ignorance. It extends the existing literature by introducing the concepts of efficiency and effectiveness. It is argued that the impact of strategic resources on domestic and international firm performance is systematic and predictable. In addition to the already well-known drivers of successful early foreign market activity (e.g., foreign network and international experience), the study shows that successful foreign market activity is strongly influenced by the resources firms already possess. I propose that the more likely it is that a firm has resources that will help it reduce host-country ignorance of its products/services, the more likely it is that the firm will be successfully active in the foreign market. On the contrary, firm assets that support efficiency should have a negative impact on an entrepreneurs' ability to be active in foreign markets. Due to their lack of organizational routines and certain resource constraints, new ventures are not able to generate economic rents when relying on efficiency-related firm resources that can compensate for the additional costs of foreigners' liabilities. Moreover, these assets are not helpful for resolving the inherent sources of the liability of foreignness. Thus, efficiency-related firm assets create a barrier that hinders a successful early internationalization as entrepreneurs are not able to avoid the costs of being foreign.

Chapter 6 is a summary of the thesis results and contributions. Final conclusions are drawn and suggestions made regarding potentially fruitful avenues for future research.

Chapter Two

2 Overcoming the Disadvantage of Being Foreign[1]

2.1 Introduction

Recent literature on the liability of foreignness (Zaheer 1995, Zaheer and Mosakowski 1997, Mezias 2002a) lacks a theoretical incorporation of strategic instruments that can compensate for alien status and the related competitive disadvantage. Applying existing theory on information asymmetries and, especially, the communication of product information as well as environmental scanning as ways of handling asymmetric distribution of information, allows me to identify potential strategies that reduce or compensate for alien status and the consequent competitive disadvantage. The applied framework demonstrates that a foreign venture's success in mitigating the liability of foreignness depends on the company's ability to provide product information to host consumers and scan their preferences, the ventures age, and scanning activities by host-country consumers. This theoretical approach provides insights into the management of the liability of foreignness and can help companies refine their foreign market strategy.

[1] I appreciate comments and suggestions from Erik E. Lehmann, Werner Bönte, Stephan Heblich, and Prashanth Mahagaonkar.

This chapter is particularly addressed to readers who are new to the field of liability of foreignness. It provides the theoretical background necessary for understanding the approaches employed by the empirical studies covered in subsequent sections. To begin, I identify certain characteristics of the liability of foreignness and the related lack of embeddedness, and give some background information about the history and development of the economic research in this field. Included in this same section is an overview of the current state of research.

In addition, I explain the two main sources of the foreign firm's status in host-country markets and address the current lack of research into strategies helpful in overcoming the liability of foreignness. Incorporating already existing theory on information asymmetries and instruments devised to correct same allows me to identify instruments that have the potential to reduce or compensate for the unfamiliarity with host-country preferences, and the consequent competitive disadvantage, experienced by foreign ventures. Therefore, I set up empirical scenarios to measure the moderating effect of the proposed instruments. Introducing consumer-focused firm strategies and environmental scanning as instruments to reduce the information asymmetries between foreign ventures and host consumers, my research takes a new and important direction, one that should further develop the very interesting concept of liability of foreignness.

2.2 Liability of Foreignness

> *National firms have the general advantage of better information about their country: its economy, its language, its law, and its politics. To a foreigner the cost of acquiring this information may be considerable.*
>
> (Hymer 1976, p. 34)

2.2.1 Theoretical Background of Liability of Foreignness

The international business literature shows that firms operating in foreign countries face extra costs compared to domestic ventures due to their unfamiliarity with the local environment (Hymer 1976; Mezias 2002a). The main source of this disadvantage, the so-called liability of foreignness (Zaheer 1995), results from an interaction of social and cultural components that potentially creates a barrier to success (Granovetter 1985; Zaheer and Mosakowski 1997).

Domestic companies have an advantage over their foreign counterparts because of their intensive accumulation of tacit knowledge about their native economic, social, legal, and cultural conditions. In contrast, foreign firms can find it difficult to truly understand the host country's "sticky" unwritten laws and its cultural and social regulations, and how these affect the conduct of business (Jensen and Szulanski, 2004). Simply because they are natives, domestic firms have a great deal of knowledge that was acquired at virtually no cost—it is easy, in fact completely natural, for them to adapt their business to local conditions and preferences (Mezias, 2002b). These capabilities are deeply rooted in continuous practice,

feedback, interaction, and shared experience. Foreign firms lack this form of embeddedness and its related advantages (Hannan 1998, Stinchcombe 1965). Thus, liability of foreignness arises from the fact that native organizational units are better integrated into their local information network than their foreign counterparts (Mezias 2002a, Zaheer 1995).

Embeddedness creates economic opportunities: the state of being "embedded" is not necessarily individual, but is instead a general environment shared by individuals who occupy competitive positions in a network of exchange and in which there is a common definition and understanding of reliability and competence by potential exchange partners. Hence, embeddedness has an impact on a venture's survival and growth (Benassi 1995, Ben-Porath 1980, Burt 1992, Sherer 2003). In risky investment situations, such as foreign market activity, embeddedness increases an actor's capacity to access resources, adjust to unforeseen events, and take risks. "Embeddedness refers to the fact that economic action and outcomes … are affected by actors' dyadic (pairwise) relations and by the structures of the overall network of relations" (Granovetter 1992: 35). In this situation, many organizations are linked indirectly by third parties. These networks comprise a variety of structural, cognitive, institutional, and cultural elements (Zukin and DiMaggio 1990), which provide the social context of a firm's actions. Therefore, interfirm arrangements can enhance adaptation to market peculiarities or market changes.

In their application of the concept of embeddedness to the liability of foreignness concept, Schmidt and Sofka (2006) show that foreigner status hinders access to local customer spillovers. The lack of access to local information hinders foreign firms in adjusting their behavior and products to local needs, which leads to a significant competitive disadvantage,

e.g., lower market performance or firm profitability (Lord and Ranft 2000, Zaheer and Mosakowski 1997).

2.2.2 Origins and Evolution of the Liability of Foreignness Concept

Originally, "liability of foreignness" referred to a phenomena first described in Stephen Hymer's dissertation (completed in 1960, but not published until 1976). Extending existing theory in internationalization, Hymer (1976) provided a new and plausible alternative to the theory of international firm performance. Although multinational companies have the advantage of internalization and thus can protect technological know-how from competitors (Buckley and Casson 1976, Rugman 1982), Hymer cautioned that foreign subsidiaries would experience a competitive disadvantage due to local firms having better information about the domestic economy, language, social needs and preferences, law, and politics. His theory received support from Kindleberger (1969), who made similar observations. Kindleberger postulated that foreign subsidiary disadvantage could be due to the absence of sustained relationships with local entities, relationships that make it possible to access local tacit knowledge (Laursen and Salter 2006).

The work of Hymer (1976) and Kindleberger (1969) pointed theory of the multinational corporation (MNC) in a new direction. Their recognition of subsidiary disadvantages in host markets is the precursor to what is today referred to as liability of foreignness. However, they viewed foreignness largely in terms of economic distance related to costs of setting up a subsidiary, implying that subsidiary disadvantages are akin to national-level barriers to entry. Starting from this predominantly economic focus, Hymer concluded that this disadvantage can be overcome rather easily by a fixed, one-time investment by the foreign venture in

setting up the business in the host market. Aliber (1970) expanded the field with his idea that a foreigner's lack of embeddedness represents significant variable costs, arguing that foreign companies could overcome this disadvantage by using their home-market assets and certain advantages of their multinational network and related internalization.

Explicitly recognizing foreign subsidiary disadvantages, Caves (1971) cautioned that firms investing abroad must generate sufficient rents from their specific assets to overcome the disadvantages they face compared to domestic firms. From this perspective, it does not matter if disadvantages represent fixed or marginal costs. Focusing on foreign ventures' firm-specific advantages became the predominant approach taken in foreign direct investment (FDI) research. Empirical findings from this research stream indicate that, compared to domestic firms, MNCs are larger, more profitable, and spend more on advertising and research and development. In addition, they tend to have higher levels of intangible assets (Vernon 1971, Horst 1972, Dunning 1973, Caves 1974, Buckley and Casson 1976, Morck and Yeung 1992). These findings support the contention that MNCs possess firm-specific assets that make it feasible for them to compete effectively abroad.

Although most foreign investment research has focused on foreign investor advantages, all these studies recognize the importance of subsidiary disadvantages. In particular, the early research of Hymer (1976) and Kindleberger (1969) laid the foundation for recent theoretical refinements and empirical investigations of specific types of foreign subsidiary disadvantages. More recently, some studies have investigated specific disadvantages faced by MNC subsidiaries operating abroad. Zaheer (1995) pioneered this direct examination of subsidiary disadvantages, which she termed "liabilities of foreignness." She defined liabilities of foreignness as additional costs foreign firms incur when operating abroad (Zaheer 1995).

These costs include costs directly related to spatial distance (e.g., travel, transportation, coordination and monitoring over larger distances and different time zones) (Gomes and Ramaswamy 1999; Hitt et al 1994), costs arising from a lack of roots and experience in the local environment (e.g., higher learning costs), costs due to a perceived lack of legitimacy in the host country (higher reputation-building costs), and costs related to domestic restrictions (e.g., restrictions on sales of high technology to certain countries; legal restrictions).

Eden and Miller (2001) take a slightly different view of the costs of doing business abroad. They argue that relative production costs, exchange rate fluctuations, and relationship hazards should not be considered as liabilities of foreignness; instead, they classify only those costs stemming from either unfamiliarity with host-country environments or discrimination as liabilities of foreignness.

2.2.3 Recent Empirical Research Results

To date, researchers have systematically investigated the existence of liability of foreignness (Zaheer 1995; DeYoung and Nolle 1996; Hasan and Hunter 1996; Zaheer and Mosakowski 1997; Miller and Parkhe 2002; Sofka and Zimmermann 2005) and its impact on firm performance. A number of empirical studies have shown that multinational enterprises (MNEs) run into enduring barriers in foreign countries (Hymer 1976, Hennart, 1982) and suffer from a lack of embededdness (Ghoshal and Bartlett 1990; Granovetter 1973; Zaheer and Mosakowski 1997) compared to local firms. The most prominent sectoral studies on the topic focus on the banking industry, automobile sector, currency trading, and labor lawsuit judgments (Miller and Parkhe 2002; De Young and Nolle 1996; Zaheer and Zaheer 1997; Mezias 2002a, 2002b; Miller and Richards 2002, Sofka and Zimmermann 2005, 2007). These

studies demonstrate that the competitiveness of both the home and host country influences a foreign-owned firm's ability to compete with host-country rivals. Thus, the liability of foreignness and national advantages are closely related in determining a firm's performance abroad. In addition, DeYoung and Nolle (1996) found that foreign-owned banks in the United States were less efficient than U.S.-owned banks. Similarly, Hasan and Hunter (1996) show that Japanese-owned banks in the U.S. market were less profitable than their U.S. counterparts. Due to these empirical results, liability of foreignness implies that foreign-owned firms are expected to have lower profitability and a lower survival rate than domestic firms, ceteris paribus (see, e.g., Zaheer 1995, Zaheer and Mosakowski 1997, Lord and Ranft 2000).

Dynamic aspects of the liability of foreignness have been studied, too (Zaheer and Mosakowski 1997; Petersen and Pedersen 2001). This research has shown that, over time, foreign enterprises *can* learn about and adapt to the host-country environment with time; their perceived legitimacy in the host country increases with time, too. Hence, moving operations abroad is more in the nature of a marathon than a sprint—it will simply take time before the firm is able to compete at the same level as local enterprises. Zaheer and Mosakowski (1997) tested this dynamic aspect for the currency trading industry and discovered that it takes more than 15 years for foreign enterprises to overcome the disadvantage of being foreign. Therefore, to successfully compete with local companies, foreign firms will need a strong competitive advantage to compensate for the negative effect of liability of foreignness.

As firm-specific assets should enable the firm to overcome this liability (Caves 1971), Zaheer (1995) argues that multinational enterprises would do better to concentrate on firm-specific advantages rather than trying to imitate local practices. She suggests that

harmonization of the theory of multinational enterprises with theories of international strategy and organization will reduce and overcome the disadvantage of being a foreigner.

In contrast with most industry studies, Nachum (2003) finds that foreign firms in the London financial services sector do not appear to suffer any liability associated with foreignness. Foreign firms in this environment are more profitable, grow faster, and survive longer than British-owned firms (British Invisibles 2000; Augar 2001). Nachum argues that liability of foreignness does not adhere to types of foreign activity a firm may undertake, but is likely to vary in accordance with the types of advantages a multinational enterprise possesses and those that are important to competition in different settings.

2.3 Theorizing Instruments to Overcome Liability of Foreignness

My intent in this thesis is to inject a new stream of thought into the field of liability of foreignness by identifying instruments that will be useful to foreign companies in mitigating their alien status and allow them to compete on a more level playing field with domestic competitors. Therefore, by focusing on the lack of knowledge and sustained relationships of foreign ventures, I will use the underlying concept of information asymmetries to identify valuable tools helpful in overcoming the inherent disadvantage suffered by foreign firms. Relevant knowledge of instruments capable of handling information asymmetries is employed to design a road map for this thesis and to set up the theoretical foundation for the applied econometric approaches. First, I will explain the reasons for the asymmetric distribution of information and the existence of liability of foreignness. Moreover, taking into account the reasons for liability of foreignness and knowledge about strategic instruments of coping with

information asymmetries, I set up propositions that would allow foreign ventures to decrease their degree of liability of foreignness.

2.3.1 Sources of Liability of Foreignness

Taking as given that liability of foreignness does indeed occur, it is necessary to clarify the sources of alien status in host markets. Whereas previous research relies on a cost approach to explain the barriers to successful host-market activity experienced by foreign ventures (Hymer 1976, Kindleberger 1969, Zaheer 1995), this thesis views the reasons behind that cause the additional costs. In this way, the reasoning could be used as a starting point to identify potential strategic instruments. More in detail, this thesis focuses on the asymmetric distribution of important information within host markets as source of the aliens' status and the related performance disadvantage of foreign ventures. Theoretical models that analyze information asymmetries assume that at least one party to the transaction has relevant information that the other(s) do not (Akerlof 1970). In this way the less informed party has imperfect information. To the extend that this results in uncertainty about benefits or costs, the less informed party faces risk and becomes prey to a biased selection problem (Png and Lehmann 2007).

In belong to a firms' foreign market activity, local consumers are less likely to buy foreign products than domestic one (Zaheer 1995, Zaheer and Mosakowski 1997, Mezias 2002, Sofka and Zimmermann 2007). This reasoning is based on the following: (1) the expertise and reputation of a foreign corporation is typically shaped by its home country environment (Ghemawat 2001; Ghemawat 2003), (2) consumer preferences and market peculiarities vary between countries (De Mooij 2000), (3) domestic consumers usually have a "home bias"

(Nagashima 1970; Diamantopoulus, Schlegelmilch, and Du Preez 1995; Kang and Stulz 1997; Hsieh 2004), and (4) there can be host-country prejudice against the foreign venture's country of origin (Scholler 1965, Hsieh 2004).

In essence, liability of foreignness is a double-edged sword: foreign enterprises are "strangers in a strange land" (Heinlein, 1961), certainly, with all that such status implies (e.g., unfamiliarity with local custom), but host-country consumers experience a certain amount of uncertainty, too, when confronted with a new product or service about which they know nothing, not even who makes or provides it. In short, the foreign venture and the host-country consumer are each faced with an asymmetric distribution of relevant information leading to a suboptimal situation for both parties.

Firm-based reasoning for the existence of liability of foreignness

Technological advances (most notably in information and communication technologies) and ideological change (trade liberalizations, large emerging markets in China and India) have resulted in "globalization" and enormous business opportunities (Govindarajan and Gupta 2001, Gupta and Westney 2003); however, firms' competition for new consumers does not take place in a borderless world (Ohmae 1990). Enterprises internationalize their business activities to achieve efficiency, knowledge, and responsiveness (regarding local customer demand) (Bartlett and Ghoshal 1987, Lessard 2003), but these goals, especially the latter, have not been easy to reach. Somewhat paradoxically, globalization has not led to globally homogenous preferences among customers, as was suggested most prominently by Levitt (1983). As globalization improves income levels, customers are able to afford more than the basics and become interested in higher-quality products that reflect their culture and

personality more deeply, which actually leads to greater diversity in demand around the world, not less (De Mooij 2000). Therefore, enterprises entering foreign markets to sell their products to host consumers need to understand local needs and be cognizant of the differences between home- and host-country rules and consumer preferences.

Furthermore, most companies have developed their proprietary assets in their home market. Over time, these assets influence a series of investment decisions, including decisions to begin or expand foreign investment (Caves 1996), and reflect the firm's own core competencies and capabilities. Consequentially, when entering a new market, firms may replicate the actions that led to their home-country success in an effort to duplicate that success in the new market. However, there will always be at least some difference between the home and host country, perhaps in regard to government regulation, consumer preferences, or standard business practices. The entering firm will be at a disadvantage if it does not recognize and deal with these differences in an effective manner.

In essence, when entering a new market, foreign firms are handicapped by their lack of relevant knowledge about host-country peculiarities. That creates a performance disadvantage compared to domestic ventures, the so-called liability of foreignness (Hymer 1976, Zaheer 1995). Foreign firms need strategic tools that can help them identify local preferences that are different from the home market. They will need to readjust established home-market processes so as to meet the needs of their new consumers. Thus, foreign firms must develop an understanding of local culture so that they will be able to advertise their products in a way that appeals to host-country consumers. If they fail to do so, they may very well fail completely (Bartlett and Ghoshal 1989).

Consumer-based reasoning for the existence of liability of foreignness

Host-country consumers are also working in the dark, so to speak, when it comes to the foreign firm products, and are often subject to the so-called country of origin effect. Host-country consumers' uncertainty is founded in the relationship between country of origin and consumer product evaluation. This dependency has been investigated in many studies.[2] It is generally accepted that country of origin affects consumer product evaluations (Scholler 1965, Reierson 1966, Nagashima 1970, Kang and Stulz 1997, Hsieh 2004). The country of origin gives rise to country of origin associations in consumer minds (Aaker 1991, Keller 1993), leading to preconceived and possibly negatively biased attitudes toward the products of a particular nation.

Nagashima (1970: 68), whose conceptualization of country image has been widely accepted (Han and Terpstra 1988, Roth and Romeo 1992), defines country image as the beliefs one has about the products of a certain country. Consumers evaluate a product on the basis of information cues. The "made in" image is the picture, the reputation, the stereotype that businesspeople and consumers attach to products of a specific country. This image is created by such variables as representative products, national characteristics, economic and political background, history, and traditions. Recent studies point toward a more indirect or mitigating country of origin effect (Chao and Gupta 1995).

Nevertheless, it has been found that all products originating in foreign countries are subject to country of origin effects. Several studies have shown that there is a tendency for consumers to evaluate their own country's products more favorably than those of foreigners (Nagashima

[2] See Bilkey and Ness (1982) for a more detailed review.

1970, Bannister and Saunders 1978, Kaynak and Cavusgil 1983). Earlier studies, such as Scholler (1965), Reierson (1966), Nagashima (1970, 1977), Tesar and Werner (1992, 1995), and Kang and Stulz (1997) found that there exists a strong national bias for domestic products, which seems to be consistent over time. Nagashima (1970), for example, discovered that 80% of U.S. consumers and 93% of U.S. businesspeople prefer U.S. cars. Kang and Stulz (1997) confirm the existence of a substantial home bias in their comparison of firm performance of foreign- and domestic-owned firms in the Japanese market between the years 1975 and 1991. And there is overwhelming evidence of home-country bias in asset portfolios: investors prefer securities issued in their country of origin over foreign securities (Tesar and Werner 1992, 1995).

The competitive advantage of a home product arises from the impact of the preference asymmetry on relative brand preference. Suppose a foreign brand enters a market dominated by the local brand. If the two brands are perceived as highly similar, buyers may consider both, but will inevitably favor the local brand. The foreign brand offers no advantage over the local brand and by positioning itself near the local brand, the foreign brand implicitly reinforces the local's superiority (Loken and Ward 1990, Nedungadi and Hutchinson 1985). Moreover, based on direct experience, these preferences are likely to be persistent (Fazio and Zanna 1981; Fazio, Powell and Williams 1989).

Distinguishing between these two sources of the liability of foreignness—a foreign venture's lack of local knowledge and host-country consumer uncertainty as to the quality of the foreign product—creates an opportunity to discover strategic problem-oriented instruments useful in overcoming the asymmetric distribution of relevant information between the two parties. Both parties, foreign ventures and host-country consumers, lack knowledge,

either about the preferences of the local consumers or about the quality of the foreign product. By differentiating between these knowledge gaps, it becomes more readily discernable whether a certain firm behavior will lead to either better informing host-country consumers about the product or, alternatively, lead to more effective adaptation by the firm to local needs. This clarity of purpose will result in more effective market strategies: if the consumer-based effect is dominant, brand-building strategies should be used; if organization mis-adaptation is prominent, the firm's own processes should be reorganized.

2.3.2 Overcoming Liability of Foreignness in Host Markets

In examining the alien status of foreign ventures in the host market, it becomes clear that there is an asymmetric distribution of relevant information between foreign companies and domestic consumers where domestic consumers are less likely to buy foreign products (see section 2.3.1). I have set out two reasons why there is an information asymmetry when dealing with the liability of foreignness. First, consumer preferences are different between countries (De Mooij, 2000) and thus foreign ventures lack relevant knowledge about local consumer peculiarities when entering the host market (Jensen and Szulanski, 2004). Second, domestic consumers are in general more ignorant of foreign product quality and are therefore less willing to buy it (Kang and Stulz 1997). As a result, fewer transactions take place, which has negative consequences for the foreign venture's market performance and also for host-country consumers. Host-country consumers are not able to identify and process relevant information about all potential transaction partners (domestic and foreign) and therefore are more likely to rely on less efficient transactions with domestic partners. This asymmetric distribution not only characterizes the existence and creation of the liability of foreignness,

but also offers important clues to the foreign ventures about how they can compensate for their competitive disadvantage.

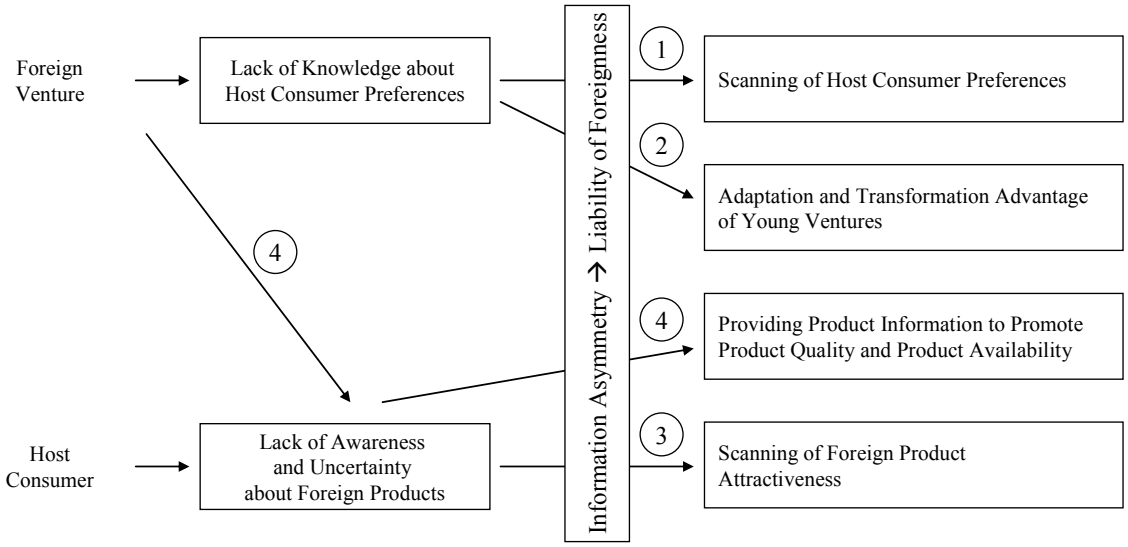
To overcome the risk inherent in lack of relevant information, market participants need specific strategies to respond to the biased selection of the trade partner. According to extant research, providing relevant product information to the potential customer and scanning host market peculiarities are valid ways of compensating for information asymmetries (Brush 1992, Mohan-Neill 1995).

More in detail, one way of resolving an information asymmetry is through the initiative of the better-informed party. The foreign company can improve the market output by providing credible information of a product's quality and availability to the less-informed local consumers. Decision makers can then rely on this information as proxies for the quality of the foreign product. Thus, the suppliers must act first by providing appropriate information that will influence consumers to purchase the product at issue (Stiglitz and Weiss 1983). A second, perhaps even more pertinent, concept that has informed this research field is the notion of environmental scanning (Brush 1992, Lant et al. 1992, Mohan-Neill 1995). Scanning involves the identification of relevant, measurable qualities by which to sort entities and the identification of valid devices to accomplish this end (Lant et al. 1992).

Taking into consideration knowledge about strategic instruments capable of coping with information asymmetries, I can identify two independent starting points that would allow foreign companies to reduce their degree of liability of foreignness: (1) reducing host consumer uncertainty and (2) increasing their own knowledge of the host market (Zaheer 1995, Zaheer and Mosakowski 1997, Mezias 2002).

Figure 2.1 summarizes the proposed relationships. The following discussion explains the individual propositions more in detail.

Figure 2.1: Proposed Relationships between Sources of the Information Asymmetry and Strategic Instruments to Compensate for the Liability of Foreignness



Note: Circled numbers indicate the proposition described next to them, e.g., "1" indicates proposition number 1.

At first, environmental scanning may be usefully employed to help both transaction partners—the foreign firm and the host-country consumer—accumulate knowledge necessary to achieve a mutually beneficial transaction, and thus decrease the liability of foreignness. By incorporating scanning theory, foreign companies can overcome the market handicap that arises from having very imperfect information about local customers (Hannon 1996). Foreign ventures therefore have a strong incentive to study the host-market environment for information that can be used in creating an appropriate instrument to successfully act in the host market. For example, current and/or past consumer behavior can be analyzed to determine purchasers' specific decision criteria; alternatively, but possibly less reliable without a thorough knowledge of local culture, consumer preferences may be predicted based on some easily observable criteria. In the consumer preferences evaluation context, if there is

a reasonable correlation between a product characteristic and a certain buying behavior (e.g., measured in terms of annual sales of competitive domestic products), it may be worthwhile to use this characteristic as a scanning device.

In general, foreign ventures need to scan the entire host-market environment. One of the earliest attempts to analyze the foreign business environment is that of Farmer and Richman (1970). These authors identified several critical environmental constraints, which they classified as educational-cultural, sociological-cultural, and legal and economic variables. Guisinger (2001) also attempts to comprehensively identify elements constituting the foreign business environment. Taking each element of the foreign business environment into account in gathering information will allow an MNE to acquire an excellent base of knowledge about its new operating environment and can be an enormous asset in its quest to successfully compete with domestic counterparts.

As a result, environmental scanning is an important tool that foreign ventures can use to compensate for their lack of local knowledge and, subsequently, should decrease the firm-specific degree of liability of foreignness and increase the foreign venture's host-market performance.

> *Proposition 1: Scanning can help foreign companies to identify host consumer preferences, adapt appropriately to local market peculiarities and, subsequently, to decrease their degree of liability of foreignness.*

By appropriate use of scanning, foreign firms can learn about and adapt to their uncertain, new environment. However, that is only half the battle. Learning and adapting will contribute

to a firm's success only if accomplished in a timely manner (Hannan and Freeman 1984). In other words, it is no use adapting to a new market if by the time the firm manages this, the market has changed. Thus, the speed with which a firm can scan the foreign environment and translate the acquired knowledge into customized (and thus superior) products will be an important determinant of its success.

Existing research has identified that certain aspects moderate the adaptation behavior of firms. For example, Audretsch (1995) shows that external characteristics, especially industry aspects and related innovation activities of firms, have an influence on firm ability to learn and grow within a market. However, there are also certain internal characteristics that moderate a company's' learning ability and the related impact on firm performance. Firms that are more flexible and adaptable will be the most successful in adjusting to whatever the market demands. According to Hannan and Freeman (1984), organizational age affects the chances of organizational change. Not only are older organizations more disrupted by change, they are less likely to do so: aging decreases the likelihood for change (Amburgey, Kelly and Barnett 1993). There are several reasons for this, including that change requires that the organization develop and acquire additional human and physical capital, institutionalize new processes, and shift the distribution of power within the organization—potential sources of resistance (Nelson and Winter 1982, Hannan and Freeman 1984). Additionally, the embeddedness of the organization within a web of interorganizational relationships and the taken-for-granted image of the organization can give rise to external sources of resistance to change (Schumpeter 1934, Hannan and Freeman 1984, Granovetter 1985).

In contrast, young firms possess the so-called learning advantage of newness (Autio et al. 2000). They assimilate new knowledge much faster than do their more mature counterparts.

Moreover, new ventures are able to respond more flexibly to new needs and situations and are generally more open to change than are more mature firms (Fujita 1995). They are thus able to more easily adapt their organizational structure to host-country preferences (Sapienza et al. 2006). Hence, young firms, compared to older firms, are able to much more quickly and extensively translate information acquired through scanning into firm performance. Thus, they should achieve greater leverage from scanning activities and, consequently, should be able to reduce their degree of liability of foreignness much more easily and possibly to a greater extent than can more mature firms.

> *Proposition 2: The positive impact of scanning activities in reducing the degree of liability of foreignness is stronger for young foreign ventures than it is for more mature foreign firms.*

Most of the scanning literature focuses almost exclusively on how companies scan the needs of consumers, rather than on how consumers judge products or firms that make them (Turban and Keon 1993, Rynes and Barber 1990, Hannon 1996). It is difficult for host-country consumers to directly observe the actions of the foreign firm and, short of actually buying the product, it is nearly impossible for the customer to know anything about the product's value and quality. Thus, because the customer has limited, imperfect information about the foreign venture's product, the purchasing decision is made under conditions of uncertainty. In deciding which product to buy, then, consumers have to develop some decision criteria, which may be based on a variety of factor, including stereotypes pertaining to the origin of the company (e.g., country-of-origin vs. home bias), product characteristics, price, and firm reputation. As domestic consumers lack knowledge about the foreign products, they need to engage in environmental scanning to better understand their quality. In this way, the host-

country consumers reduce their own form of the liability of foreignness by acquiring relevant information. This information allows the consumers to make a fairer comparison between domestic and foreign products, thus making possible a more efficient (better) choice of which product to purchase. Thus, a foreign firm's degree of liability of foreignness should decrease if domestic consumers engage in scanning foreign products.

> *Proposition 3: Host-country consumer scanning increases consumer knowledge about available foreign products and subsequently decreases foreign firm's degree of liability of foreignness.*

Applying consumer-focused firm strategies to the liability of foreignness concept, the foreign venture wants to increase host-country consumers' awareness of the firm's presence in the host-country market and decrease their uncertainty about the quality of the firm's product. If the foreign firm can accomplish both aims, it will have made substantial progress toward leveling the playing field it now shares with domestic firms. Hence, the foreign firm must provide product information that will capture host consumers attention and communicate the quality of the offered product. If the domestic consumers successfully receive this information, they will have a more adequate supply of knowledge on which to base their purchasing decisions. If the information is extremely effective, the result will be a realignment of consumer product selection behavior in favor of the foreign firm's product. Thus, the provision of relevant information to host consumers is an important way that foreign ventures can decrease their degree of liability of foreignness in host markets.

Proposition 4: Consumer-focused firm strategies can lessen the competitive disadvantage suffered by foreign firms that is based on host consumer lack of awareness and uncertainty.

2.4 Empirical Scenarios to Indicate Potential Strategic Instruments

In summary, there are four types of action or behavior that can lessen information asymmetries and thus mitigate the liability of foreignness.

1. Under certain conditions, host-country consumers will take it upon themselves to learn about the foreign venture's products and thus reduce information asymmetries.

2. Foreign ventures can scan host-country consumer preferences to accumulate knowledge about local preferences and market peculiarities.

3. Young foreign ventures, more so than their more mature counterparts, can effectively leverage the information gleaned from scanning and thus reduce information asymmetries.

4. Foreign ventures can provide product information to local consumers in a way that increases the awareness about the foreign product, thus reducing consumers' reliance on stereotypes and decreasing their uncertainty about the foreign product.

To discuss the above propositions and to test the reliability of the theoretical approach, the following three subsections describe different empirical approaches for identifying the theoretically examined strategic instruments hypothesized to be helpful in overcoming the liability of foreignness in host-country markets. In recapitulating the theoretical model of how

foreign ventures can overcome the liability of foreignness in host-country markets, I provide more precise feedback regarding potential empirical settings that would allow me to measure the use of potential instruments to handle related problems of asymmetric information in host markets.

2.4.1 Scenario 1: Host-Country Economic Stress

First, I examine the impact of economic stress as a force that compels domestic consumers to scan the home market. Consumer preferences are related to the processes, functions, and structures of a social system. Preferences and preference formation are closely related to social stability and change (Zinam, 1974). Various authors show that when consumers experience disruptive events that signify transitions into new roles and create stress, they also modify their consumption patterns (Mathur, et al., 2003; Wan, 1998).

I argue that economic stress leads to evaluation of existing patterns of behavior, consequently weakening the existing networks of knowledge flows (Thoits, 1995). Readjusting their preferences, consumers put domestic and foreign competitors back on an "even footing," that is, domestic consumers judge the importance of each product relying on their personal criteria and current economic situation rather than on their established paradigms. This opens a window of opportunity for foreign firms. Product characteristics become much more important than established procedures, paradigms, and social pressure. At this point, foreign firms have the same chance as domestic competitors to communicate their product advantage. Such an argument would predict that the liability of foreignness decreases in situations where consumers face high levels of economic stress. Disruptive changes and the related economic stress force consumers to scan foreign products, reconsider their previous

assumptions, accumulate more knowledge about foreign products, and consequently reduce their lack of awareness and uncertainty about foreign ventures and their products. In this way, they decrease the consumer-based liability of foreignness.

Thus, economic stress is an external factor that forces domestic consumers to scan the market (including foreign products) and reevaluate their buying behavior, and, subsequently, decreases host consumers' lack of knowledge about foreign products. In this regard, economic stress would decrease consumers' brand loyalty, intensify a debate about their needs and increase the probability to change the supplier (Hirschman 1990). Thus, comparing two regions where Region 1 experiences economic stress and Region 2 does not would allow me to identify the impact of economic stress on the degree of liability of foreignness and thus prove (or not) Proposition 3. To test reliability of this scenario, I investigate, in Chapter 3, the impact of economic stress on firm performance for foreign car manufacturer in the East and West German car market.

2.4.2 Scenario 2: Market Orientation and Firm Age as Instruments for Reducing the Liability of Foreignness

Second, the use of market research as a scanning device is analyzed to identify whether the accumulation of knowledge about local consumer preferences and the related adaptation advantage of young foreign ventures have an impact on foreign firms' host-market performance. When a firm enters a foreign market, it needs a completely new body of market based knowledge (Ghoshal 1987), including knowledge of specific foreign business practices and institutional norms, market peculiarities and consumer preferences as well as general

knowledge about how to organize for foreign competition (Eriksson et al. 1997), a situation that puts the foreign venture at somewhat of a disadvantage, especially when it is in competition with domestic firms.

Therefore, a foreign firm's involvement or direct experience in the host country significantly affects the degree of the liability of foreignness. Host-country involvement could be operationalized as the firm operations to adopt local knowledge. As the foreign venture's base of local knowledge expands, the uncertainty of operating abroad shrinks and this, in turn, leads to a greater commitment to the foreign market (Johanson and Vahlne 1977; 1990, Erikssson et al. 1997). Thus, foreign ventures need market information (Mezias 2002a; Zaheer et al. 1999) so that they can identify, prioritize, and incorporate the needs and preferences of host-country consumers. Therefore, market orientation, and especially market research, as a means of scanning the host market should be more important to the success of foreign ventures than it is for their domestic counterparts.

Moreover, research has shown that young ventures possess learning advantages compared to more mature ones (Fujita 1995; Autio et al. 2000; Sapienza et al. 2006). Young firms can assimilate new knowledge much faster than their mature counterparts and can more easily adapt their organizational structure to host-country preferences. Thus, young foreign companies should benefit more from using market research and the related incorporation of local knowledge spillovers in host-country markets than their more mature foreign counterparts. Therefore, age should moderate the relationship between market research, used as a scanning device, and firm performance for foreign ventures.

In essence, studying the market research activity of firms allows me to identify the impact of this activity on subsequent market performance, how the impact differs between domestic and foreign competitors, and, especially, the moderating effect of firm age. In particular, this line of investigation could be used to test whether the scanning activities of foreign ventures are helpful in overcoming the knowledge disadvantage they suffer compared to local competitors. I can thus discover whether environmental scanning is a valuable instrument in mitigating the liability of foreignness in host markets. In essence, this investigation, which is detailed in Chapter 4, allows me to prove or disprove Propositions 1 and 2.

2.4.3 Scenario 3: Foreign Firm Assets that Increase the Awareness and Reduce the Uncertainty of Host Consumers

Even though all young firms have the ability to incorporate local knowledge more quickly than their more mature counterparts, not all of them are able to compensate for the second source of liability of foreignness—the disadvantage based on the host-country consumers' lack of awareness and related uncertainty about the foreign product. Entrepreneurs that want to compete successfully abroad need to use specific advantages derived from their unique mix of assets (Caves 1971; Hymer 1976; McDougall 1989) to provide the necessary information to host-country consumers. That should help foreign entrepreneurs overcome the problem of asymmetric information and the resulting home biased selection of host-country customers. Therefore, my third area of study investigates the utilization of specific firm assets as instruments that provide product information to reduce the lack of awareness and uncertainty of domestic consumers.

To make consumers aware of their products, foreign entrepreneurs have to focus on assets that attract new customers (Grönroos and Ojasalo 2004). Indicators that increase the demand for a product or service are described as effective. According to Grönroos and Ojasalo (2004), efficiency and effectiveness are distinguishable concepts. Effectiveness is concerned with customer-generating capability; efficiency involves the cost-effective use of resources. The former has to do with how effectively firm-specific resources and capabilities increase or create an external interest in the firm's output; the latter relies on firm-specific or market-based restrictions that force entrepreneurs to save costs. Thus, in order to make consumers aware of their products and decrease consumer uncertainty, firms should use effective resources as instruments to communicate product characteristics.

On the opposite firm assets that support firm efficiency should have a negative impact on entrepreneurs' probability to be active in foreign markets. Firm resources like speed of service and cost advantage are not helpful to compensate for the disadvantage of being foreign and the related lack of knowledge about foreign products of host country consumers. Moreover, the negative impact of efficient resources rest in the assumption that a competitive advantage based on efficiency-related firm assets rely on organizational experience and available resources. Focusing on new ventures, it is probable that the entrepreneurs are not able to generate significant economic rents when relying on efficiency-related competitive advantages that are high enough to compensate for the disadvantage arising from foreignness (Caves 1971). Over time, accumulating the necessary experience and overcoming the resource constraints of young ventures, firms should be able to generate enough rents when using their efficiency-related firm assets that can compensate for the additional costs of being foreign. In this way they are able to avoid the liability of foreignness problem (Caves 1971).

As result, international new ventures that enter foreign markets need to focus more intensively on effectiveness-related resources than do their home-market competitors to reduce the lack of awareness of host consumers. This scenario allows me to prove, or disprove, Proposition 4, which I undertake in Chapter 5.

2.5 Conclusion

In summary, I use these three scenarios to enhance the concept of liability of foreignness and explore new roads that could lead to a further development of the construct. Based on existing theory in the field, I argue that manipulation of information asymmetries is a viable way of coping with and, indeed, overcoming the liability of foreignness. Applying the theory of asymmetric information distribution to the concept of liability of foreignness allows me to look in greater detail at the reasons behind this liability, a perspective that then leads to a better understanding of how certain instruments can work to reduce the impact of its inherent disadvantages.

The following three chapters focus on four key influences on the degree of liability of foreignness: economic stress in host-country markets (Chapter 3); market research used as a scanning device and its variable effectiveness depending on the age of the foreign venture (Chapter 4); and effectiveness-related firm assets employed as instruments for increasing consumer awareness of foreign products (Chapter 5).

Chapter Three

3 Regional Economic Stress, Host Consumer Preferences and Liability of Foreignness [3]

3.1 Introduction

Globalization has been an engine for growth and efficiency in almost every industry. Hence, many companies have become "multinational", i.e. they operate procurement, production, sales and/or distribution activities abroad. These internationalization strategies have not been without fractional losses. Especially social and cultural borders remain sticky. The expertise and reputation of multinational corporations are typically shaped by their home country environment. Their products and practices do not fit seamlessly in host countries with different cultural, social, economic, religious and regulatory traits and roots (Ghemawat 2001, 2003). These stumbling blocks for MNCs materialize as more frequent mistakes and delays

[3] This paper is based on Sofka and Zimmermann (2008), published in the Journal of International Management. I appreciate comments and suggestions from Srilata Zaheer, John Mezias, Yadong Luo, Masaaki Kotabe, Christian Rammer, Ulrich Kaiser, Adam Lederer, Werner Bönte and two anonymous reviewers. Earlier versions of this paper were presented at the 2006 Academy of International Business Conference in Beijing / PR China, the 2006 Academy of Management Conference in Atlanta / USA, and the 2007 Strategic Management Society Conference in San Diego / USA..

(Lord and Ranft 2000). Several studies (Zaheer and Mosakowski 1997; Mezias 2002; Miller and Parkhe 2002) have identified this "liability of foreignness" (Zaheer 1995) and its effects.

I apply a new theoretical approach by focussing on countervailing strategies for multinational firms to act successfully on foreign markets. I argue that when consumers experience disruptive changes that create stress, they also modify their consumption pattern which, subsequently, opens a window of opportunity for foreign ventures to decrease their liability.

More precisely, I argue that multinational firms can exploit regional differences within the host country to mitigate the effects from liability of foreignness. Mezias (2002a) and Nachum (2003) suspect such regional discrepancies. I incorporate their argumentation into a conceptual framework that makes regional leverage points for foreign firms predictable. I stress the importance of divergence in economic development among regions. Hence, I develop theoretical hypotheses and test them empirically for a comprehensive sample (almost 1,200 models) of the East and West German car market in 2003. The latter is a fitting object of analysis. The automotive industry is on the forefront of globalization and Germany is a major market with deeply rooted domestic car manufacturers and established foreign competitors. Additionally, significant economic differences between both parts of the country exist even 13 years after re-unification.

This study is directed at management practitioners and scholars. Academic discussion has so far mostly focussed on the effects of liability of foreignness. I aim at deepening these insights by providing contingencies. The latter should be of interest for managers who can identify instruments for overcoming their disadvantages from liability of foreignness.

In the following section I present an analytical framework about regional discontinuities based on economic stress and the related product evaluation by local consumers, on the degree of liability of foreignness. In section three I present my empirical study followed by results, and subsequently, in sections five and six, the conclusions, limitations and recommendations for future research.

3.2 Analytical Framework – Regional Discontinuities

Most of the studies mentioned before assume at least implicitly that the country level is the relevant perspective to analyze liability of foreignness. This follows the basic assumption that the previously described sources of liability of foreignness are evenly distributed across a nation (e.g. same language, legal system etc.). Earlier empirical investigations of liabilities of foreignness have largely ignored the importance of regional differences within the host country. Even when location is not central to the primary liability being investigated, ignoring these issues is potentially problematic because the engagement and performance of foreign firms often varies by region. Shaver (1998) documents that regional characteristics influence the localization strategy of foreign direct investments. He shows for example that distinct differences in location preferences between foreign and domestic manufacturing firms in the US exist.

Literature directly investigating liabilities of foreignness has so far started to acknowledge that differences between host country regions may be important. A first empirical attempt stems from Miller and Richards (2002) who investigate the moderating effect of host country characteristics on the degree of liability of foreignness. They focus on the idea of performance

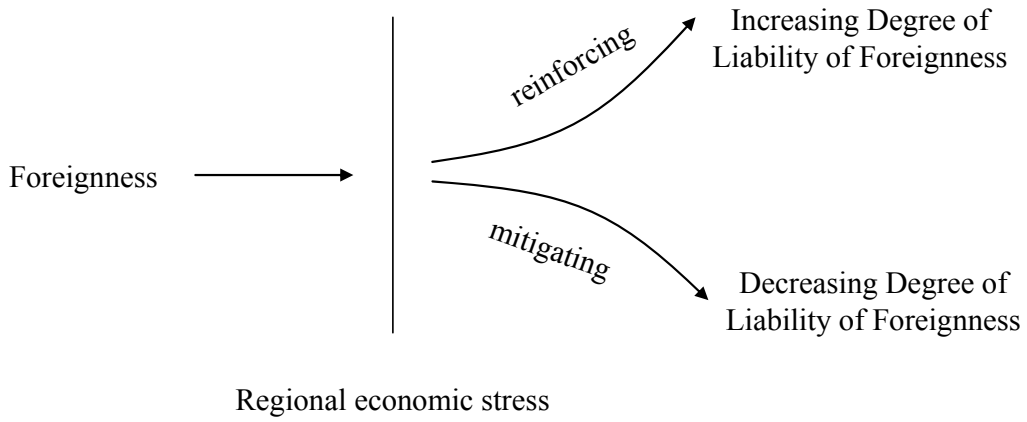
differences between member and non-member firms in a regional economic group. The empirical results show that foreign firms are able to overcome the liability of foreignness in some host countries as the degree of liability of foreignness varies across these countries. Moreover, Mezias (2002a) cautions that regional aberrations inside host countries may exist and the results of Nachum (2003, 2006) could be interpreted as a first empirical hint. She finds no measurable effect for liability of foreignness for her sample of financial service firms in the city of London. Location within a host country may directly affect the degree of liability of foreignness. For example, Mezias (2002b) assesses if labor lawsuit judgements represented a liability of foreignness for foreign firms operating in the US. As legal application and interpretation vary across jurisdictions, selecting locations under different federal district court jurisdictions allows a more diversified national test of labor lawsuit judgements as a liability of foreignness. These locations were in different states, which also provided state-level jurisdictional diversity. Because location can directly affect a liability of foreignness, sampling from different regions increases the comprehensiveness and generalizability of results.

I extend this discussion by returning to its starting point. Liability of foreignness can only be measured relatively to host country competitors. While the potential factors behind liability of foreignness may be ubiquitous within a nation, environmental forces may hinder domestic competitors from realizing this "home turf advantage." I propose that this favourable strategic context for foreign firms can be identified on an intra-national level which allows multinational firms to develop targeted regional strategies within a country.

I argue that the amount of economic stress in a host country region influences the impact of liability of foreignness. Two mechanisms are possible. On the one hand, economic downturns

may force host country customers to re-evaluate existing consumption patterns which provides windows of opportunities for foreign firms and their products. On the other hand, economic stress may drive customers to return to their national core believes which causes their purchasing behaviors to become more "patriotic" in effect. I explore both routes theoretically. Figure 3.1 summarizes my approach.

Figure 3.1: Moderating Effect of the Level of Regional Economic Stress on the Degree of Liability of Foreignness



3.2.1 Economic Stress as a Mitigating Factor of Liability of Foreignness

Dierickx and Cool (1989) argue that the degree of imitability of strategic assets, i.e. the social and cultural embeddedness of host country competitors, depends on the presence of time compression diseconomies. Put simply, the latter implies whether it is possible to take a shortcut in accumulating similar stocks of host country knowledge as domestic competitors. I argue that economic stress provides such leverage points. Given the socio-cultural nature of liability of foreignness and related deeply rooted mechanisms in a country, economic stress in a society invalidates the established social network and opens the chance for newcomers from abroad to develop local embeddedness at rates equal to domestic competitors.

These mechanisms have typically been investigated with a focus on the demand side. Consumer preferences are related to the processes, functions and structures of a social system. Preferences and preference formation are closely related to social stability and change (Zinam, 1974). Various authors show that when consumers experience disruptive events that signify transitions into new roles and create stress, they also modify their consumption patterns. Such events could have personal or social/political character (Mathur, et al., 2003; Wan, 1998). Two theoretical perspectives apply: the role transition perspective and the stress perspective. The role transition perspective suggests that as people change roles, assume new roles or relinquish old roles, their behavior changes. As people enact new roles or relinquish old ones they experience a need to redefine their self-concept (Mehta and Belk, 1991). Since possessions are integral to the definition of self and the expression and performance of roles (e.g. Belk, 1988), role transitions are associated with disposal of products relevant to previous roles and acquisition of products relevant to new roles. Theory and research on stress provides the second perspective on behavioral changes. Stress is often defined as environmental, social or internal demands that disrupt existing psychological states and require the individual to readjust his or her usual behavior patterns (Thoits, 1995). Major life transitions are often considered to be "stressors". By virtue of the newness of these preferences they are relatively weak, but the weaker the preference is the more likely it is that switching can be induced (for example see Weber and Hansen, 1972). This is especially evident in markets that have experienced disruptive changes or economic stress and in untapped markets when preferences are relatively weak.

Wan (1998) illustrates this line of argument for China: Economic reforms have brought remarkable change. The economic transition in China becomes most visible in economic

development and institutional transformations. The impacts on lifestyle and westernization through these channels are tremendous. Wan (1998) shows that these impacts are essentially reflected by changes in consumers' preferences for the consumption of commodities and services.

In essence, I argue that economic stress in a society forces the evaluation of existing patterns of behavior, consequently weakening the existing networks of knowledge flows (Thoits, 1995). Readjusting their preferences, consumers put domestic and foreign competitors back to the same "starting point." They judge the importance of each product relying rather on their personal criteria and current economic situation than on their established paradigms. That opens a window of opportunity for foreign firms. Product characteristics become much more important than established procedures, paradigms and social pressure. At this time foreign firms have the same chance as domestic competitors to communicate their product advantage. This readjustment enables foreign competitors to enter host country networks. Thus, long learning engagements and the absorption of tacit knowledge is no longer a precondition to success in a foreign market. The economic stress acts as a 'time-compressor' for foreign companies as consumers reweigh their priorities. Such an argument would predict that the liability of foreignness decreases in regions with high levels of economic stress as domestic consumers scan the whole market. Hence, I derive my first hypothesis:

> ***Hypothesis 1:*** *Economic stress is a mitigating factor for the relative levels of liability of foreignness among host country regions.*

3.2.2 Economic Stress as a Reinforcing Factor of Liability of Foreignness

However, a contrary line of research can be found in the literature. Events such as unemployment and political and or economic upheaval often involve significant personal loss and place people in "between" stages. As stress occurs, people attempt to restore balance while relieving the frustrations and tensions accompanying disequilibrium (Lazarus and Folkman, 1984; Pearlin, 1982). Actions and thoughts that enable the individual to handle difficult situations, solve problems and reduce stress dominate (Lazarus and Folkman, 1984). At stressful times, aspects of life otherwise taken for granted may be reassessed (O'Donohoe and Turley, 1999). When people feel that they lack knowledge or the ability to process information during the crisis they rely on established patterns from the past where they feel trust (Earl, 1986).

For example, during the economic crisis of the winter of 1996-1997, consumer stress significantly affected the consumption practices of Bulgarian consumers. The uncertainty about future incomes and unemployment made people more cautious about their spending. In this case, consumer preferences shifted from foreign to Bulgarian brands, particularly in the food, apparel and footwear product categories (Milanova, 1999). These attitudes towards foreign brands may be bolstered by official "buy local" campaigns. These typically government sponsored or supported programs encourage local customers to prefer domestic goods over imported ones by emphasizing the positive effects for the domestic economy, e.g. job security, foreign currency reserves (see for example Elliott and Cameron, 1994). These defensive measures are largely the result of increased competitive pressure from abroad which may be an important source of economic stress.

Examining the impact of economic stress on consumer preferences, I argue that uncertain consumers rely more intensively on past patterns (Earl, 1986). Therefore, they prefer established home market brands compared to unknown foreign ones when economic stress occurs. I suggest that disruption and crisis actually lead to increased centralization and greater demarcation between insiders and outsiders. Such an argument predicts that the liability of foreignness actually increases during times of economic stress. Hence, I derive my second hypothesis:

> ***Hypothesis 2:*** *Economic stress is a reinforcing factor for the relative levels of liability of foreignness among host country regions.*

3.3 Empirical Study

3.3.1 Empirical Setting

I test my hypotheses using the German car market. Since liability of foreignness has been defined as a competitive disadvantage for foreign multinationals compared to their host country competitors, I propose that the differences in sales quantity of comparable cars between German and foreign producers can be interpreted as the degree of liability of foreignness. The German car market is an especially good setting since it features several large, domestic car manufacturers as well as established presences from almost all international car producers.

Relying on samples of different regions within the host country helps to determine if

liability of foreignness is a national effect or influenced by regional characteristics (Shaver, 1998). To estimate the regional economic effect on liability of foreignness I have to control for all other liability-specific criteria (Mezias, 2002a). Moreover, as both regions, West and East Germany, belong to the same country there should be no difference in the general legislative framework that could bias the results. Thus, estimating the degree of liability of foreignness separately for West and East Germany I can compare the estimation results and interpret the difference as the outcome of the different regional economic performance. In addition, estimating separate demand functions for each region takes into account the different demand behaviors of customers between these regions. Thus, if my theoretical outline holds, the effect of liability of foreignness should be significantly different between West and East Germany.

Germany offers the opportunity to investigate the impact of a different regional economic situation on liability of foreignness. Before reunification in 1990 the East German car market was largely closed to western producers and its citizens were not directly targeted by western marketing efforts. Hence, in East Germany existed a whole regional buyer group within Germany that had little or indirect ties to West German car manufacturers. When the Berlin Wall fell, East Germany had to fulfil an economic restart. Meanwhile, West Germans relied on established patterns and experience. Thus, the West German economy had an advantage compared to East Germany. Since reunification, both parts of Germany have developed a common sense of nationality. Therefore, and because of the failure of East German competitors (sales of the native Trabant and Wartburg models collapsed immediately after the border opening and the firms closed), West German car manufacturers became more and more established as home brands in East Germany. Furthermore, facing a 13 year time lag,

East Germans have had time to handle the short term effects of the disruptive change and established their new preferences and routines. What is more, the East German states are by now fully integrated into a unified German institutional setting. This includes the legal and regulatory framework, finance system, taxation as well as the road infrastructure.

Nevertheless, while East and West Germany share historic, cultural and societal traits and similarities, significant differences in economic structure, behavior and living conditions remain. There exist significant differences in economic performance between the East and West German economies. Comparing the standard economic indicators between the regions shows a strong economic advantage for the West German states (summarized in Table 3.1). Relying on the German GDP, I find that the growth rate in West Germany is 160 times greater than in East Germany in 2005. Moreover, the unemployment rate in East Germany is more than 40% higher than in West Germany. Hence, I find significant lower rates of per capita consumption, saving rates and gross fixed investments in East Germany. In essence, the East German economy suffers from much more economic stress than the West German economy.

Relying on German car market data has several advantages. Car models are the actual item of competition in the automotive market. Automotive companies do hardly compete on individual cars but rather on lines of equally equipped car models. Market data is broadly available for all relevant competitors. It allows benchmark comparisons between foreign and domestic competitors, instead of hypothetical, normative targets. What is more, using market data enables us to judge liabilities of foreignness from the most relevant perspective: Through the eyes of the consumer. Furthermore, using market data delivers value estimations (so called shadow prices) for important company and product characteristics which can subsequently be used to validate the model.

Table 3.1: Comparison of Key Economic Indicator between East and West Germany

Indicator	West Germany	East Germany (incl. Berlin)
Population (as of December 31st 2005)	65,698,000	16,740,000
Unemployment rate (as of August 2006)[a]	7.7%	11.4%
Gross domestic product (2005, current prices, in billion Euro)	1,907.97	337.54
GDP growth (2005, current prices)	1.6%	0.1%
Per capita GDP (2005, current prices, in Euro)	29,045	20,117
Per capita consumption (2004, current prices, in Euro)	16,584	13,281
Savings rate	10.7%	9.3%
Gross fixed investment (2003, current prices, in million Euro)	319,081	65,299

Source: Federal Statistical Office Germany.
[a] Ratio of unemployed persons to total labor force.

3.3.2 Model and Method

For estimating the effects of foreignness and various control variables, I use seemingly unrelated regression (SUR) models. SUR models are well established in the literature and have been used repeatedly for estimating automotive demand (see for example Carlson 1978; Ohta and Griliches 1986). The major advantage of SUR models compared to ordinary least squares (OLS) models is that car demand in West and East Germany is estimated separately for both regions but simultaneously with correlated error terms for both equations (Zellner 1962). It enables us to reflect specific differences in consumption patterns in each regional market (e.g. due to economic opportunities or preferences) through separate equations while incorporating the fact that both are part of a joint German market context. The effects of unobserved quality characteristics captured in the error term of one equation influence the error term of the other equation and vice versa. I achieve a joint variance-covariance matrix for both demand equations by applying SUR. This allows us to directly compare the effects of various factors (including foreignness) on demand in West and East Germany, which

immediately reflects the hypothesis testing strategy outlined before. [4] Moreover, I compare the demand equations in East and West Germany to examine whether they are significant different. That would underline my assumption that regional effects exist.

Another issue needs to be addressed methodologically: Price is endogenous to demand as both consumers and producers know the unobserved (to the econometrician) quality components and producers take its value into account in their pricing decision which, in turn, induces a positive correlation between car prices and unobserved model quality. This leads to a downward bias in the estimate for the parameter corresponding to price, i.e. it is estimated "too small" in absolute value. Obviously, the impact of pricing on car purchasing behavior is too important to be neglected. Hence, I instrument the price variable. Valid instruments have to be highly correlated with the endogenous variable price while uncorrelated with unobserved car quality. Instrument variables with the combination of these particular properties are necessarily rare. I therefore rely on a technique suggested by Berry et al. (1995). It is built around the idea that the price of any car is a function of the characteristics of other cars. Consequently, these characteristics are valid instruments for car price. I use the average specification of all cars in the relevant car segment of the following quality characteristics as instrument variables: car height, cylinder capacity, power steering, brilliant varnish, all-wheel drive and convertible.

I conduct a "first stage" regression analysis with these instrument variables. The table in appendix A (Table 3.6) shows the results. These indicate that the instrument variables are highly correlated with the endogenous variable price. Most instrument variables are

[4] For more details see Griffiths et al. (1992) or Wooldridge (2002).

individually significant; all of them are jointly highly significant. I find no evidence for correlation between the unobserved quality characteristics and the instruments, as "J-tests" for over-identifying restrictions cannot reject the validity of my instruments at any conventional significance level.

In conclusion, I estimate the following formal model:

$$\ln q_{iwest} = \beta_{0west} + \sum_{j=1}^{l} \beta_{jwest} \times X_{ij} + \beta_{jwest} \times D_i + \varepsilon_{iwest}$$

$$\ln q_{ieast} = \beta_{0east} + \sum_{j=1}^{l} \beta_{jeast} \times X_{ij} + \beta_{jeast} \times D_i + \varepsilon_{ieast}$$

$$i = 1,..,N$$

$$cov(\varepsilon_{iwest}, \varepsilon_{ieast}) = \rho$$

where

q_{iwest} : *Quantity sold of model i to customers in West Germany*

q_{ieast} : *Quantity sold of model i to customers in East Germany*

X_{ij} : *Quality characteristic j of model i*

D_i : *Foreign producer dummy of model i*

ρ: *Correlation between the error terms* ε_{iwest} *and* ε_{iwest} *(to be estimated)*

β : *parameters to be estimated*

Finally, I use Wald tests to estimate if the degrees of liability of foreignness are significantly different between East and West Germany.

3.3.3 Data

I rely on a cross sectional dataset for the year 2003 which was specifically generated by combining several major data sources. Table 3.2 provides an overview.

Table 3.2: **Data Sources**

Content	***Data source***
Sales volume and major quality features by model and region	Kraftfahrt-Bundesamt (KBA, Federal Bureau of Motor Vehicles and Drivers)
Prices and enhanced quality features	German car evaluation company EurotaxSchwacke
Advertising expenditure	Automotive intelligence provider B&D Forecast GmbH
Distribution network of licensed dealers	Central associations of German vehicle manufacturers (ZDK/VDA/VDIK)
R&D expenditures	EU industrial R&D investment scoreboard report (European Commission, 2004)
Environmental friendliness ranking EcoTest and breakdown frequency statistics	German automobile assistance association (ADAC)

My dataset is based on official new car registration statistic provided by the Federal Bureau of Motor Vehicles and Drivers. It contains information on 1,744 car models from producers with a production permit for Germany. The latter is mandated by law which implies that I can cover the complete German market. 33% of these models stem from domestic brands the rest is foreign. I combine this database with several other databases and lose some observations due to compatibility issues and resulting missing values. The two most important sources for this consolidation process should be discussed briefly. 408 car models are not ranked by German automobile assistance association ADAC with regards to their environmental friendliness and/or received no reliable pricing quote by the German car evaluation company EurotaxSchwacke (191 car models). Both issues are mostly due to the broad coverage of the official registration dataset which contains both sub-truck vehicles for commercial use (e.g., DaimlerChrysler Vito, Fiat Ducato, Ford Transit) and high-end premium cars (e.g., DaimlerChrysler Maybach, Porsche 911 GT3, Jaguar XKR). Both represent niche products which are typically not covered by the comprehensive ADAC study on the environmental friendliness of passenger cars owned by the majority of Germans. Moreover, the high-end

premium products are sold in low volumes to specific customers for which reliable prices and used-car prices can hardly be estimated. As a result all models from Porsche, Jaguar and Land Rover have to be dropped from the dataset.

I derive a final dataset of 1,198 observations (37% or 439 German, and 63% or 759 foreign models) from 23 domestic and foreign car manufacturers. Hence, the share of domestic brands has increased due to data availability issues but the overall distribution is fairly in line with the initial official statistics.

3.3.4 Variables

Dependent variables

The dependent variables in my study are sales quantities of a particular car model (in logs) in West and East Germany respectively. By choosing the logarithmic form, I rely on the experience of several authors from hedonic price analysis. Using sales quantity as dependent variable, I can control for price. High unit sales could be the result of discount pricing or vice versa. Thus, the causal direction could be problematic. I will rely on the instrument variable estimation procedure described in section 3.3.2 to address it.

Liability of foreignness variables

I add a dummy variable for the foreign brands under consideration as proposed by Mezias (2002a). The coefficient will be the focal point of interest in the following discussion and conclusion. My theoretically developed research question can be tested by comparing the coefficients of this dummy variable in East and West Germany.

Zaheer and Mosakowski (1997) discuss a number of concepts that would indicate whether a company can be considered foreign: location of international headquarters, nationality of the majority of workers, share of foreign shareholders, and nationality of the largest single shareholder or the perception of a company in a particular country. I chose the latter concept and define an automotive brand as domestic or foreign relying on a German point of view. Brands from companies that are born and established in Germany are treated as German and brands from firms with traditional roots in foreign markets are defined as foreign. The reference groups in all further estimations are the car models with a traditional German background: Audi, BMW, Mercedes (DaimlerChrysler), Smart and Volkswagen.[5]

I classify the following brands as foreign: Citroen, Daewoo, Chrysler, Fiat, Ford, Honda, Hyundai, Mazda, MG Rover, Nissan, General Motors (Opel), Peugeot, Renault, Saab, Seat, Skoda, Toyota, Volvo. The engagements of General Motors and Ford in Germany run deep and date back to the pre World War II era. General Motors has owned Opel since 1929 (the company was founded 1862 by German engineer Adam Opel), and the German branch of Ford was established in 1925. Hence, one could certainly argue that these companies should be considered German (i.e. domestic) instead of foreign. Still, I fear that by doing so, I would severely neglect the internalization activities and subsequently liabilities of foreignness of two of the largest car producers in the world. Nevertheless, I estimate and report an additional econometric model (Model 2) which includes separate dummy variables for Ford and Opel to test the consistency of the foreign effect. Ford and Opel are also the only foreign producers with manufacturing plants in Germany. Both possess production plants in West Germany, and Opel an additional one in East Germany. Thus, foreign firms that manufacture in Germany

[5] Porsche is excluded because of data availability issues.

may have an advantage, and this should be controlled for. Finally, I add a dummy variable in the second econometric model for German-owned foreign brands (Skoda, Seat and Chrysler) to further test the stability of my foreign concept. German-owned foreign brands may benefit from joint development, production and distribution activities which may change the "foreignness" perception of domestic customers.

Control variables

As suggested by Mezias (2002a) and Caves (1971, 1974), measuring liability of foreignness implies controlling for the effects of other liabilities, competitive advantages and contextual aberrations. I address these issues through a broad set of firm specific variables and model specific items.

When identifying liabilities of foreignness, it is important to control the impact of other liabilities unrelated to foreignness that may affect foreign subsidiaries. Liabilities with respect to age provide a good example. Foreign subsidiaries may be younger than domestic firms. The predominant view of the effect of age has been a liability of newness: Young organizations are at a survival disadvantage (Carroll 1983, Freeman et al 1983, Baum 1996). While liability of newness correlates with adverse performance, this liability is not a result of foreignness because it affects all young firms, foreign or domestic. Newness is not the only liability with respect to age. Imprinting could create an age-related disadvantage. Stinchcombe (1965) argued that organizations are imprinted by strong environmental forces at birth. Moreover, it is important to control for any liability stemming from size. Size has also been shown to significantly affect firm performance. Liability with respect to size would be unrelated to foreignness because it would affect domestic firms as well. For these reasons,

research designs should also control for the effects of size to avoid confusing any effects from size-related liabilities with effects from liability of foreignness. With regards to other liabilities I capture the effects of newness (time since introduction of both brands and models in Germany), as well as firm size.

A central operationalization challenge is finding measures that exclusively measure disadvantage: most performance measures aggregate foreign firms' advantages and disadvantages. Taking into account the work of Caves (1971) it is necessary to control for firm-specific assets that create a competitive advantage. These assets are helpful to compensate for the disadvantage arising from foreignness (Caves 1971, 1974).

With regards to firm assets that could create a firm-specific competitive advantage I capture the effects distribution networks, advertising and R&D expenditures. Additionally, I control for differences in model price and quality. Specifically, I add control variables for mid- and high-end car segments that capture the different patterns of demand between the regions. Moreover, I rely on previous findings from marketing research[6] and hedonic price analysis[7] to derive four broad quality factors that influence the product evaluation of prospective car

[6] Marketing research focuses largely on consumer preferences. Consumers have individual preferences through which they evaluate the quality of a car, which enables them to decide if and what kind of car they should buy. Hence, it is important for car manufacturers to produce cars that meet these preferences. The prevailing methods employed to evaluate the preferences are conjoint analyses and joint stated/revealed preferences models (Berkovec and Rust, 1985; Brownstone et al., 2000; Bunch et al., 1993; Train and Sonnier, 2002). The dominant quality characteristics in these studies are price, performance, engine type, convenience and operating costs (Brownstone et al., 2000; Bunch et al., 1993).

[7] The basic idea behind hedonic price analysis lies in the assumption that changes in prices can only be correctly assessed once they have been adjusted for changes in quality. Based on the hypotheses that goods are valued for their value-creating characteristics, hedonic prices are defined as the implicit prices of these attributes (Rosen, 1974). For basic work on hedonic prices see studies of Court, 1939 and Griliches, 1961. The hedonic approach has been used in recent years in the automotive sector to investigate a variety of research topics (see for example Goldberg and Verboven, 2001, 2004; Verboven, 1998, 2002). Their prevailing goal has been to achieve segmentation in the car market largely based on performance and size.

buyers: performance, economic and ecological efficiency, safety and convenience/amenity. Table 3.3 provides a detailed overview.

Table 3.3: **Control Variables**

Other liabilities	**Quality differences**				
	Basic outfit	***Performance***	***Economic/ ecolog. efficiency***	***Safety***	***Convenience/ amenity***
Months since model introduction in Germany [b] (in logs)	Price (€; in logs; instrumented)	Engine power (logs, kw)	EcoTest ranking (points) [c]	Airbags (no.)	Leather interior (dummy)
Time since brand introduction in Germany (years in logs)	Model mid-size segment (dummy)	Diesel engine (dummy)	Average value loss after first year (%)	Anti skid system	On-board computer (dummy)
Licensed dealerships per 1,000 cars sold (ratio)	Model upper-size segment (dummy)		Breakdown frequency (no. in logs)	Immobilizer (dummy)	Power windows (no.)
Advertising expenditures (%)	Station wagon (dummy)				
R&D expenditures (% of sales)	Convertible (dummy)				
Employment (no. worldwide in logs)					

[b] Companies have to apply for a general production permit at the KBA (Federal Bureau of Motor Vehicles and Drivers) if they want to sell their product on the German market. I consider the date of this production permit a reliable proxy variable for market entry (for the company as well as a specific model). Timelines refers to introduction to the German market not necessarily world-wide.

[c] The EcoTest ranking is constructed by ADAC (German Automobile Assistance Association) as a composite point score of emissions and fuel efficiency. A car model can achieve 100 points at best. Toyota achieved the highest score of 89 with its hybrid powered Prius model.

3.3.5 Description

The following section gives a brief overview of the average car characteristics and the differences between German and foreign cars. A detailed list of the means and standard deviations for the variables used in this study is provided in Table 3.4. Appendix A (Table 3.8) provides a correlation matrix and variance inflation factors which give no indication of collinearity concerns.

Table 3.4: Descriptive Statistics

Variable	All brands		German brands		Foreign brands	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Sales in West Germany units	1,711.71	3,812.28	2,551.92	5,405.42	1,225.73	2,328.45
Sales in East Germany units	320.83	631.13	335.83	727.58	312.16	568.27
Price € (in thousands)	26.72	14.22	34.63	18.50	22.14	8.03
Months since model introduction	23.22	11.68	23.10	11.55	23.29	11.77
Years since brand introduction	45.60	11.88	51.82	9.49	41.99	11.63
Employment no., worldwide (in thousands)	243.62	106.49	299.24	88.09	211.46	102.94
Engine power kw	99.12	42.81	119.82	53.05	87.14	29.60
Licensed dealerships per 1, 000 cars sold	8.30	5.99	4.64	1.78	10.42	6.53
Advertising expenditures % of total	5.60	2.91	6.28	2.53	5.20	3.04
R&D expenditures % of sales	4.33	0.77	4.72	0.67	4.09	0.72
Model mid-size segment dummy	0.42	0.49	0.51	0.50	0.37	0.48
Model upper-size segment dummy	0.12	0.32	0.16	0.37	0.09	0.28
Station wagon dummy	0.18	0.38	0.20	0.40	0.16	0.37
Convertible dummy	0.06	0.24	0.09	0.29	0.04	0.21
Diesel engine dummy	0.32	0.47	0.35	0.48	0.31	0.46
Av. value loss after first year, %	22.91	160.07	9.29	3.61	30.78	200.72
EcoTest ranking points	62.93	8.63	65.08	5.52	61.69	9.79
Airbags no.	5.04	1.54	5.16	1.48	4.96	1.57
Breakdown frequency no. in logs	3.13	0.39	2.95	0.13	3.23	0.44
Anti skid system dummy	0.54	0.50	0.69	0.46	0.45	0.50
Immobilizer dummy	0.95	0.21	0.99	0.11	0.94	0.25
On-board computer dummy	0.62	0.48	0.54	0.50	0.67	0.47
Leather interior dummy	0.44	0.50	0.33	0.47	0.51	0.50
Power windows no.	3.19	1.07	3.33	1.01	3.11	1.10
No. of observations	1,198		439		759	

The West German car market is much larger than the East German one. Roughly 1,700 units are sold from an average model in the West compared to 320 in the East. German brands outsell foreign ones in West Germany roughly 2:1 (average units sold by model) but this ratio is much smaller and almost at parity in East Germany. However, this does not account for major differences in the prices and quality characteristics. The average car from a domestic brand is more expensive (over € 34,000) compared to their foreign counterparts (above € 22,000). Domestic brands sell also much more frequently in the mid-size and upper-size segments of the market which may explain why they also posses more engine power on

average. Additionally, they also have a lead when it comes to station wagon or convertible models. What is more, the average value loss after the first year is much smaller for domestic brands which may be reflected in a higher initial purchasing price. Foreign brands are not lagging with regards to their share of diesel powered or environmental friendly cars. With regards to safety features, the number of airbags is not a distinct feature but German brands sell anti skid systems much more frequently. Then again, foreign brands are better equipped with leather interior and on-board computer systems. In conclusion, the prima facie comparison provides some trends but no clear picture on how sales, prices and quality characteristics interact. A multivariate analysis is warranted.

3.4 Results

Table 3.5 presents the results. My empirical analysis yields some interesting insights. I find a high degree of correlation between the error terms of the two individual regressions (rho 0.90). Thus, my estimation procedure did in fact produce superior results compared to estimating two separate OLS regressions. Additionally, I confirm that specific regional effects in demand patterns exist. I conduct a likelihood-ratio test on whether a constrained estimation model imposing homogeneous preferences across regions would be equally suitable. This hypothesis is rejected at the 99% significance level. Therefore, I show that the demand equations of East and West Germany are significantly different. Major discussions in this section will focus on the econometric model I with a broad definition of foreign brands. Model II is primarily designed as a consistency check for potential distortions on effects of liability of foreignness from the assignments of Ford and Opel (they are no longer considered

"foreign" but receive separate dummy variables) and German-owned brands. Generally, the consistency checks in model II support my overall results. I will return to its specific implications later in this section.

Table 3.5: Estimation Results of Sales Units from Seemingly Unrelated Regression in West and East Germany

Variable	Model I				Model II			
	West Germany		East Germany		West Germany		East Germany	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Foreign brand (dummy)	-0.94 ***	0.15	-0.32 **	0.13	-0.84 ***	0.19	-0.29 *	0.17
Brand: Opel (dummy)					0.93 ***	0.29	0.42 *	0.25
Brand: Ford (dummy)					0.03	0.25	-0.28	0.22
German owned brand (dummy)					-1.07 ***	0.31	-0.09	0.27
Control variables	YES		YES		YES		YES	
Constant	28.50 ***	2.76	25.22 ***	2.38	26.51 ***	2.95	24.27 ***	2.56
No. of Obs.	1,198		1,198		1,198		1,198	
RMSE	1.71		1.47		1.69		1.47	
R2	0.21		0.22		0.23		0.22	
chi2	326.32		329.5		354.99		336.38	
P>0	0.00		0.00		0.00		0.00	
Wald test on significant difference between foreign brand coefficients	chi2(1) = 88.13		Prob > chi2 = 0.00		chi2(1) = 48.34		Prob > chi2 = 0.00	

*** significant at 99%, ** significant at 95%, * significant at 90%
Robust standard errors.

In the conceptual part of this analysis I highlighted the dangers of misinterpreting other deficiencies as liabilities of foreignness. Thus, the control variables that have entered my estimation are important. Nevertheless, they are not the main focus of my research. I refer to a discussion of major control variable findings in appendix A (Table 3.7).

The results for my variables of interest (i.e., foreign dummy variables) are more important. Foreign companies face a significant disadvantage in firm performance (measured as quantity of sales). The coefficients of the foreign variables are negative and significant in both submarkets (East and West Germany). Foreign car manufacturers face a significantly

competitive disadvantage compared to their German competitors. Therefore, I identify liability of foreignness in the German car market. These results support the existing research outlined in the literature review.

More importantly, I extend this existing research by proposing that the degree of liability of foreignness differs between regions. I argue that the regional economic performance influences the consumer perception of foreign products. Comparing the coefficients of the foreignness variable in the East and West German market, I find actual differences. The coefficient in West Germany is higher than the one for the East German market. I use a Wald test to evaluate if there is a significant difference between the degree of liability of foreignness in East and West Germany and find it supported at the 99% significance level. Therefore, I conclude that foreign car manufacturers face a lower degree of liability of foreignness in East Germany than in the West German market.

To ensure that the foreign effect is not driven by a certain company, I perform several consistency checks. First, I test the significant difference of the foreign effect for the East and West German car market excluding each single foreign brand separately from the foreign group. The results indicate that the regional effect is consistent for all foreign ventures and not a firm-specific effect. The significance levels and related regional differences of the liability of foreignness variable remain stable.[8] Secondly, I estimate an additional econometric model. Model II (see Table 3.5) includes separate dummy variables for Opel and Ford (I exclude them from the "foreign" status) as both firms are well established in the German market and possess production facilities in Germany. Opel shows a significant positive effect in both the

[8] Full regression results of these additional specifications are available from the authors upon request.

West German and East German market. Ford shows no significant effect. That could be traced back to the location of their production facilities in Germany. Moreover, I control for the effect of German ownership of foreign brands (Seat, Skoda and Chrysler) and their performance in the West and East German market. Its significant negative effect is limited to the West German market. The remaining foreign effect remains stable. In conclusion, all consistency checks support the existence of a liability of foreignness effect and the related regional differences remain stable.

How does this empirical finding relate to my conceptual argumentation? Following the idea of region-specific degrees of liability of foreignness (Mezias 2002b), I test two competing hypotheses. I propose that economic stress would lead either to more rational decisions by host country consumers or reinforce their patriotic sentiments. As a result, the effects of liability of foreignness would be, respectively, more or less severe. Based on my empirical findings I conclude that a lower economic performance reduces the degree of liability of foreignness. Low regional economic performance becomes reflected in individual decision making. People reconsider their habitual buying behavior. Thus, potential customers in economically depressed regions evaluate products more objectively and rely less intensively on country of origin stereotypes. They choose the product that fits best with their personal preferences and needs quite rationally. I argue that economic stress propels the degree of rationality in these purchasing decisions which mitigates the effects of liability of foreignness.

These results are somewhat surprising since the country affiliation of automotive brands is very visible compared to other products (Samiee et al., 2005). Hence, customers who want to make a "patriotic" statement through their purchasing behavior could achieve high visibility by "buying German." However, buying a new car is typically a large investment and a

financial burden with high levels of personal involvement in terms of information gathering and comparison prior to the purchasing decision. This may reduce the necessity of host country customers to rely on country stereotypes as an indicator for expected quality (Gurhan-Canli and Maheswaran, 2000). In essence, relying on my analytical framework I can conclude that economic stress in a region may act as a reinforcing factor for making the most educated choices possible, when it comes to expensive purchases, since budgets are more restricted and economic prospects more uncertain (e.g. through unemployment).

3.5 Conclusions

The purpose of this chapter was to identify regional differences in the degree of liability of foreignness in a host country. I argue theoretically that economic stress in a region can have either a mitigating or reinforcing effect. I consider this a valuable contribution to the field. While the existence of liability of foreignness is very well documented, countervailing strategy recommendations for practitioners remain scarce (Mezias, 2002a). Luo et al. (2002) suggest a choice between offensive and defensive strategies which multinational firms can typically only meaningfully conduct after they have entered the host market. I add a spatial dimension to this discussion and underline the importance of economic stress. Firms can assess these regional differences within a country based on publicly available information before their entry decision. Adding a regional contingency to the concept of liability of foreignness allows managers to develop targeted, ex-ante strategies.

During the conceptual part of this study, I explore both paths of the potential impact of economic stress on liability of foreignness, i.e. whether economically depressed regions

become more or less “patriotic” in their purchasing decisions. My empirical study allowed us to investigate the effects of economic stress under the shared cultural and institutional framework of East and West Germany. It reveals that higher levels of economic stress translate into lower levels of liability of foreignness. Following the theoretical reasoning for hypothesis 1 and the related research results of Mehta and Belk (1991) and Thoits (1995) I suspect that customers in these regions have higher incentives to invest in information processing prior to the purchasing decision which reduces their lack of knowledge about foreign product characteristics and the related need to rely on country-of-origin stereotypes.

I have no means to assure whether this leads to a more foreigner-friendly environment or simply reduces the home field advantage of domestic producers, since I measure only the relative disadvantage between the two. This differentiation may be more relevant for academic discussion, however. What may be more important is the argument that these economically depressed regions may be more accessible to foreign producers but also less profitable. I do not suggest that multinational firms should limit their host country engagements to areas under severe economic stress. Instead, I support the notion of using them as a starting point or attractive foothold with lower disadvantages from liability of foreignness before entering or for serving the full market.

3.6 Limitations and Future Research

This chapter suffers from several limitations which may also propel new projects. First of all, one could very easily extend my regional approach towards more fine grained concepts, like urban centres versus rural areas. I consider this a fruitful road for further research

initiatives as market entry strategies especially in the automotive sector would largely focus on metropolitan areas because of agglomeration advantages. My study hints that international firms should initially target cities in temporarily economically depressed regions with a high market potential but this cannot be verified based on the existing analysis.

Secondly, my empirical study is limited to German data. Given the tradition and importance of automotive production in Germany comparative studies of other countries would certainly be interesting. Foreign products may even be considered of superior quality in different country and/or product settings. Hence, foreignness becomes an asset. If this perception is related to luxury status, one would assume that the effect of my study is reversed and foreign luxury products are especially attractive in economically prosperous regions inside a country. One could easily argue that this would hold in emerging economies. Additionally, the differences in economic performance between East and West Germany may be especially pronounced and regionally confined which also warrants comparison with other countries. What is more, the underlying concepts of economic stress, e.g. the social implications of unemployment, may be explored in more detail which may result in further contingencies for dealing with liability of foreignness. Finally, studies with other high or low involvement purchasing decisions may strengthen my results or put them into perspective.

3.7 Appendix A

Table 3.6: **Instrument Regression Results of Car Prices (in logs)**

Variable	Model I		Model II	
	Coef.	SE	Coef.	SE
Foreign brand (dummy)	-0.12 ***	0.01	-0.14 ***	0.01
Brand: Opel (dummy)			0.02	0.02
Brand: Ford (dummy)			0.03	0.02
German owned brand (dummy)			0.02	0.02
Time since model introduction (months in logs)	0.00	0.01	0.00	0.01
Time since brand introduction (years in logs)	0.06 ***	0.02	0.05 ***	0.02
Licensed dealerships per 1,000 cars sold (ratio)	0.00	0.00	0.00	0.00
Advertising expenditures (% of total)	0.00 **	0.00	0.01 **	0.00
R&D expenditures (% of sales)	-0.01	0.01	-0.01	0.01
Employment (no., worldwide in logs)	0.01 *	0.01	0.01	0.01
Model from mid-size segment (dummy)	0.04 **	0.02	0.04 **	0.02
Model from upper-size segment (dummy)	0.08	0.05	0.08	0.05
Station wagon (dummy)	0.03 ***	0.01	0.03 ***	0.01
Convertible (dummy)	0.17 ***	0.02	0.18 ***	0.02
Engine power (logs, kw)	0.55 ***	0.02	0.55 ***	0.02
Diesel engine (dummy)	0.09 ***	0.01	0.09 ***	0.01
Average value loss after 1st year (normalized, %)	0.00 ***	0.00	0.00 ***	0.00
EcoTest ranking (points)	0.00	0.00	0.00	0.00
Airbags (no.)	0.01 **	0.00	0.01 ***	0.00
Breakdown frequency (no. in logs)	0.02 *	0.01	0.03 *	0.01
Anti skid system (dummy)	-0.01	0.01	-0.01	0.01
Immobilizer (dummy)	0.05 **	0.02	0.04 **	0.02
On-board computer (dummy)	0.02 *	0.01	0.02 **	0.01
Leather interior (dummy)	0.05 ***	0.01	0.05 ***	0.01
Power windows (no.)	0.03 ***	0.00	0.02 ***	0.00
Hight (cm, av. segment)	0.00	0.00	0.00	0.00
Brilliant varnish (dummy, av. segment)	0.16	0.10	0.15	0.10
Cylinder capacity (ccm, av. segment)	0.00 ***	0.00	0.00 ***	0.00
Power steering (dummy, av. segment)	-0.19 **	0.08	-0.18 **	0.08
All-wheel drive (dummy, av. segment)	-0.10 *	0.06	-0.11 *	0.06
Convertible (dummy, av. segment)	-0.16	0.11	-0.16	0.11
Constant	6.61 ***	0.36	6.66 ***	0.37

Variable	Model I		Model II	
	Coef.	SE	Coef.	SE
No. of Obs.		1,198		1,198
RMSE		0.13		0.13
R2		0.90		0.90
chi2		10,687.22		10,709.86
P>0		0.00		0.00
Test for instrument variables equaling zero can be rejected	F(6;1169) = 49.38		F(6;1169) = 49.34	
	Prob > F = 0.00		Prob > F = 0.00	

*** significant at 99%, ** significant at 95%, * significant at 90%
Robust standard errors.

Table 3.7: **Estimation Results of Sales Units from Seemingly Unrelated Regression in West and East Germany**

Variable	Model I				Model II			
	West Germany		East Germany		West Germany		East Germany	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Foreign brand (dummy)	-0.94 ***	0.15	-0.32 **	0.13	-0.84 ***	0.19	-0.29 *	0.17
Brand: Opel (dummy)					0.93 ***	0.29	0.42 *	0.25
Brand: Ford (dummy)					0.03	0.25	-0.28	0.22
German owned brand (dummy)					-1.07 ***	0.31	-0.09	0.27
Time since model introduction (months in logs)	-1.19 ***	0.10	-0.82 ***	0.09	-1.15 ***	0.10	-0.82 ***	0.09
Time since brand introduction (years in logs)	1.06 ***	0.19	0.75 ***	0.16	0.98 ***	0.20	0.72 ***	0.17
Licensed dealerships per 1,000 cars sold (ratio)	-0.05 ***	0.01	-0.06 ***	0.01	-0.06 ***	0.01	-0.06 ***	0.01
Advertising expenditures (% of total)	-0.08 ***	0.02	-0.08 ***	0.02	-0.15 ***	0.03	-0.09 ***	0.03
R&D expenditures (% of sales)	-0.26 ***	0.09	-0.19 **	0.07	-0.01	0.11	-0.09	0.09
Employment (no., worldwide in logs)	-0.30 ***	0.10	-0.23 ***	0.09	-0.13	0.12	-0.17 *	0.10
Model from mid-size segment (dummy)	0.21	0.16	0.36 ***	0.14	0.19	0.16	0.36 ***	0.14
Model from upper-size segment (dummy)	0.72 ***	0.21	0.69 ***	0.18	0.78 ***	0.21	0.70 ***	0.18
Station wagon (dummy)	0.13	0.14	0.16	0.12	0.19	0.14	0.16	0.12
Convertible (dummy)	0.57 **	0.22	-0.27	0.19	0.45 **	0.22	-0.31	0.19
Engine power (logs, kw)	-1.03 ***	0.30	-1.60 ***	0.25	-1.11 ***	0.29	-1.65 ***	0.25
Diesel engine (dummy)	0.11	0.12	-0.40 ***	0.11	0.07	0.12	-0.43 ***	0.11
Average value loss after 1st year (normalized, %)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EcoTest ranking (points)	-0.01	0.01	-0.01	0.01	-0.02 **	0.01	-0.01	0.01
Airbags (no.)	0.12 ***	0.04	0.11 ***	0.04	0.10 **	0.04	0.11 ***	0.04
Breakdown frequency (no. in logs)	-0.50 ***	0.17	-0.39 ***	0.14	-0.34 **	0.17	-0.37 **	0.15
Anti skid system (dummy)	0.12	0.12	0.18 *	0.10	0.16	0.12	0.14	0.11
Immobilizer (dummy)	0.32	0.26	0.14	0.23	0.27	0.26	0.11	0.23
On-board computer (dummy)	0.26 **	0.12	0.28 ***	0.10	0.43 ***	0.13	0.29 ***	0.11
Leather interior (dummy)	0.15	0.12	0.09	0.10	0.10	0.12	0.09	0.10
Power windows (no.)	0.01	0.06	0.08	0.05	0.06	0.06	0.10 *	0.05
Price (€; in logs; instrumented)	-1.11 ***	0.33	-0.87 ***	0.28	-1.16 ***	0.33	-0.84 ***	0.28
Constant	28.50 ***	2.76	25.22 ***	2.38	26.51 ***	2.95	24.27 ***	2.56
No. of Obs.	1,198		1,198		1,198		1,198	
RMSE	1.71		1.47		1.69		1.47	
R2	0.21		0.22		0.23		0.22	
chi2	326.32		329.5		354.99		336.38	
P>0	0.00		0.00		0.00		0.00	

*** significant at 99%, ** significant at 95%, * significant at 90%
Robust standard errors.

The variables in Table 3.7 are my control variables. I develop no individual a priori hypotheses on their influences and the discussion is explorative in nature. One would generally expect that better equipped car models produce larger sales numbers. Then again, customers make judgments based not just on quality but quality given the sales price. I control for the latter which means that predictions on significant coefficients and signs are much less obvious.

Most of the control variables show the same signs in both West and East Germany (see Table 3.7). First, I find that the time that a foreign firm has been active in the German market is positively linked to the success of its individual car models. This result is fully in line with Pedersen and Petersen (2003) and Zaheer and Mosakowski (1997). Foreign enterprises learn and adapt to the specific preferences of German customers over time. Additionally, the age of car models makes a significant difference in success. I find that customers prefer car models that are more up to date and consequently reflect their expectations for a modern car more adequately. An announcement of a new model propels sales once the new model finally arrives. Interestingly enough, the overall advertising expenditures of a producer influence the quantity of sales negatively. I cannot observe advertising for a particular car model and it would therefore be farfetched to conclude that ad campaigns are per se useless or even counterproductive. Besides, an important argument for increased advertising expenditures is to balance weaknesses in sales. Considering the negative effect of R&D investments on model turnover I argue that these expenditures are necessary investments into the future and tie up resources in the short run while providing long term competitive potentials. The number of worldwide employees per car manufacturer shows a negative impact on sales performance

Not surprisingly, price elasticities for cars in West and East Germany are negative and

significant. I find a significant negative impact of engine power on sales units in West and East Germany (see Table 3.7). Given that I already control for car price and segment, the room for variation in engine power is limited. I argue that average engine power within a certain price and size segment is sufficient for daily use. Cars with an engine power above this threshold are more likely for exclusive driving behavior (like sports cars). I argue that these high powered cars are for niche markets with lower volumes. Thus, the overall effect of engine power on sales units is negative. Dealership network shows a significant negative effect. Some industry studies have indicated that the brand exclusive dealership network in Germany is too extensive and my results may also point in this direction (see Cleff et al., 2005). Then again, customers are willing to buy reliable car models with superior safety features (as captured by the breakdown frequency and the number of airbags). On-board computer systems make a significant positive difference when it comes to convenience. All other amenities may be considered standard given a certain price and size segment.

Few quality feature differences between the two German markets remain. West Germans are attracted by convertibles while there is no preference in East Germany. A diesel powered engine makes a car less attractive in East Germans while an anti-skid system has a positive impact there. Cars of the mid-size segment are more attractive for East German customers than West German ones.

Generally spoken, I find no strong differences in purchasing patterns between East and West Germany. This may reflect the homogeneity of legal, tax and infrastructure environments in both sub-markets. However, the various significant results indicate that they are valuable control variables for the core theme of this study.

Table 3.8: **Correlation Matrix and Variance Inflation Factors**

	Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1)	Foreign brand	1.00												
(2)	Brand Opel	0.20	1.00											
(3)	Brand Ford	0.22	-0.07	1.00										
(4)	German owend brand	0.23	-0.07	-0.08	1.00									
(5)	Time since model introd.	0.00	0.01	-0.13	0.00	1.00								
(6)	Time since brand introd.	-0.27	0.14	0.15	-0.07	0.05	1.00							
(7)	Licensed dealerships	0.48	-0.05	0.07	0.00	-0.05	-0.23	1.00						
(8)	Advertising expenditures	-0.19	0.27	0.02	-0.40	0.05	0.49	-0.42	1.00					
(9)	R&D expenditures	-0.39	-0.42	0.08	0.12	-0.07	0.35	-0.24	0.06	1.00				
(10)	Employment	-0.35	0.16	0.18	0.18	-0.02	0.29	-0.55	0.34	-0.05	1.00			
(11)	Mid-size segment	-0.14	-0.03	-0.06	-0.09	-0.06	0.09	-0.05	-0.16	0.11	-0.12	1.00		
(12)	Upper size segment	-0.16	-0.10	-0.11	-0.08	-0.03	0.07	0.00	0.05	0.04	-0.03	-0.32	1.00	
(13)	Station wagon	-0.04	-0.11	-0.12	0.05	0.05	0.04	-0.01	0.02	0.14	-0.08	0.19	-0.15	1.00
(14)	Convertible	-0.11	0.03	-0.06	-0.05	0.00	-0.10	0.01	-0.07	0.02	-0.01	-0.07	0.16	-0.12
(15)	Engine power	-0.36	-0.04	-0.14	-0.13	-0.08	0.26	-0.15	-0.02	0.16	0.00	0.41	0.28	0.02
(16)	Diesel engine	-0.01	0.00	0.01	0.05	-0.08	0.07	-0.03	0.05	0.05	0.02	0.03	-0.03	0.06
(17)	Average value loss	0.07	-0.02	-0.02	0.25	0.05	-0.05	0.05	-0.10	-0.02	0.06	-0.06	0.11	-0.03
(18)	EcoTest ranking	-0.18	0.23	-0.03	-0.08	0.01	0.15	-0.21	0.10	0.06	0.14	0.49	-0.13	0.09
(19)	Airbags	0.02	0.01	-0.05	-0.11	-0.10	0.21	0.00	0.11	0.08	-0.06	0.28	-0.08	0.17
(20)	Breakdown frequency	0.34	0.03	-0.04	0.24	0.06	0.05	0.40	-0.21	-0.23	-0.18	-0.02	-0.01	0.01
(21)	Anti skid system	-0.19	0.04	-0.19	0.06	-0.11	0.13	-0.06	0.08	0.21	-0.04	0.15	0.03	0.22
(22)	Immobilizer	0.00	0.07	0.07	0.09	0.04	-0.09	0.07	-0.14	0.01	0.04	0.09	-0.13	0.03
(23)	On-board computer	0.15	-0.03	-0.13	0.18	-0.04	0.08	-0.09	0.11	-0.03	0.02	0.11	-0.02	0.11
(24)	Leather interior	0.20	0.09	0.00	-0.08	-0.01	0.05	0.09	0.13	-0.08	-0.14	0.06	0.09	0.00
(25)	Power windows (no.)	-0.01	-0.11	0.00	-0.01	-0.05	0.01	0.01	0.05	0.05	-0.05	0.32	0.00	0.14
	Variance Inflation Factor (VIF)	3.28	1.96	1.79	2.94	1.15	2.65	2.39	3.22	2.65	2.97	2.34	1.59	1.17

	Variable	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(14)	Convertible	1.00											
(15)	Engine power	0.11	1.00										
(16)	Diesel engine	-0.15	-0.17	1.00									
(17)	Average value loss	0.07	0.02	-0.05	1.00								
(18)	EcoTest ranking	0.08	0.39	-0.20	0.05	1.00							
(19)	Airbags	-0.17	0.23	0.11	-0.06	0.21	1.00						
(20)	Breakdown frequency	0.00	-0.07	0.02	0.19	-0.07	0.04	1.00					
(21)	Anti skid system	-0.03	0.30	0.04	-0.07	0.22	0.37	0.04	1.00				
(22)	Immobilizer	0.02	-0.03	0.09	0.02	0.02	0.30	-0.08	0.07	1.00			
(23)	On-board computer	-0.07	0.18	0.12	-0.01	0.10	0.39	0.12	0.25	0.11	1.00		
(24)	Leather interior	0.03	0.16	0.02	0.04	0.08	0.17	0.25	0.19	0.04	0.29	1.00	
(25)	Power windows	-0.03	0.27	0.16	0.02	0.14	0.55	-0.04	0.26	0.36	0.41	0.27	1.00
	VIF	1.17	2.27	1.23	1.17	1.84	2.15	1.72	1.55	1.44	1.65	1.39	2.16
	Mean VIF	1.99											

Chapter Four

4 The Moderating Effect of Firm Age on Overcoming an Inherent Source of Liability of Foreignness [9]

4.1 Introduction

Existing research shows that the lack of embeddedness of foreign companies in host country markets leads to a disadvantage compared to domestic firms, which is called liability of foreignness (Zaheer 1995; Mezias 2002a). Although several authors have highlighted the existence of the liability of foreignness and the related impact on firm performance (Zaheer 1995; DeYoung and Nolle 1996; Hasan and Hunter 1996; Zaheer and Mosakowski 1997; Miller and Parkhe 2002), relatively little is known concerning strategies that could overcome the lack of local embeddedness (Mezias 2002a; Sofka and Zimmermann 2007). Thus, there is a need to determine how foreign companies can reduce their lack of knowledge about local consumer preferences and the resulting disadvantage to compete successfully with host country competitors.

[9] I appreciate comments and suggestions from Werner Bönte, Holger Patzelt, Wolfgang Sofka, Harry J. Sapienza, David B. Audretsch and Erik Monsen. Earlier versions of this paper were presented at the 2007 Academy of Management Conference in Philadelphia / USA.

In this article, I develop a new theoretical approach by examining the impact of local knowledge gained through market research as a strategic instrument for foreign ventures to overcome the asymmetric distribution of information and, subsequently, to compensate for their liability of foreignness. Using firm-level data from manufacturing firms active in the Spanish market, it is demonstrated that market research is significantly more important to the firm performance of foreign ventures than it is for their Spanish competitors. As international ventures face a higher degree of uncertainty about local consumer preferences (Zaheer and Mosakowski 1997; Kostova and Zaheer 1999), market research can be a useful instrument in reducing the lack of market knowledge, thus enabling foreign firms to compete on a more equal footing with their domestic counterparts.

Additionally, the empirical results show that market research is even more important for young foreign companies than it is for mature ones. Because young firms learn more quickly (Autio et al. 2000), they can assimilate new knowledge about their foreign locale much faster than can older firms. Therefore, they can more quickly and extensively adapt their organizational structure to host country preferences. As result, it is easier for younger firms to overcome the liability of foreignness, which means they will become successful in the foreign market activity sooner than would more mature firms.

In the following sections I describe the concept of market orientation, outline the characteristics of market research and its impact as a strategy to compensate for the lack of embeddedness in host country markets, demonstrate related differences between young and mature foreign ventures, set up the hypotheses, and describe the dataset and the applied methodology. The final sections of this chapter discuss the results and their implications for successful foreign market activity. I conclude with a few suggestions for future research.

4.2 Market Research and the Incorporation of Consumer Preferences

Contemporary market conditions are increasingly complex, turbulent, and uncertain for most types of business. To prosper under such conditions, organizations must find new ways to respond and adapt to consumer needs. Hence, market orientation is one of the key contributors to firm performance (Narver and Slater 1990; Hult and Ketchen 2001; Hult, Ketchen, and Slater 2005). Even though the focus of most market orientation studies has been on the content of the concept or on establishing links between market orientation and firm performance, current research lacks the contribution of market information as instrument to scan the host market and, thus, to decrease the disadvantage of foreign ventures compared to their host market competitors. In addition, recognizing the learning advantages of young companies (see e.g., Slater and Narver 1995), market orientation literature neglects the connection to liability of foreignness and the resulting advantage of young firms to overcome this barrier.

In particular, detailed market information has become a critical resource (Fahey and King 1977; Brush 1992; Mohan-Neill 1995; Peters and Brush 1996; McGee and Sawyer 2003). Several researchers have found that a lack of market and marketing information is one of the most serious problems companies face (Stephenson 1984; Chrisman and Leslie 1989). Ventures are often confronted with market and competitive conditions such as rapid growth, fragmented competition, or share domination by large firms, which can exacerbate the difficulty of collecting market information. For continued successful performance, companies have to closely monitor events, trends, and changes occurring in the market environment (Fahey and King 1977). Research suggests that information about the size and the growth rate

of markets, purchasing characteristics of consumers, competitors' products, prices, and characteristics, and general demographic, economic, and industry trends are crucial for firm success (Brush 1992; Fahey and King 1977).

The market orientation literature departs from both economics and the social exchange view of markets; the underlying assumption is that profit maximization and long-term profitability are ultimate goals of sellers. At the same time, however, these goals can only be achieved by understanding customers' needs and problems as well as competitors' strategies. Scholars have increasingly used sociology and social exchange literature for understanding market behaviour (Hedaa and Ritter 2005). Market orientation is defined as the priority placed on generating, disseminating, and interpreting information about customer needs (Kohli and Jaworski 1990; Sinkula 1994). It is a concept that places the highest priority on the creation and maintenance of superior customer value and that urges firms to develop and exploit market information (Narver and Slater 1990), that is, firms with a strong market orientation act on the knowledge they have gained about customers' needs and desires and are thus able to better serve the customers, leading to a business advantage.[10] Thus, market orientation has emerged as a predictor of a firm's performance.

A number of empirical studies demonstrate that market research is positively correlated with firm performance (e.g., Dollinger 1985; Brush 1992, Baker and Sinkula 1999, Harris 2001, Matsuno and Mentzer 2000). Nevertheless, some studies report a negative or non-significant relationship between the two (Rodriguez Cano et al. 2004). A possible explanation for the

[10] For a detailed discussion of the market orientation concept, see, e.g., Hull, Ketchen, and Slater (2005), Narver and Slater (1990), Kohli and Jaworski (1990), Sinkula (1994), Slater and Narver (1998, 1999), Connor (1999), and Christensen and Bower (1996).

lack of a clear relationship between market orientation and performance is that it is a more complex relationship than those tested for in previous studies (Pelham 1997). For example, the research results of Hult and Ketchen (2001) suggest that the linkage between market orientation, entrepreneurship, innovativeness and organizational learning all contribute to positional advantage, which has a positive effect on performance indicators (Hult and Ketchen 2001).

Most studies that look at the relationship between a firm's market orientation and its performance have implicitly made the assumption that all three market orientation components (entrepreneurship, innovativeness and organizational learning) have an equal and direct influence on firm performance. However, this may not accurately capture the market orientation – performance relationship. For example, it can be argued that the generation and dissemination of market information will not directly impact on firm performance. Rather these subcomponents of market orientation are likely to influence the responsiveness component of market orientation, which, again, has an impact on firm performance. Thus market intelligence generation and dissemination may only influence performance indirectly (Hart and Diamantopoulos 1993). Contradictory evidence is provided by Veldhuizen, Hultink and Griffin (2006), who find that the acquisition of customer information in a high-technology context is directly associated with product advantage. The authors hypothesize that this could be due to intuitive use of market information in the development of innovative products. A comprehensive review of research that has looked at the market orientation-performance relationship is provided in the meta-analysis of Rodriguez Cano et al. (2004).

Furthermore, it has been claimed that in many firms the degree to which activities are market-oriented in the domestic and export settings differs (Cadogan, Paul, Salminen

Puumalainen and Sundqvist 2001, Rose and Shoham 2002). Hence some researchers have studied export market orientation as a construct on its own (see for example, Cadogan et al. 2001, Akyol and Akehurst 2003). The focus of a firm's export market orientation behaviour is towards the firm's export markets, not its domestic markets. Export market-oriented behaviour has been defined as consisting of export market intelligence generation, dissemination and responsive activities (Cadogan et al. 2003), i.e. the components of behavioural market orientation but only in an export setting. Export intelligence generation concerns the activities associated with generating information about the firm's export customers' current and future needs and wants and other exogenous factors; export intelligence dissemination concerns the distribution of this information to the appropriate export decision makers.

Finally, as the industry contexts reveal, market orientation research has started to depart from its early focus on manufacturing and consumer goods firms and moved into service industries and even small and medium-sized firms. The results of Kirca et al. (2005) can show that the market orientation – performance relationship is largely robust across various measurement characteristics. Their analysis demonstrates that market orientation affects performance through innovativeness, customer loyalty and quality.

Overall, as indicated by the literature mentioned above, the popular notion has been that a proper execution of market orientation brings about superior performance. Gathering information about the market increases the probability of identifying and incorporating consumer and industry needs and desires. When this information is used in an appropriate and timely manner, the firm can increase the attractiveness of its products. Adaptation and

customization of products toward local preferences increases demand for them and, subsequently, also improves firm performance.

4.3 Overcoming Liability of Foreignness

The idea that market research is equally beneficial may be too simplistic. For example, Mezias (2002b) pointed out that domestic firms acquire local knowledge at no cost, simply due to the fact that they are natives, and can therefore assimilate that knowledge into their products and structure very quickly and easily. In comparison, foreign ventures lack this kind of embeddedness and are thus much more dependent on strategic instruments to identify and accumulate the needed information. This situation suggests that the performance implications of market research are context specific; that is, the relationship between market research and firm performance depends on the characteristics of the external environment as well as on internal characteristics of the firm.

This paper develops a new theoretical approach by investigating the interaction of foreign ownership and market research. It is argued that market research is a useful way for foreign ventures to increase their local knowledge and, subsequently, increase firm performance in host country markets. Thus, market research should be significantly more crucial to foreign ventures than it is to their host country competitors. In addition, it is proposed that the impact of local knowledge, gained through market research, on firm performance will be different as between young and mature foreign ventures. Although all foreign ventures face the same lack of market knowledge and the related difficulties in accessing this information (see, e.g., Schmidt and Sofka 2006), young firms possess certain advantages (Autio et al. 2000;

Sapienza et al. 2006) in transforming accumulated local knowledge spillovers into organizational changes, new products or procedures, and firm performance. Therefore, young foreign ventures benefit more from using market research as a strategic tool to overcome the liability of foreignness than do their more mature foreign competitors.

To analyze these ideas, I employ a two-stage framework that explains (1) the additional effect of market research on foreign venture performance, and (2) the moderating effect of age on the relation between market research and firm performance in the host country market.

4.3.1 Market Research as Instrument to Overcome the Liability of Foreignness

As globalization improves income levels, customers start to look beyond basic daily-life purchases and begin to ask for higher quality products that are more in tune with their individual culture and personality, a process that actually leads to a greater demand for diversity, instead of a market for completely homogenous products as is sometimes thought (De Mooij 2000). Thus, when a firm enters a foreign market, it needs a completely new body of knowledge (Ghoshal 1987), including knowledge of specific foreign business practices and institutional norms as well as general knowledge about how to organize for foreign competition (Eriksson et al. 1997), a situation that puts the foreign venture at somewhat of a disadvantage, especially when it is in competition with domestic firms. For example, foreign companies do not have the tacit knowledge (Hymer 1976) necessary for identifying differences between home and host country rules so as to understand the needs and preferences of local consumers. Moreover, foreign ventures lack the sort of sustained relationships with local entities that make accessing and incorporating local tacit knowledge in host country markets possible (Schmidt and Sofka 2006). Sustained relationships facilitate

the identification of promising knowledge sources, as patterns of interaction and shared understanding are already established (Laursen and Salter 2006).

Foreign entrants need to develop capabilities that will increase their embeddedness in the host country market (Nelson and Winter 1982; Mitchell 1994). Therefore, a foreign firm's involvement or direct experience in the focal host country significantly affects the degree of the liability of foreignness. Host country involvement could be operationalized as the firm operations to adopt local knowledge. This vicarious learning (Miner and Mezias 1996) helps managers of foreign ventures to identify, understand, and successfully implement practices that mitigate the liabilities of foreignness. As the foreign venture's base of local knowledge increases, the uncertainty of operating abroad eases and this, in turn, leads to a greater commitment to the foreign market (Johanson and Vahlne 1977; 1990, Erikssson et al. 1997). Greater compliance with host country norms minimizes exposure to the liability of foreignness.

Thus, foreign ventures need to develop strategies that will enable them to develop the needed market information (Mezias 2002a; Zaheer et al. 1999), such as instruments that identify, prioritize, and incorporate the needs and preferences of host country consumers. With this knowledge, the foreign firm can become more responsive to local needs, making it more like its local competitors in this regard (Bartlett and Ghoshal 1989; Prahalad and Doz 1987). Market research is a useful means of obtaining an overview of the foreign firm's new environment, identifying local consumer peculiarities, and discovering differences between the preference structure of home and host country consumers. Obtaining this sort of information will increase the foreign firm's social embeddedness in its new environment and adapt its products to local preferences. Thus, the degree of the liability of foreignness is

reduced and foreign firms are able to compete with domestic firms on a more level playing field. Market research is not only a helpful instrument in identifying current trends and preference changes in the host market, but is also a crucial instrument in reducing the lack of social embeddedness faced by foreign firms in host countries. Therefore, market research should be even more important to the success of foreign ventures than it is for domestic firms. Hence, the first hypothesis:

> ***Hypothesis 1****: Market research is significantly more important for the firm performance of foreign ventures in the host country market than it is for their local competitors.*

4.3.2 The Moderating Effect of Age on Overcoming the Liability of Foreignness

But, not all foreign ventures are the same. The firm ability to scan the environment and to transfer the adopted information into customized products depends on certain factors. Research already identified certain aspects that moderate the learning behaviour of firms. For example, Audretsch (1995) showed that industry characteristics influence the learning behaviour of firms and the ability to grow. That is especially important as learning and adjusting structures enhances the chance of survival and firm performance. Firms that are more flexible and adaptable will be the most successful in adjusting to whatever the market demands.

Furthermore, organizational age moderates the learning abilities of firms. Ageing decreases the likelihood to change (Nelson and Winter 1982, Hannan and Freeman 1984, Amburgey, Kelly and Barnett 1993). More in detail, extant research points out that new venture possess

certain advantages compared to mature ones (Fujita 1995; Autio et al. 2000; Sapienza et al. 2006). In a startup, managerial roles are relatively undifferentiated and lines of authority and responsibility are shared (Miller and Friesen 1984). Young firms are able to respond more flexibly to new needs and situations and are generally more open to change than more mature firms (Autio et al. 2000). It is easier for them to incorporate new knowledge as their organizational procedures are less fixed than are those of mature firms. They are thus able to more easily adapt their organizational structure to host country preferences. In comparison, older firms become increasingly resistant to change over time (Hannan 1998), which hampers quick adaptation to new environmental conditions, an attribute especially relevant for foreign market success.

Moreover, young firms possess the so-called learning advantage of newness (Autio et al. 2000). Young firms assimilate new foreign knowledge much faster than their mature counterparts. Organizational learning is defined as the process of assimilating new knowledge into the organization's knowledge base. Knowledge and learning can be expected to have an impact on foreign market growth in that foreign firms must apprehend, share, and assimilate new knowledge in order to compete and grow in host country markets in which they have little or no previous experience (Autio et al. 2000). Additionally, the adoption of new knowledge involves not merely learning the new, but unlearning the old (Bettis and Prahalad 1995; Nonaka 1994). When incorporating new knowledge, firms have to unlearn old routines in order to adopt new routines (Barkema and Vermeulen 1998). The intensity of the learning process is important as it defines the accumulation of new knowledge, which is a crucial issue in today's' marketplace as what may be most important is not how much a firm knows, but

how quickly it can learn (D'Aveni 1994). And how quickly firms learn significantly impacts their subsequent growth (Autio et al. 2000).

The cognitive, political, and relational patterns of young firms are easier to modify than those of older companies because, over time, managers develop biases, standard responses to problems, and relational obligations that limit adaptation to new circumstances (Cyert and March 1963). As firms age, they develop learning barriers that hamper their ability to successfully grow in new environments. Moreover, past successes appear to cause companies to ignore new information and instead stick with what has worked for them in the past (Denrell and March 2001). Further, the history of a company's experience appears to restrict the types of information that the firm tends to focus on while searching for opportunities (Shane 2000). In comparison, the relative flexibility of newer firms allows them to rapidly learn the competencies necessary for continued growth in foreign markets. In short, the survival and prosperity of new ventures may be explained by their ability to adapt and innovate more rapidly in new and dynamic environments than is ordinarily the case for older firms, a theory that is in line with Amburgey, Kelly, and Barnett (1993), who argue that young firms are more likely to adopt changes (such as going international).

This paper incorporates a new theoretical point of view by proposing that young foreign companies benefit more from using market research and the related incorporation of local knowledge spillovers in host country markets than do their mature foreign counterparts. The learning advantage and organizational flexibility of young firms means that they can adapt, incorporate, and transform market research findings into concrete products, or changes to existing products, much more quickly and extensively than more mature firms. Adaptation of the firm's products to host country preferences increases the demand for those products and,

correspondingly, decreases their lack of knowledge in host markets and the related degree of liability of foreignness. In turn, it increases the market success of young foreign firms more than for their mature counterparts.

In conclusion, the impact of market research on foreign market performance should be even greater for young foreign ventures than it is for mature ones since young foreign ventures obtain a greater benefit from using market research as a strategic instrument to reduce the liability of foreignness. Therefore, age becomes a moderator variable that influences the relationship between market research and firm performance for foreign ventures and the related degree of liability of foreignness. Hence, the second hypothesis:

> ***Hypothesis 2:*** *The positive impact of market research for foreign firms is higher for young foreign ventures than more mature ones.*

4.4 Empirical Study

4.4.1 Sample and Data

The hypotheses set out above are tested empirically for a broad sample of manufacturing firms. The database used is the Survey of Business Strategies (*Encuesta Sobre Estrategias Empresariales*; ESEE). The reference population of the ESEE is compromised of companies in the manufacturing industry. The geographical area of reference is Spain and the variables have a time scale of one year. The data include the production activity of firms aggregated to a two-digit level corresponding to the manufacturing sector. The aggregation in 20 industries

corresponds to the NACE code.[11] Unbalanced panel data on the firm level are available for the years 1990 to 2005.

Recent market-orientation literature has suggested that the greater the extend of firm autonomy, the better the ability to leverage local assets and embeddedness (Birkinshaw et al. 1998, Anderson and Forsgren 2000, Andersson, Forsgren and Holm 2002). Ventures independence and the mandate to explore local knowledge are interlinked variables. The capacity to fulfill the exploration mandate is dependent by the extent to which the venture is able to develop its own independent strategy (Cantwell and Mudambi 2005). Only if the firm has a mandate to explore local knowledge it is able to adopt local knowledge and transfer it into superior firm performance. Otherwise, the effect of the transformation of local knowledge into customized firm products and the subsequent increase of local firm performance is absent if the firm is not independent (Cantwell and Mudambi 2005).

Examining the contribution of market orientation on firm performance it is necessary to restrict the sample to firms that possess the required strategic independence to achieve and make use of a knowledge exploration strategy. Therefore, the used sample is restricted to firms that are independent, defined as ventures that hold the majority of the firm shares. [12] Thus, non-independent companies become excluded. Moreover, the variable indicating whether firms rely on market research to commercialize their products is not available for every year and each company. For the majority of firms in the ESEE dataset, information

[11] NACE is a general industrial classification of economic activities within the European Union.

[12] I run several consistency checks using different cut-off points of ownership rate (70%, 90%, 95%, and 99%). The results still hold. Using an external ownership rate of 100% the results show a lack of the effect of market research for foreign ventures confirming the proposition of Cantwell and Mudambi. In the follow-up of this study I rely on the established threshold of 50% to be consistent with previous settings (Cantwell and Mudambi 2005). For more details see section 4.4.4 Robustness Checks.

regarding market research is available for the years 1990, 1994, 1998 and 2002. To exclude causality problems I estimate the impact of market research on firm performance in the subsequent year. Pooled regression estimation is employed.[13] The final sample contains 3,359 observations: 80 observations of 61 foreign ventures and 3,279 observations of 1,778 domestic ventures.

4.4.2 Variables

Dependent Variable

The following sections describe how the theoretical constructs presented so far are operationalized. The dependent variable in this study is sales revenue of a particular firm in the observed year. Sales revenue is defined as all sales revenues derived in one year from firm operations in the Spanish market. To investigate the impact of market research on sales revenue I use the sales revenue of the subsequent year. The logarithmic form for sales revenue is applied.

Independent Variable

With regard to the effect of market research on sales volume, the focus is on whether the firms use market research to adapt to the market. In particular, I investigate whether firms rely on market research when commercializing firm products in the Spanish market and the related impact on sales volume. A contrast code is employed to indicate the impact of market research on firm performance. The variable takes the value 0.5 if the firm performs market

[13] I run a control estimation relying on firms that perform the use of market research for the first time. The results still hold (see section 4.4.4 and Table 4 in Appendix A).

research to commercialize their products and -0.5 otherwise. Contrast codes allow to test whether there are two levels of the variable of interest. That facilitates the interpretation of interactions (see Cohen et al. 2003). However, please note that this variable does *not* reflect the market research activities of foreign ventures before entering a market. Under investigation is the contribution of market research for companies that are already active within the foreign market. Moreover, the variable does *not* examine the overall impact of market research. There are no data available on the firm-specific expenditures for doing market research.

Moreover, firm age is measured using a continuous variable. The logarithmic form is employed to correct for skewness. To examine whether foreign firm performance differs from that of domestic ones, a firm is classified as foreign if 100 percent of its shares are held by foreign owners in the year under review; correspondingly, firms are classified as domestic if 100 percent of the firm shares are held by domestic owners. In this way, joint ventures between domestic and foreign ventures are excluded.[14] It must be notified that the foreign variable controls for the overall effect for foreign companies. That includes the competitive advantages of foreign companies (Caves 1971), the liability of foreignness effect, but also further characteristics of foreign companies like the host country image.[15] Again, I apply contrast codes to distinguish between foreign (0.5) and domestic-owned ventures (-0.5).

To analyze whether using market research to commercialize firm products is more important

[14] To ensure that the findings are consistent, I performed control estimation. I defined foreign ventures as firms where more than 50 percent of the shares are held by foreigners. Domestic ventures were defined as companies where 50 percent and more of the shares are domestically owned. The results still hold. For more details see section 4.4.4 Robustness Checks.

[15] For a more detailed discussion, see Insch and Miller (2005), Mezias (2002b), and Sofka and Zimmermann (2007).

for sales volume of foreign ventures than the overall impact of market research, a two-way interaction variable is introduced, consisting of the foreigner status and the market research variable. The interaction indicates the additional effect of market research for foreign ventures in the host market. In this way it is an indicator of the impact of liability of foreignness. More in detail, the additional impact of market research on sales volume in host markets indicates the lack of knowledge of foreign ventures about local consumer preferences which is, as already mentioned before (see chapter 2.2.4), a source of the information asymmetry between foreign companies and host consumers that causes the disadvantage of being foreign.

Moreover, to investigate the moderating effect of age on the impact of market research on sales revenue for foreign ventures, a three-way interaction term including foreigner status, market research, and firm age is implemented.

However, for higher-order interactions, all lower-order interactions and main effects must be considered jointly (Allison 1977; Aiken and West 1991) because the regression coefficient for the interaction is a partial regression coefficient representing the effect of the interaction if and only if all predictors comprising the interaction are included in the regression equation (Cohen 1978). If only the interaction term were included in the regression equation and the main effects (and lower-order interactions for the three-way interaction) were omitted, then the effect attributed to the interaction would include any first-order effects (and second-order effects for the three-way interaction) that were correlated with the interaction term as well. In this case, any lower-order effects of the independent variables that were correlated with the interaction would be incorrectly attributed to the interaction (Cohen et al. 2003). Thus, it is necessary to include the lower-order interactions of foreigner status with firm age, and market research with firm age.

Control Variables

Factors other than the independent variables may affect the sales volume of firms. To free the estimations from this influence, several control variables are added. To account for sectoral effects; dichotomous variables are included that indicate the technological opportunity level of the sector of activity in which the firm is operating. Thus, four industry dummies (supplier dominated, scale intensive, science based, and specialized suppliers; relying on Pavitt 1984) that indicate the sector a company is operating in are applied. In addition, using reliance on market research to commercialize firm products as a variable of interest makes it necessary to include the R&D expenditures of the company (Veldhuizen, Hultink and Griffin 2006). This ensures that the impact of market research on sales volume is not biased by the impact of the R&D behavior of the company (Kirca et al. 2005). The variable is logged to correct for skewness. Additionally, changes in a firms' market share becomes incorporated to control for growth effects relying on information about the development of the companies' market share during the last year (increase, stable, decrease). Finally, year dummy variables are introduced to capture related macroeconomic effects and a dummy variable, indicating if the observed venture is part of a holding.

4.4.3 Econometric Model and Method

Following the theoretical argument provided above, the impact of market research on sales revenue is estimated. Hierarchical linear regression analysis was used to test whether the model best fit the data. The hierarchical approach is appropriate when analyzing interaction and moderating effects in regression analysis (Bagozzi 1984; Cohen 1978; Cohen and Cohen 1983). To estimate models containing multiplicative interaction terms, a hierarchical testing

procedure should be employed. That is, one should test for higher-order interactions only when all lower-ordered interactions and main effects are included in the equation (Allison 1977). The validity of the procedure has been shown mathematically (Arnold 1982; Cohen and Cohen 1983) as well as in computer simulations (Stone and Hollenbeck 1984). In each step of the hierarchical analysis, the next higher order of interaction is added (two-way and three-way interactions, respectively). An interaction exists if, and only if, the interaction results in a significant contribution over and above the direct effects of the independent variables (Cohen and Cohen 1983). The magnitude of higher-order regression coefficients (as opposed to statistical significance) cannot be evaluated separately from lower-order terms but must be assessed jointly. Typically, assessment of how significant interactions affect the dependent variable is done by first entering selected values of the interaction terms into the regression equation and then plotting these values against the resulting values of the dependent variable (Cohen and Cohen 1983), a practice that is adhered to here. Such plots show the effect of one selected variable, given different combinations of values for other variables.

4.4.4 Robustness Checks

To test the validity of the applied theory and the consistency of the empirical approach, several robustness checks are performed and the details are in Appendix B. Thus, I tested the consistency of the applied model, the reliability of the foreign effect on market research, and the moderating effect of firm age.

Initially, to prove the consistency of the applied estimation procedure and the impact of the interaction variables on firm performance the sample was restricted to firms that performed

market research for the first time (Table 4.4). Additionally, using the sample restriction of Cantwell and Mudambi (2005) on independent ventures, I applied a model for all ventures that hold at least 1 % of their own firm shares (Table 4.5) and other cut-off points (Table 4.6). The results held. In this way, ventures need not be independent but need the possibility to participate in the decision making process to make use of the adopted local knowledge. I also performed a consistency check for ventures that are 100% external owned. The results show no foreign effect for market research (Table 4.7). Thus, the theoretical approach by Cantwell and Mudambi (2005) is supported. Moreover, I used sales volume of the current year as the dependent variable (Table 4.8). In addition, I substituted the applied sector indicator, introducing the NACE code sector dummies in which firms are active (Table 4.9). Furthermore, I control for regional effects that could moderate the degree of liability of foreignness (Table 4.10). Additionally, the impact of market research and firm age is tested for foreign companies defined as firms' holding more than 50% of the firm shares. The superior impact of market research on firm performance for foreign ventures as well as the moderating effect of firm age is supported.

Secondly, the moderating effect of firm age on market research for foreign-owned ventures is estimated separately for foreign and domestic ventures (Tables 4.11 through 4.15), using (1) sales volume of the subsequent year, and (2) sales volume of the current year as dependent variables. Using a seemingly unrelated post estimation and a Wald test I analyzed if the contribution of market research was significantly different between Spanish and foreign-owned companies. The results still hold.

Several researchers already demonstrate that the impact of market research depends on the learning behavior of the company (Santos-Vijande et al. 2005, Jimenez-Jimenez and Cegarra-

Navarro 2007). This is especially important for foreign ventures. Zaheer and Mosakowski (1997) as well as Petersen and Pedersen (2002) claim that organizational learning reduces the degree of liability of foreignness for foreign subsidiaries in host country markets. Adopting local knowledge over time decreases the unfamiliarity of foreign ventures and therefore reduces the lack of embeddedness for foreign ventures. For this reason it is necessary to control for organizational learning behavior and the additional effect for foreign companies. The impact of organizational learning on market research is identified by relying on the frequency that companies perform market research. Thus, I include the number of times a company reports the use of market research divided by the years the company is observed (see Tables 4.16 through 4.18). That is necessary as the ESEE dataset is an unbalanced panel and not all firms are analyzed for the entire period of time. In addition, I interact the learning over time variable with the foreign dummy to investigate the impact of market research for all companies that participate in the survey for at least two observations using random effects panel estimation.[16] The data show that learning over time has a significant positive impact on firm performance but no additional learning effect for foreign ventures to reach the level playing field and compete successfully with domestic competitors. Still, the moderating effect of firm age on market research to commercialize firm products for foreign ventures is significant negative and not biased by certain time effects.

In summary, all tests showed that the results of the applied hierarchical estimation procedure are consistent and therefore support the theoretical outline and the general applicability of the theoretical approach under investigation.

[16] Choosing the random-effects panel estimator I rely on the results of the Breusch-Pagan Lagrange Multiplier and the Hausman test.

4.4.5 Descriptive Statistics

The following section gives a brief overview of the average firm characteristics of domestic and foreign ventures active in the Spanish market. Table 4.1 shows the different firm characteristics for domestic and foreign companies.

Table 4.1: Descriptive Statistics

Definition	*Domestic venture*	*Foreign venture*
No. of observations	3259	80
No. of firms	1778	61
Firm age (in years)	21.22	30.78
Market research (in %)	16.01	42.48
No. of employees (mean)	154.7	646.99
Sales revenue (in Euro)	942,186	1,400,000
Product innovation (yes/no, in %)	27.43	36.59

Foreign owned ventures show a higher sales volume than domestic ones, supporting the theoretical approach of Caves (1971). Foreign ventures make use of their firm-specific assets to compensate for the disadvantage of being foreign and, subsequently, outperform their host market competitors. In line, the number of employees is higher for foreign companies than the average size of Spanish-owned ventures.

Considering the variable of interest, there is a significant difference between domestic and international ventures when it comes to market research. While 42 percent of the international ventures rely on market research, only 16 percent of domestic firms do so, which implies that market research is more important for foreign firms than it is for domestic companies.

Following the approach of Audretsch (1995) that the learning behaviour of firms is related to the innovation activities and the fact that innovativeness supports firm performance, it is

necessary to examine differences in belong to the innovation behaviour between domestic and foreign companies. Alvarez and Molero (2005) already identified differentiated innovation behaviour between foreign and domestic-owned manufacturer in the Spanish market. The descriptive results confirm their finding. Nearly 36.59 percent of the foreign companies have product innovations, whereas only 27.43 percent of the domestic firms do so. Thus, international ventures rely more often on innovative products than do their host country competitors. In addition, foreign-owned companies are older than their Spanish competitors.

Of importance, too, is the distribution of foreign firms across industries. Foreign companies predominate in science based industries that are R&D intensive, like chemicals. On the contrary, the presence of foreign-owned firms is minor in lower R&D intensity industries, such as leather products, wood and wooden furniture.

In conclusion, the descriptive comparison provides some trends but no clear picture on how the variables of interest interact with firm performance. A multivariate analysis is warranted.

4.5 Results

This section provides results about the empirical investigation of market research, firm age, and foreignness on firm performance in the Spanish market. The correlation effects between the independent variables are displayed in Table 4.2.

Table 4.2: Correlation Matrix and Variance Inflation Factors (VIF)

	Definition	1	2	3	4	5	6	7	8
1	Age (in logs; centered)	1.00							
2	Foreign ownership	0.08	1.00						
3	Market research (Yes/No)	0.17	0.10	1.00					
4	Market research * Age	-0.13	0.03	0.14	1.00				
5	Foreign*Market research	0.01	-0.18	0.17	0.09	1.00			
6	Foreign*Age	0.15	0.40	0.07	0.08	0.08	1.00		
7	Foreign*Market research*Age	0.06	0.25	0.10	0.19	0.38	0.35	1.00	
8	Part of a Holding (Yes/No)	0.16	0.31	0.19	0.07	-0.05	0.19	0.10	1.00
9	Market development (+,0,-)	-0.05	0.03	0.06	-0.02	-0.01	0.00	0.01	0.03
10	Product innovation	0.27	0.11	0.33	0.09	0.03	0.10	0.07	0.26
11	No. of Employees (in logs)	0.24	0.14	0.26	0.12	0.03	0.09	0.08	0.38
12	Science based	0.06	0.05	0.03	0.01	0.03	0.08	0.06	0.03
13	Scale intensive	0.01	0.03	0.02	0.01	-0.01	-0.01	-0.01	0.05
14	Supplier dominated	-0.04	-0.07	-0.01	0.00	0.01	-0.02	-0.04	-0.07
15	Year dummy (1994)	-0.01	0.01	-0.02	0.02	0.02	0.01	0.01	-0.03
16	Year dummy (1998)	0.06	0.02	-0.01	0.00	-0.02	0.03	0.00	-0.01
	VIF	1.31	1.43	1.60	1.37	1.33	1.32	1.44	1.31

	Definition	9	10	11	12	13	14	15
9	Market development (+,0,-)	1.00						
10	Product innovation	0.08	1.00					
11	No. of Employees (in logs)	0.05	0.34	1.00				
12	Science based	0.02	0.01	0.00	1.00			
13	Scale intensive	-0.01	0.09	0.09	-0.10	1.00		
14	Supplier dominated	-0.08	-0.13	-0.05	-0.45	-0.22	1.00	
15	Year dummy (1994)	-0.08	0.04	0.01	0.00	-0.01	0.01	1.00
16	Year dummy (1998)	0.11	0.08	-0.02	-0.01	0.01	0.01	-0.32
	VIF	1.04	1.39	1.35	1.34	1.12	1.41	1.14
	Mean VIF	1.35						

To ensure that multicollinearity was not an issue, I mean-centered the continuous variables of interest and applied multicollinearity diagnosis. That is a common procedure when using hierarchical estimation procedure. It is used to reduce the unessential correlation between the interaction variables (see e.g., Kam and Franzese 2007). Overall, the correlations among the independent variables are relatively modest. Thus, I examined the variance inflation factor (VIF) for all independent variables. The VIF measures how much multicollinearity has increased the variance of a slope estimate. There is no well defined critical value for what is

needed to have a "large" VIF. Chatterjee and Price (1991), Neter et al. (1985) and Hair et al. (1998) suggest values above 10 as being large enough to indicate a problem. I found that the effects of the correlation between the independent variables would not hamper the interpretability of the results. Calculations of VIF ranged from a low of 1.04 to a high of 1.84 (see Table 4.2).

The empirical analysis yields some interesting insights. The results are summarized in Table 4.3. The chronology of the analyses is as follows. First, the control variables were introduced, then the independent variables (main effects; Column 3), including market research, firm age, and foreigner status, followed by the two-way interactions (Column 4), and, finally, the three-way interaction variable (Column 5).

The control variables are not the main focus of my research. Thus, the findings are succinctly summarized. Certain sector dummies show a significant impact on sales volume. For the science-based industries, the data show a positive relation with sales volume, whereas scale intensive ventures show a negative coefficient. That's in line with Alvarez and Molero (2005) that trace it back to the relative high weight of low tech sectors in the Spanish economy. Thus, superior technology leads to a higher firm performance. In addition, market development, measured as the change of a firms' market share in the last year, has a significant positive relation with sales volume in the subsequent year. Relying on the number of employees I find a significant positive contribution on sales volume. Moreover, firms that possess product innovations show a higher sales volume than their non-innovative competitors. Incorporating age as a control variable has a significant positive impact. More mature companies show a better firm performance than their younger competitors. Finally, ventures that are part of a holding show a better performance.

Table 4.3: Impact of Market Research on Sales Revenue

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.445 [19.28]***	0.427 [18.70]***	0.438 [18.74]***	0.440 [18.81]***
Part of a Holding (Yes/No)	0.856 [10.12]***	0.661 [7.51]***	0.677 [7.66]***	0.676 [7.66]***
Market development (+,0,-)	0.323 [10.45]***	0.313 [10.27]***	0.315 [10.35]***	0.317 [10.40]***
R&D expenditures (in logs; centered)	0.108 [16.01]***	0.092 [13.52]***	0.092 [13.51]***	0.092 [13.50]***
No. of Employees (in logs)	0.001 [21.83]***	0.001 [21.18]***	0.001 [20.86]***	0.001 [20.91]***
Science based	0.143 [2.19]**	0.114 [1.77]*	0.117 [1.82]*	0.115 [1.78]*
Scale intensive	0.204 [1.91]*	0.192 [1.82]*	0.190 [1.80]*	0.182 [1.73]*
Supplier dominated	0.152 [2.95]***	0.134 [2.63]***	0.136 [2.68]***	0.131 [2.58]**
Year dummy (1994)	-0.081 [1.49]	-0.021 [0.40]	-0.024 [0.44]	-0.025 [0.46]
Year dummy (1998)	-0.008 [0.15]	0.054 [1.00]	0.053 [0.98]	0.053 [0.98]
Foreign ownership		0.876 [5.84]***	1.027 [6.33]***	1.104 [6.71]***
Market research (Yes/No)		0.534 [8.51]***	0.503 [7.83]***	0.499 [7.78]***
Market research * Age			0.078 [1.34]	0.105 [1.38]
Foreign*Market research			0.508 [1.73]*	0.795 [2.54]**
Foreign*Age			-0.263 [1.82]*	-0.202 [1.78]*
Foreign*Market research*Age				-0.035 [2.65]***
Constant	13.026 [240.09]***	13.144 [236.08]***	13.125 [233.73]***	13.126 [233.95]***
Observations	3371	3371	3371	3371
R-squared	0.46	0.47	0.47	0.48
Adjusted R2	0.45	0.47	0.47	0.48
F-test	281.21	250.8	201.41	189.6

Absolute value of t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

The next step of the analysis addresses the individual influence of market research, firm age, and the foreign variable on sales volume over and above the base model. Market research has a significant positive relationship with sales performance, that is, higher sales volume is associated with an increasing probability of relying on market research. This finding is supportive of existing research in the field of market orientation, particularly as it relates to market research. Moreover, foreigner status shows a positive relation with sales volume. As noted before, the dataset does not allow estimating the pure liability of foreignness effect and thus the foreign variable reflects the overall effect, including firm-specific advantages as well as country of origin effects.[17]

The third step (Column 4 of Table 3) examines the additional impact of market research on sales volume for foreign ventures. It shows a significant positive impact on the two-way interaction of market research and the foreign variable. Thus, Hypothesis 1 is supported. Market research is significantly more important for the sales volume of foreign ventures in the host country market than it is for their domestic competitors. However, the three-way interaction, displayed in Column 5, shows a significant negative impact on sales volume, suggesting that the combination of market research, foreigner status, and firm age has an additional effect on sales. The result implies that the positive contribution of market research on foreign firm sales volume is higher for young foreign ventures than mature ones. Thus, Hypothesis 2 is supported.

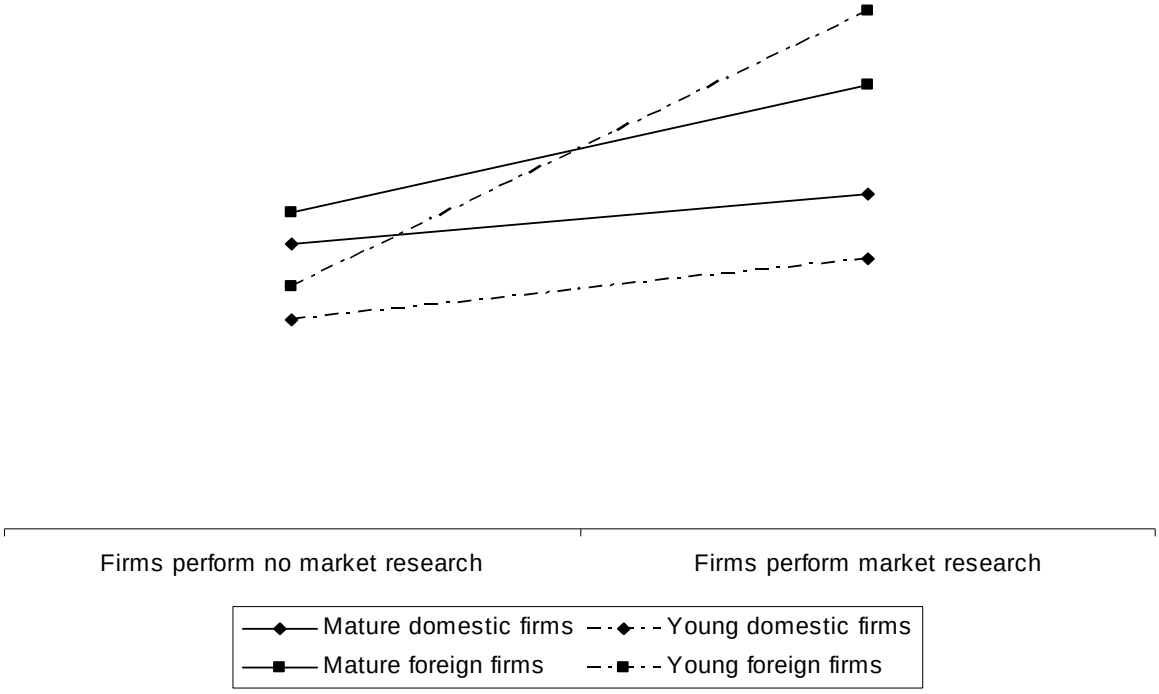
[17] It must be noted that the foreign variable controls for the overall effect for foreign companies and not only for the liability of foreignness effect. That includes the competitive advantage of foreign ventures (Caves 1971) and further characteristics of foreign ventures like host country image, and strategies to overcome the lack of embeddedness. For a more detailed discussion, see Insch and Miller (2005) and Mezias (2002b).

As stated previously (see Section 4.3), to determine the nature of an interaction, the main effects and the interaction term must be considered jointly (Cronbach 1987; Stone and Hollenbeck 1984; Cohen and Cohen 1983). Thus, the two-way interactions of foreigner status and age and market research and age were investigated. The interaction of foreigner status and firm age shows a significant negative contribution. Although foreign ventures may be more likely to possess certain advantages that could help them outperform local competitors, this does not mean that local firms cannot identify, develop, and/or adapt these advantages as well. No customer benefit is safe from competition (see, e.g., Bhide 1986, Ghemawat 1986, Williams 1992).

Finally, the interaction of market research and age shows an insignificant relation with sales volume. Thus, the assumption that market research is more important for young ventures than mature ones seems especially true for foreign firms. Young domestic companies already possess the social embeddedness foreign companies are lacking and this appears to offset the age-related impact of market research on sales volume for domestic companies.

Based on the regression coefficients estimated in my analysis, I plotted the effects of the interplay of market research, firm age, and foreign ownership on firm performance (considering the three main effects, the two-way interactions, and the three-way interaction term) for given values of foreigner status and market research. Age values were set at one standard deviation above and below the mean. The plots are shown in Figure 4.1.

Figure 4.1: Effects of Market Research and Age on Sales Revenue for Domestic and Foreign Ventures



The nature of the interaction indicates that domestic ventures are relatively low performers compared to foreign ones (see Figure 4.1); foreign ventures outperform their host market counterparts. Moreover, all lines in Figure 4.1 slope upward, indicating that regardless of age and foreign ownership, performance increases with the decision to rely on market research. This finding validates previous research results on the universal positive relation of market research and firm performance (see e.g., Hult and Ketchen 2001, Hult et al. 2005). However, it is interesting to note that while performance increases with the decision to do market research for all configurations, it increases at a faster rate for foreign ventures than for domestic ones, which supports Hypothesis 1. Foreign ventures have a more intensive leverage when adopting local knowledge. That result confirms previous research (Hymer 1976), that foreign ventures face unfamiliarity with host markets and thus are more likely to adopt local

information and therefore force the incorporation of host market peculiarities (Sofka and Schmidt 2006). Nevertheless, there are significant differences within the foreign firm group. Those companies that are foreign and young demonstrate the strongest increase in firm performance compared to all other combinations of age and foreignness, a finding that supports Hypothesis 2.

4.6 Discussion and Implication

This study demonstrates that market research contributes to the performance of foreign ventures in host country markets. The results underline the assumption that foreign ventures are disadvantaged by a lack of embeddedness and related local knowledge and that market research is a valuable method of overcoming this disadvantage.

More specifically, this study examined the effect of using market research (to commercialize firm products) on sales volume for all firms, foreign companies, and, especially, young foreign ventures. The effectiveness of using market research as a strategic instrument to overcome the lack of embeddedness was confirmed. The empirical results show that market research has a significant positive impact on sales volume. Market research increases the probability of incorporating local preferences and therefore reduces the lack of embeddedness of firm products.

Moreover, market research can become crucial to successful competition in foreign markets as it increases the probability that local preferences will be incorporated into the foreign firm's business structure and products. Focusing only on internal firm know-how restricts the knowledge exchange with host country customers and can hamper the foreign company's

successful adaptation to the new market. The estimation results imply that firms can use market research as an instrument to overcome this disadvantage of being foreign. Such research will increase a firm's awareness of host country consumer needs and desires, and will do so in a shorter amount of time than if market research is not undertaken.

This finding has especially strong implications for young foreign companies and their market performance. The estimation results imply that market research can be used not only to compensate for the lack of social embeddedness faced by foreign companies, but can also be a valuable means of overcoming the disadvantages inherent in that lack of embededness by allowing young foreign firms to quickly discern and adapt to local needs and preferences, thus leveling the competition playing field.

This study has shown that although market research is generally of benefit to all firms, it is especially beneficial for foreign firms operating in host country market. Generally speaking, market research by foreign firms will prevent them from making social and business mistakes in their new environment and give them a head start in adjusting their old routines to ones that will be more accepted and effective in the host country.

From a managerial perspective, foreign ventures, and especially young foreign ventures, can use market research to reduce the disadvantages of being foreign. Market research can help determine firm-specific advantages that can then to emphasized in competition with local firms. The research reported here also implies that firms should enter foreign markets as early as possible as young firms are able to adapt to local conditions more quickly than are older firms and thus are able to become more successful sooner.

From a researcher's point of view, this article has demonstrated that research is needed to

discover strategies that will be useful in acquiring local knowledge, identifying host country preferences and appropriately adapting firm products thereto, and developing tools that will detect differences between home and host market as well as within the host country.

Finally, the analysis has certain limitations that merit comment. First, the sample includes only firms active in the Spanish market. Conditions affecting ventures outside Spain could be different from those affecting the firms in this sample. Second, the sample came exclusively from the manufacturing sector, and thus the results may not be generalizable to other sectors. These limitations may provide valuable inspiration for further research.

4.7 Appendix B

Table 4.4: **Impact of Market Research on Sales Revenue for Firms that Report Market Research the First Time**

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.433 [18.61]***	0.422 [18.28]***	0.432 [18.01]***	0.434 [18.07]***
Part of a Holding (Yes/No)	0.844 [9.54]***	0.687 [7.41]***	0.700 [7.52]***	0.698 [7.51]***
Market development (+,0,-)	0.338 [10.79]***	0.327 [10.53]***	0.328 [10.57]***	0.329 [10.60]***
R&D expenditures (in logs; centered)	0.105 [14.65]***	0.096 [13.22]***	0.096 [13.26]***	0.096 [13.27]***
No. of Employees (in logs; centered)	0.001 [21.23]***	0.001 [20.61]***	0.001 [20.32]***	0.001 [20.37]***
Science based	0.124 [1.87]*	0.109 [1.65]*	0.113 [1.71]*	0.110 [1.67]*
Scale intensive	0.259 [2.37]**	0.254 [2.34]**	0.251 [2.32]**	0.241 [2.23]**
Supplier dominated	0.129 [2.47]**	0.121 [2.34]**	0.124 [2.39]**	0.120 [2.32]**
Year dummy (1994)	-0.110 [2.03]**	-0.043 [0.79]	-0.043 [0.78]	-0.043 [0.78]
Year dummy (1998)	-0.037 [0.67]	0.031 [0.55]	0.032 [0.59]	0.033 [0.59]
Foreign ownership		0.770 [4.83]***	0.912 [5.05]***	0.982 [5.34]***
Market research		0.466 [6.75]***	0.449 [6.38]***	0.448 [6.37]***
Market research * Age			0.063 [0.99]	0.084 [1.32]
Foreign*Market research			0.376 [1.12]	0.608 [1.72]*
Foreign*Age			-0.217 [1.45]	-0.197 [1.32]
Foreign*Market research*Age				-0.029 [1.99]**
Constant	13.023 [237.95]***	13.132 [230.15]***	13.119 [228.34]***	13.121 [228.45]***
Observations	3245	3245	3245	3245
R-squared	0.43	0.44	0.44	0.45
F-test	244.58	213.91	171.46	161.14

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.5: **Impact of Market Research on Sales Revenue [t+1] (Foreign Owner = 100%; External Ownership < 100%)**

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.449 [20.50]***	0.429 [19.76]***	0.441 [19.77]***	0.442 [19.83]***
Part of a Holding (Yes/No)	1.029 [15.63]***	0.894 [13.12]***	0.900 [13.20]***	0.900 [13.20]***
Market development (+,0,-)	0.315 [10.77]***	0.302 [10.48]***	0.305 [10.55]***	0.306 [10.60]***
R&D expenditures (in logs; centered)	0.103 [16.78]***	0.087 [13.94]***	0.088 [14.00]***	0.088 [14.03]***
No. of Employees (in logs; centered)	0.002 [24.48]***	0.001 [23.59]***	0.001 [23.34]***	0.001 [23.39]***
Science based	0.175 [2.86]***	0.141 [2.33]**	0.144 [2.38]**	0.143 [2.37]**
Scale intensive	0.231 [2.41]**	0.210 [2.22]**	0.205 [2.17]**	0.193 [2.03]**
Supplier dominated	0.152 [3.09]***	0.131 [2.70]***	0.135 [2.77]***	0.130 [2.67]***
Year dummy (1994)	-0.064 [1.24]	-0.004 [0.08]	-0.005 [0.10]	-0.006 [0.11]
Year dummy (1998)	0.022 [0.43]	0.087 [1.69]*	0.087 [1.69]*	0.086 [1.67]*
Foreign ownership		0.610 [5.27]***	0.767 [5.89]***	0.826 [6.23]***
Market research		0.519 [8.97]***	0.488 [8.12]***	0.483 [8.03]***
Market research * Age			0.046 [0.84]	0.070 [1.27]
Foreign*Market research			0.465 [1.70]*	0.574 [2.33]**
Foreign*Age			-0.269 [2.31]**	-0.221 [1.87]*
Foreign*Market research*Age				-0.023 [2.34]**
Constant	13.041 [252.29]***	13.151 [247.82]***	13.136 [244.96]***	13.136 [245.12]***
Observations	3727	3727	3727	3727
R-squared	0.51	0.52	0.52	0.53
Adjusted R2	0.51	0.52	0.52	0.53
F-test	383.88	338.3	271.48	255.16

Absolute value of t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.6: **Impact of Market Research on Sales Revenue [t+1] (Different Degrees of External Ownership)**

Definition	50% external owned	70% external owned	90% external owned	95% external owned	99% external owned
Age (in logs; centered)	0.393 [17.22]***	0.391 [17.44]***	0.391 [17.63]***	0.388 [17.61]***	0.390 [17.81]***
Foreign ownership	1.036 [7.37]***	0.959 [7.27]***	0.879 [6.74]***	0.827 [6.59]***	0.815 [6.69]***
Market research (Yes/No)	0.463 [7.02]***	0.466 [7.36]***	0.477 [7.71]***	0.468 [7.62]***	0.464 [7.61]***
Market research * Age	0.102 [1.91]*	0.078 [1.53]	0.085 [1.69]*	0.076 [1.54]	0.071 [1.44]
Foreign*Market research	0.815 [3.04]***	0.827 [3.37]***	0.719 [3.05]***	0.799 [3.46]***	0.747 [3.33]***
Foreign*Age	-0.154 [1.32]	-0.130 [1.15]	-0.150 [1.31]	-0.181 [1.65]*	-0.202 [1.99]**
Foreign*Market research*Age	-0.031 [3.24]***	-0.034 [3.92]***	-0.027 [3.14]***	-0.026 [3.14]***	-0.022 [2.80]***
Part of a Holding (Yes/No)	0.754 [8.79]***	0.875 [11.19]***	0.904 [12.47]***	0.920 [12.99]***	0.959 [13.92]***
Market development (+,0,-)	0.311 [10.68]***	0.307 [10.72]***	0.307 [10.90]***	0.308 [10.99]***	0.310 [11.13]***
R&D expenditures (in logs; centered)	0.073 [15.18]***	0.070 [14.72]***	0.069 [14.94]***	0.069 [14.90]***	0.068 [14.93]***
No. of Employees (in logs)	0.001 [6.69]***	0.001 [6.86]***	0.001 [7.04]***	0.001 [7.07]***	0.001 [7.18]***
Science-based	0.126 [2.60]***	0.144 [3.04]***	0.148 [3.16]***	0.154 [3.31]***	0.156 [3.36]***
Scale-intensive	0.181 [1.89]*	0.172 [1.76]*	0.160 [1.68]*	0.171 [1.82]*	0.171 [1.85]*
Supplier-dominated	0.101 [2.39]**	0.102 [2.45]**	0.104 [2.50]**	0.105 [2.54]**	0.105 [2.55]**
Year dummy (1994)	0.189 [3.62]***	0.202 [3.93]***	0.217 [4.26]***	0.212 [4.19]***	0.219 [4.36]***
Year dummy (1998)	0.282 [5.52]***	0.291 [5.82]***	0.306 [6.17]***	0.305 [6.21]***	0.310 [6.33]***
Year dummy (2002)	0.479 [8.83]***	0.504 [9.43]***	0.507 [9.56]***	0.501 [9.52]***	0.503 [9.64]***
Constant	14.683 [233.15]***	14.689 [235.75]***	14.689 [239.24]***	14.690 [240.57]***	14.685 [242.95]***
Observations	4344	4531	4628	4679	4727
R-squared	0.48	0.50	0.51	0.52	0.52
Adjusted R2	0.48	0.50	0.51	0.51	0.52
F-test	232.11	269.16	292.63	299.77	312.42

Robust t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.7: **Impact of Market Research on Sales Revenue [t+1] (Foreign Owner = 100%; External Ownership = 100%)**

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.105 [2.51]**	0.077 [1.87]*	0.165 [2.69]***	0.180 [2.94]***
Part of a Holding (Yes/No)	0.757 [4.69]***	0.691 [4.39]***	0.718 [4.51]***	0.711 [4.48]***
Market development (+,0,-)	0.275 [4.51]***	0.252 [4.18]***	0.261 [4.32]***	0.261 [4.33]***
R&D expenditures (in logs; centered)	0.057 [5.88]***	0.045 [4.69]***	0.045 [4.69]***	0.044 [4.61]***
No. of Employees (in logs; centered)	0.001 [14.32]***	0.000 [13.97]***	0.000 [13.84]***	0.000 [13.86]***
Science based	0.309 [2.57]**	0.216 [1.83]*	0.235 [1.97]**	0.248 [2.09]**
Scale intensive	-0.135 [0.85]	-0.096 [0.62]	-0.105 [0.67]	-0.094 [0.61]
Supplier dominated	0.237 [2.15]**	0.170 [1.58]	0.174 [1.59]	0.160 [1.47]
Year dummy (1994)	-0.102 [0.85]	-0.021 [0.18]	-0.016 [0.14]	-0.007 [0.06]
Year dummy (1998)	-0.179 [1.50]	-0.077 [0.65]	-0.062 [0.52]	-0.061 [0.51]
Foreign ownership		0.303 [3.31]***	0.339 [3.53]***	0.320 [3.33]***
Market research		0.457 [4.89]***	0.465 [3.06]***	0.497 [3.28]***
Market research * Age			0.018 [0.21]	-0.160 [1.49]
Foreign*Market research			0.009 [0.05]	-0.070 [0.37]
Foreign*Age			-0.169 [2.02]**	-0.228 [2.65]***
Foreign*Market research*Age				0.015 [2.79]***
Constant	14.130 [78.99]***	14.056 [77.95]***	14.007 [75.45]***	14.018 [75.86]***
Observations	700	700	700	700
R-squared	0.38	0.41	0.41	0.42
Adjusted R2	0.37	0.40	0.40	0.41
F-test	41.41	39.74	32.11	30.89

Absolute value of t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.8: **Impact of Market Research on Sales Revenue in Period [t] (Foreign = 100%; External Ownership < 50%)**

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.537 [26.54]***	0.528 [26.17]***	0.532 [25.66]***	0.533 [25.70]***
Part of a Holding (Yes/No)	0.834 [11.38]***	0.730 [9.59]***	0.744 [9.76]***	0.744 [9.77]***
Market development (+,0,-)	0.191 [7.22]***	0.183 [6.94]***	0.183 [6.93]***	0.184 [6.94]***
R&D expenditures (in logs; centered)	0.129 [24.80]***	0.122 [22.78]***	0.123 [22.83]***	0.123 [22.83]***
No. of Employees (in logs; centered)	0.001 [22.31]***	0.001 [21.46]***	0.001 [21.32]***	0.001 [21.34]***
Science based	0.054 [0.96]	0.034 [0.61]	0.039 [0.70]	0.039 [0.70]
Scale intensive	0.265 [2.88]***	0.260 [2.84]***	0.260 [2.84]***	0.256 [2.80]***
Supplier dominated	0.137 [3.12]***	0.127 [2.91]***	0.131 [2.99]***	0.129 [2.94]***
Year dummy (1994)	-1.091 [23.87]***	-1.084 [23.81]***	-1.085 [23.81]***	-1.085 [23.83]***
Year dummy (1998)	-0.936 [20.06]***	-0.928 [19.96]***	-0.926 [19.91]***	-0.926 [19.92]***
Foreign ownership		0.550 [3.81]***	0.728 [4.58]***	0.795 [4.87]***
Market research		0.306 [5.49]***	0.287 [5.04]***	0.285 [5.00]***
Market research * Age			-0.019 [0.37]	-0.005 [0.09]
Foreign*Market research			0.569 [2.00]**	0.803 [2.58]**
Foreign*Age			-0.312 [2.13]**	-0.251 [1.67]*
Foreign*Market research*Age				-0.023 [2.12]**
Constant	13.983 [335.01]***	14.073 [313.10]***	14.065 [309.60]***	14.065 [309.66]***
Observations	4850	4850	4850	4850
R-squared	0.50	0.50	0.50	0.51
Adjusted R2	0.50	0.50	0.50	0.51
F-test	480.76	408.13	327.32	307.21

Absolute value of t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.9: Impact of Market Research on Sales Revenue – NACE Industry Code

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.402 [17.44]***	0.385 [16.93]***	0.398 [17.06]***	0.400 [17.15]***
Part of a Holding (Yes/No)	0.839 [10.20]***	0.648 [7.56]***	0.664 [7.72]***	0.663 [7.72]***
Market development (+,0,-)	0.295 [9.75]***	0.286 [9.60]***	0.289 [9.68]***	0.290 [9.72]***
R&D expenditures (in logs; centered)	0.111 [16.57]***	0.097 [14.33]***	0.097 [14.32]***	0.097 [14.30]***
No. of Employees (in logs)	0.001 [21.92]***	0.001 [21.19]***	0.001 [20.85]***	0.001 [20.90]***
Meat-processing industry	0.775 [4.96]***	0.871 [5.65]***	0.879 [5.71]***	0.881 [5.72]***
Foodstuff and tobacco	-0.071 [0.60]	-0.024 [0.21]	-0.021 [0.18]	-0.025 [0.22]
Drinks	0.683 [3.72]***	0.748 [4.13]***	0.753 [4.16]***	0.732 [4.04]***
Textiles	-0.396 [3.47]***	-0.299 [2.65]***	-0.298 [2.64]***	-0.299 [2.65]***
Leather and footwear	-0.941 [6.69]***	-0.849 [6.12]***	-0.849 [6.12]***	-0.851 [6.14]***
Wood industry	-0.306 [1.92]*	-0.194 [1.23]	-0.188 [1.19]	-0.189 [1.20]
Paper	0.243 [1.42]	0.368 [2.18]**	0.367 [2.18]**	0.365 [2.17]**
Editing and printing	-0.322 [2.48]**	-0.223 [1.74]*	-0.218 [1.70]*	-0.220 [1.72]*
Rubber and plastics	-0.254 [1.80]*	-0.191 [1.37]	-0.164 [1.17]	-0.167 [1.20]
Non-metallic mineral products	-0.300 [2.37]**	-0.201 [1.61]	-0.190 [1.52]	-0.188 [1.51]
Iron and steel	-0.012 [0.07]	0.150 [0.90]	0.150 [0.90]	0.152 [0.91]
Metallic products	-0.305 [2.52]**	-0.178 [1.49]	-0.172 [1.43]	-0.171 [1.43]
Machinery and mechanical products	-0.525 [4.25]***	-0.414 [3.39]***	-0.410 [3.35]***	-0.407 [3.33]***
Office machinery	-0.491 [2.27]**	-0.546 [2.56]**	-0.565 [2.64]***	-0.575 [2.69]***
Electrical and electronic machinery	-0.299 [2.34]**	-0.241 [1.91]*	-0.235 [1.85]*	-0.227 [1.79]*
Other transport materials	-0.547 [3.07]***	-0.416 [2.36]**	-0.420 [2.38]**	-0.424 [2.41]**
Motor vehicles	0.090 [0.57]	0.147 [0.94]	0.152 [0.97]	0.146 [0.94]
Furniture	-0.479 [3.70]***	-0.380 [2.97]***	-0.371 [2.90]***	-0.371 [2.90]***
Other manufacturing industries	-0.636 [4.08]***	-0.534 [3.47]***	-0.531 [3.45]***	-0.532 [3.46]***
Year dummy (1994)	-0.091 [1.72]*	-0.036 [0.69]	-0.039 [0.74]	-0.039 [0.76]
Year dummy (1998)	0.002 [0.03]	0.058 [1.10]	0.057 [1.07]	0.057 [1.07]
Foreign ownership		0.865 [5.87]***	1.018 [6.39]***	1.089 [6.74]***
Market research (Yes/No)		0.527 [8.58]***	0.493 [7.86]***	0.490 [7.82]***
Market research * Age			0.090 [1.59]	0.115 [2.00]**
Foreign*Market research			0.557 [1.95]*	0.826 [2.71]***
Foreign*Age			-0.249 [1.76]*	-0.192 [1.35]
Foreign*Market research*Age				-0.033 [2.55]**
Constant	13.403 [132.28]***	13.422 [133.59]***	13.398 [132.26]***	13.396 [132.35]***
Observations	3371	3371	3371	3371
R-squared	0.49	0.51	0.51	0.52
Adjusted R2	0.49	0.50	0.50	0.51
F-test	123.15	121.91	110.59	107.52

Absolute value of t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.10: Impact of Market Research on Sales Revenue – Regional Effects

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.384 [16.72]***	0.371 [16.63]***	0.380 [16.62]***	0.382 [16.66]***
Parent company (Yes/No)	0.880 [10.11]***	0.725 [8.50]***	0.735 [8.60]***	0.734 [8.59]***
Market development (+,0,-)	0.314 [10.58]***	0.305 [10.45]***	0.308 [10.58]***	0.309 [10.61]***
R&D expenditures (in logs; centered)	0.083 [16.78]***	0.072 [15.00]***	0.072 [15.02]***	0.072 [14.99]***
No. of Employees (in logs)	0.002 [6.72]***	0.001 [6.83]***	0.001 [6.77]***	0.001 [6.76]***
Science-based	0.190 [3.75]***	0.162 [3.25]***	0.163 [3.27]***	0.160 [3.23]***
Scale-intensive	0.182 [1.87]*	0.181 [1.86]*	0.177 [1.82]*	0.171 [1.76]*
Supplier-dominated	0.181 [4.10]***	0.157 [3.63]***	0.158 [3.65]***	0.155 [3.59]***
Year dummy (1994)	0.166 [3.15]***	0.193 [3.72]***	0.192 [3.70]***	0.191 [3.69]***
Year dummy (1998)	0.249 [4.82]***	0.277 [5.46]***	0.276 [5.43]***	0.275 [5.42]***
Year dummy (2002)	0.429 [7.88]***	0.478 [8.86]***	0.478 [8.86]***	0.479 [8.88]***
Andalucia	0.057 [0.65]	0.052 [0.60]	0.048 [0.56]	0.046 [0.53]
Aragon	0.125 [1.27]	0.106 [1.07]	0.097 [0.98]	0.095 [0.95]
Asturias	0.308 [1.75]*	0.323 [1.85]*	0.325 [1.86]*	0.326 [1.87]*
Baleares	-0.376 [1.88]*	-0.377 [1.90]*	-0.378 [1.91]*	-0.377 [1.90]*
Canarias	0.264 [1.43]	0.232 [1.24]	0.228 [1.23]	0.229 [1.23]
Cantabria	0.783 [4.57]***	0.793 [4.71]***	0.783 [4.63]***	0.782 [4.62]***
Castilla La Mancha	0.033 [0.34]	0.034 [0.35]	0.035 [0.35]	0.035 [0.35]
Castilla Y Leon	0.439 [4.42]***	0.407 [4.12]***	0.403 [4.09]***	0.401 [4.07]***
Cataluna	0.267 [4.49]***	0.239 [4.05]***	0.235 [3.98]***	0.235 [3.98]***
Extremadura	-0.383 [1.58]	-0.397 [1.66]*	-0.397 [1.66]*	-0.397 [1.66]*
Galicia	0.272 [2.84]***	0.214 [2.29]**	0.211 [2.26]**	0.211 [2.26]**
Madrid	0.235 [3.57]***	0.222 [3.40]***	0.220 [3.37]***	0.221 [3.40]***
Murcia	0.407 [3.25]***	0.391 [3.18]***	0.391 [3.18]***	0.392 [3.19]***
Navarro	0.154 [1.14]	0.135 [0.98]	0.139 [1.01]	0.135 [0.98]
Pais Vasco	0.324 [3.71]***	0.303 [3.52]***	0.300 [3.50]***	0.304 [3.54]***
La Rioja	0.187 [1.38]	0.150 [1.11]	0.156 [1.15]	0.163 [1.20]
Foreign ownership		0.816 [5.98]***	0.947 [6.54]***	1.033 [7.43]***
Market research (Yes/No)		0.480 [7.39]***	0.449 [6.87]***	0.444 [6.80]***
Market research * Age			0.074 [1.41]	0.096 [1.79]*
Foreign*Market research			0.475 [1.94]*	0.803 [3.05]***
Foreign*Age			-0.213 [1.74]*	-0.139 [1.18]
Foreign*Market research*Age				-0.031 [3.37]***
Constant	14.346 [168.99]***	14.495 [171.22]***	14.480 [170.05]***	14.479 [169.96]***
Observations	4344	4344	4344	4344
R-squared	0.48	0.49	0.49	0.49
Adjusted R2	0.47	0.49	0.49	0.49
F-test	135.76	135.17	123.59	123.57

Robust t statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.11: **Impact of Market Research on Sales Revenue (Extern <50; Foreign=100)**

Definition	Domestic	Foreign
Age (in logs)	0.403 [15.95]***	0.159 [0.88]
Market research (Yes/No)	0.409 [5.94]***	1.255 [4.12]***
Market research * Age	-0.004 [0.05]	-0.632 [2.29]**
Part of a Holding (Yes/No)	0.657 [7.15]***	0.747 [2.30]**
Market development (+,0,-)	0.314 [10.13]***	0.229 [1.17]
Product innovation	0.097 [13.77]***	0.016 [0.47]
No. of Employees (in logs)	0.001 [19.52]***	0.002 [5.35]***
Science based	0.103 [1.56]	0.455 [1.27]
Scale intensive	0.206 [1.88]*	-0.618 [1.33]
Supplier dominated	0.129 [2.50]**	0.145 [0.38]
Year dummy (1994)	-0.002 [0.03]	0.222 [0.66]
Year dummy (1998)	0.087 [1.55]	0.383 [0.91]
Constant	0.594 [10.05]***	0.323 [0.90]
Observations	3259	80
Wald test on significant difference between market research coefficients	chi2(1) = 9.86	Prob > chi2 = 0.00
R-squared	0.45	0.66
Adjusted R2	0.44	0.60
F-test	200.74	9.98

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.12: **Impact of Market Research on Sales Revenue (Extern <100; Foreign=100)**

Definition	Domestic	Foreign
Age (in logs)	0.405 [16.84]***	0.181 [1.50]
Market research (Yes/No)	0.398 [6.18]***	1.038 [4.56]***
Market research * Age	-0.022 [0.36]	-0.498 [2.25]**
Part of a Holding (Yes/No)	0.936 [13.17]***	0.309 [1.27]
Market development (+,0,-)	0.306 [10.32]***	0.235 [1.78]*
Product innovation	0.092 [14.16]***	0.035 [1.49]
No. of Employees (in logs)	0.001 [21.27]***	0.002 [8.13]***
Science based	0.114 [1.82]*	0.593 [2.55]**
Scale intensive	0.217 [2.18]**	-0.126 [0.40]
Supplier dominated	0.127 [2.54]**	0.193 [0.75]
Year dummy (1994)	0.018 [0.33]	0.498 [2.00]**
Year dummy (1998)	0.128 [2.35]**	0.536 [1.83]*
Constant	0.589 [10.38]***	0.428 [1.61]
Observations	3556	138
Wald test on significant difference between market research coefficients	chi2(1) = 9.20	Prob > chi2 = 0.00
R-squared	0.49	0.62
Adjusted R2	0.49	0.58
F-test	260.2	15.73

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.13: **Impact of Market Research on Sales Revenue (External <50; Foreign=50)**

Definition	Domestic	Foreign
Age (in logs)	0.362 [10.86]***	-0.050 [0.29]
Market research (Yes/No)	0.428 [4.80]***	1.560 [4.81]***
Market research * Age	-0.001 [0.01]	-0.708 [2.50]**
Part of a Holding (Yes/No)	0.823 [7.52]***	0.967 [3.11]***
Market development (+,0,-)	0.322 [8.30]***	0.378 [2.03]**
Product innovation	0.090 [12.85]***	0.023 [0.86]
No. of Employees (in logs)	0.001 [13.93]***	0.001 [5.02]***
Science based	0.200 [2.51]**	0.689 [1.78]*
Scale intensive	-0.010 [0.08]	-0.285 [0.59]
Supplier dominated	0.203 [3.30]***	0.144 [0.40]
Year dummy (1994)	-0.174 [2.04]**	0.011 [0.01]
Year dummy (1994)	-0.106 [1.99]**	0.002 [0.01]
Year dummy (1998)	0.564 [1.05]	0.597 [1.40]
Constant	0.557 [8.30]***	0.674 [1.60]
Observations	3382	115
Wald test on significant difference between market research coefficients	chi2(1) = 11.55	Prob > chi2 = 0.00
R-squared	0.48	0.72
Adjusted R2	0.47	0.66
F-test	162	11.25

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.14: **Impact of Market Research on Current Sales Revenue (External <50)**

Definition	Domestic	Foreign
Age (in logs)	0.408 [20.83]***	0.151 [0.92]
Market research (Yes/No)	0.406 [7.62]***	1.056 [3.81]***
Market research * Age	-0.029 [0.57]	-0.572 [2.34]**
Part of a Holding (Yes/No)	0.787 [11.41]***	0.821 [3.02]***
Market development (+,0,-)	0.264 [11.17]***	0.282 [1.67]*
Product innovation	0.086 [17.56]***	0.025 [0.92]
No. of Employees (in logs)	0.001 [25.93]***	0.002 [6.07]***
Science based	0.059 [1.16]	0.635 [2.06]**
Scale intensive	0.302 [3.67]***	-0.808 [1.91]*
Supplier dominated	0.099 [2.54]**	0.429 [1.32]
Year dummy (1990)	-1.855 [37.67]***	-1.860 [1.69]*
Year dummy (1994)	-2.096 [43.42]***	-2.383 [2.24]**
Year dummy (1998)	-1.923 [39.33]***	-2.108 [1.99]**
Constant	1.467 [30.14]***	2.550 [2.29]**
Observations	4723	90
Wald test on significant difference between market research coefficients	chi2(1) = 7.13	Prob > chi2 = 0.01
Adjusted R2	0.61	0.64
F-test	522.89	12.46

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.15: **Impact of Market Research on Current Sales Revenue (External <100)**

Definition	Domestic	Foreign
Age (in logs)	0.407 [21.85]***	0.158 [1.43]
Market research (Yes/No)	0.403 [8.10]***	0.837 [4.28]***
Market research * Age	-0.063 [1.34]	-0.429 [2.23]**
Part of a Holding (Yes/No)	1.005 [19.01]***	0.555 [2.57]**
Market development (+,0,-)	0.253 [11.19]***	0.221 [1.96]*
Product innovation	0.081 [17.89]***	0.020 [1.14]
No. of Employees (in logs)	0.002 [28.54]***	0.002 [9.42]***
Science based	0.071 [1.48]	0.742 [3.75]***
Scale intensive	0.278 [3.65]***	-0.084 [0.32]
Supplier dominated	0.089 [2.36]**	0.366 [1.65]
Year dummy (1990)	-1.870 [39.34]***	-1.823 [5.59]***
Year dummy (1994)	-2.095 [45.28]***	-1.911 [6.44]***
Year dummy (1998)	-1.899 [40.75]***	-1.625 [5.56]***
Constant	1.496 [31.91]***	2.456 [6.98]***
Observations	5174	167
Wald test on significant difference between market research coefficients	chi2(1) = 7.92	Prob > chi2 = 0.00
R-squared	0.63	0.65
Adjusted R2	0.63	0.62
F-test	640.15	20.44

Absolute value of t statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.16: **Impact of Market Research on Sales Revenue – Random Effects Panel Estimation (External <50; Foreign=100)**

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.36 [15.05]***	0.355 [14.97]***	0.357 [14.77]***	0.357 [14.79]***
Part of a Holding (Yes/No)	0.419 [6.27]***	0.308 [4.50]***	0.313 [4.56]***	0.314 [4.59]***
Market development (+,0,-)	0.124 [6.56]***	0.123 [6.52]***	0.124 [6.52]***	0.124 [6.53]***
R&D expenditures (in logs; centered)	0.041 [8.65]***	0.039 [8.13]***	0.039 [8.13]***	0.039 [8.12]***
No. of Employees (in logs; centered)	0.002 [21.37]***	0.002 [20.79]***	0.002 [20.75]***	0.002 [20.83]***
Science based	0.045 [0.51]	0.033 [0.38]	0.033 [0.38]	0.033 [0.38]
Scale intensive	0.142 [1.09]	0.118 [0.92]	0.12 [0.93]	0.111 [0.86]
Supplier dominated	-0.111 [1.62]	-0.091 [1.35]	-0.09 [1.33]	-0.094 [1.39]
Year dummy (1994)	-0.051 [1.81]*	-0.037 [1.33]	-0.04 [1.41]	-0.039 [1.39]
Year dummy (1998)	0.027 [0.83]	0.043 [1.30]	0.04 [1.21]	0.041 [1.24]
Foreign ownership		1.083 [7.22]***	1.156 [7.29]***	1.251 [7.65]***
Market research		0.149 [3.49]***	0.14 [3.25]***	0.139 [3.21]***
Market research * Age			-0.011 [0.28]	-0.001 [0.01]
Foreign*Market research			0.489 [1.75]*	0.719 [2.43]**
Foreign*Age			-0.111 [0.76]	-0.054 [0.37]
Foreign*Market research*Age				-0.032 [2.34]**
Constant	13.159 [219.80]***	13.152 [217.75]***	13.152 [217.06]***	13.152 [217.29]***
Observations	3371	3371	3371	3371
Groups	1858	1858	1858	1858
Wald chi 2	1435.41	1548.19	1553.99	1563.37
P > chi2	0.00	0.00	0.00	0.00

Absolute value of z statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.17: Impact of Market Research on Sales Revenue – Random Effects Panel Estimation (External <50; Foreign=100); Ventures that Report > 1 Times Market Research Activities

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs; centered)	0.354 [14.47]***	0.348 [14.36]***	0.352 [14.24]***	0.352 [14.25]***
Part of a Holding (Yes/No)	0.435 [6.40]***	0.315 [4.51]***	0.319 [4.57]***	0.319 [4.57]***
Market development (+,0,-)	0.115 [5.95]***	0.113 [5.89]***	0.113 [5.89]***	0.114 [5.90]***
R&D expenditures (in logs; centered)	0.044 [9.39]***	0.042 [8.89]***	0.042 [8.92]***	0.042 [8.91]***
No. of Employees (in logs; centered)	0.002 [21.09]***	0.002 [20.61]***	0.002 [20.56]***	0.002 [20.64]***
Science based	0.063 [0.70]	0.053 [0.60]	0.057 [0.65]	0.057 [0.65]
Scale intensive	0.251 [1.90]*	0.219 [1.68]*	0.219 [1.68]*	0.209 [1.60]
Supplier dominated	-0.06 [0.86]	-0.039 [0.57]	-0.036 [0.52]	-0.039 [0.57]
Year dummy (1994)	-0.074 [2.60]***	-0.062 [2.17]**	-0.064 [2.24]**	-0.064 [2.22]**
Year dummy (1998)	0.006 [0.19]	0.021 [0.63]	0.018 [0.54]	0.019 [0.57]
Foreign ownership		1.098 [7.20]***	1.187 [7.17]***	1.267 [7.45]***
Market research		0.133 [3.06]***	0.126 [2.84]***	0.124 [2.87]***
Market research * Age			0.002 [0.06]	0.012 [0.28]
Foreign*Market research			0.337 [1.70]*	0.572 [2.18]**
Foreign*Age			-0.156 [1.04]	-0.112 [0.74]
Foreign*Market research*Age				-0.028 [2.74]***
Constant	13.189 [215.18]***	13.179 [213.39]***	13.177 [212.54]***	13.178 [212.72]***
Observations	3062	3062	3062	3062
Groups	1449	1449	1449	1449
Wald chi 2	1414.07	1523.99	1528.88	1536.27
P > chi2	0.00	0.00	0.00	0.00

Absolute value of z statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 4.18: Impact of Market Research on Sales Revenue – Panel Estimation (External <100; Foreign=100); Ventures that Report > 1 Times Market Research Activities Divided by Time of Observation

Definition	*Control Variables*	*Market Research*	*Two-way Interaction*	*Three-way Interaction*
Age (in logs)	0.315 [9.33]***	0.317 [9.39]***	0.324 [8.96]***	0.324 [8.98]***
Times market research/observation time (in logs)	0.027 [3.98]***	0.02 [2.13]**	0.02 [1.66]*	0.021 [1.72]*
Part of a Holding (Yes/No)	0.375 [4.87]***	0.26 [3.30]***	0.271 [3.42]***	0.274 [3.46]***
Market development (+,0,-)	0.106 [5.50]***	0.107 [5.62]***	0.107 [5.60]***	0.108 [5.62]***
Product innovation	0.034 [7.44]***	0.033 [7.29]***	0.034 [7.34]***	0.034 [7.33]***
No. of Employees (in logs; centered)	0.002 [18.88]***	0.002 [18.15]***	0.002 [18.08]***	0.002 [18.18]***
Science based	0.183 [1.69]*	0.18 [1.69]*	0.189 [1.76]*	0.19 [1.78]*
Scale intensive	0.064 [0.38]	0.049 [0.30]	0.061 [0.37]	0.066 [0.40]
Supplier dominated	0.019 [0.22]	0.03 [0.36]	0.038 [0.45]	0.029 [0.36]
Year dummy (1994)	-0.072 [3.37]***	-0.07 [3.20]***	-0.068 [3.06]***	-0.068 [3.07]***
Foreign ownership		1.53 [6.54]***	1.754 [6.63]***	1.824 [6.86]***
Market research		0.063 [1.02]	0.057 [0.90]	0.051 [0.81]
Market research * Age			-0.002 [0.03]	0.007 [0.11]
Foreign*Market research			0.541 [1.22]	1.075 [2.12]**
Foreign*Age			-0.371 [1.65]*	-0.262 [1.14]
Foreign*Market research*Age				-0.039 [2.19]**
Constant	13.229 [221.42]***	13.207 [215.24]***	13.192 [213.19]***	13.162 [212.72]***
Observations	3512	3512	3512	3512
Number of Groups	1658	1658	1658	1658
Wald chi2	1025.54	1102.73	1110.07	1119.78
P > chi2	0.00	0.00	0.00	0.00

Absolute value of z statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

Chapter Five

5 Effectiveness and Early Internationalization – Overcoming the Lack of Awareness in Host Markets – [18]

5.1 Introduction

Instead of following the stepwise pattern proposed by Johanson and Vahlne (1977), accumulating the necessary resources and building up the required network in the early state of the firm life cycle to start a successful internationalization afterwards, international entrepreneurs begin to enter foreign markets instantaneously after firm establishment. Much of the literature addressing this phenomenon has been connected with high-technology-based sectors (Crick and Jones 2000; Preece, Miles, and Baetz 1998). However, this phenomenon has also been found in old and mature sectors such as the arts and crafts business (McAuley 1999). Compared to domestic entrepreneurs, international ones face a greater degree of risk. Acting in foreign markets, new firms face not only the liability of newness (Stinchcombe

[18] I appreciate comments and suggestions from Wolfgang Sofka, Werner Bönte, Holger Patzelt, and Erik Monsen. Earlier versions of this paper were presented at the 2006 European Association for Research in Industrial Economics Conference in Amsterdam / Netherlands and the 2007 Academy of Management Conference in Philadelphia / USA.

1965), but also barriers of internationalization (Campbell 1996; Leonidou 1995; Katsikeas and Morgan 1994; Zaheer 1995; Hymer 1976). To overcome these inherent disadvantages, firms must deploy their innate assets (Caves 1971).

There are two sides of liability of foreignness: the foreign ventures lack of knowledge about host market peculiarities and the host consumers' lack of awareness and uncertainty about the foreign ventures product. Several researchers (see e.g., Autio et al. 2000, Sapienza et al. 2006) already showed that young ventures posses a learning advantage compared to more mature ones that could compensate for the foreign ventures lack of host market knowledge. However, as it is generally easier for new ventures to incorporate the host market peculiarities and translate it into improved firm performance (see Chapter 4), not all of them are equal in their ability to overcome the second source of liability of foreignness.

This study evaluates whether specific firm assets are helpful in overcoming the liability of foreignness in host country markets based on the lack of awareness and the uncertainty of host country consumers. Existing theory on firm internationalization argues that competitive advantages allow ventures to generate sufficient economic rents in host country markets that compensate for the additional costs of being foreign (Caves 1971). This study establishes a new theoretical approach which determines the scope of new ventures firm activities, domestic or international. Therefore the concepts of efficiency and effectiveness become introduced. It is argued that the impact of strategic resources on new ventures' domestic and international performance is systematic and predictable. The study suggests that effectiveness-related resources support the international activity of new ventures while efficiency-related firm assets hamper it.

According to Grönroos and Ojasalo (2004), efficiency and effectiveness have different targets. The authors distinguish the two as customer-generating capability (effectiveness) and cost-effective use of resources (efficiency). The former has to do with how effectively firm-specific resources and capabilities increase or create an external interest in the firm's output; the latter relies on firm-specific or market-based restrictions that force the entrepreneurs to save on costs. Facing a lack of embeddedness and responsiveness in foreign markets, international new ventures must overcome the disadvantage of being foreign and the related home bias of host country consumers (Zaheer 1995; Hymer 1976). To make consumers aware of their products and to decrease their uncertainty, these firms focus on effective resources (Grönroos and Ojasalo 2004) that act as instruments to communicate the availability and quality of the firms' product. It is a helpful instrument to overcome the asymmetric distribution of information between foreign companies and native consumers and the resulting home biased selection (Zaheer 1995, Mezias 2002). In other words, they act effectively.

On the contrary, firms relying on resources that support efficiency focus on reducing input costs instead of increasing sales (Katsikeas and Morgan 1994; Grönroos and Ojasalo 2004; Gonzalez and Carcaba 2004). Efficient resources depend on organizational experience and performance (Gonzalez and Carcaba 2004). These instruments are less likely to be used as instruments to decrease the uncertainty and related biased selection of host country consumers. Moreover, due to the lack of organizational experience (Thornhill and Amit 2003) and certain resource constraints of young ventures (Oviatt and McDougall 1994), new ventures are not able to generate sufficient economic rents when relying on firm assets that support efficiency to compensate the additional costs of being foreign. In this way start-ups are also not able to avoid the liability of foreignness problem.

Thus, it is argued that firms building their competitive advantage around efficient resources are less likely to follow an early internationalization path. Lacking the necessary organizational experience and facing resource constraints, efficient resources hinder an early foreign market activity of new ventures.

In the following sections, I start by outlining the theoretical background of international entrepreneurship. I then go on to explain the resource-based view, the second source of the liability of foreignness and the differences between efficient and effective resources. Next comes a description of the dataset, the variables employed, and the applied methodology. Thereafter, I present the results of the estimated model, followed by a discussion of those results and their related implications for further research and a conclusion.

5.2 Theoretical Background

5.2.1 Early Internationalization

International Entrepreneurship

Early internationalizers go by many different names in the research literature—international entrepreneurs, instant internationals, international new ventures, born globals, internationally focused knowledge-intensive firms, or instant exporters (Bell 1995; Boter and Holmquist 1996; Jones 1999; McAuley 1999; Litvak 1990; Rennie 1993; Oviatt and McDougall 1994; Madsen and Servais 1997). McDougall was one of the first to characterize entrepreneurs that go global immediately after establishing themselves, defining international entrepreneurship "as the development of international new ventures of start-ups that, from their inception

engage in international business, thus viewing their operation domain as international from the early stages of the firms operation" (McDougall 1989: 388). Rennie (1993) provided empirical support for this definition. In his look at the internationalization behavior of young Australian firms, he discovered that these firms' management views the world as their marketplace right from the birth of the company.

The reasons for early internationalization include the knowledge-intensive nature of the product or service, an underlying desire to spread risk, and/or the realization that the opportunity for growth in the domestic market is limited (Coviello and Martin 1999). Additionally, according to Madsen and Servais (1997), some industry developments, such as the increasing speed and efficiency of international communication and transportation, the increasing homogenization of many markets, the emergence of international financing opportunities, and increasingly mobile human capital, can be other spurs to early internationalization behavior.

Resource-Based View

In the quest for conceptually consistent internationalization models, the literature on international business and entrepreneurship has begun to employ the resource-based view (RBV) as the underlying paradigm (e.g., Dhanaraj and Beamish 2003; Peng 2001). McDougall (1989) found that international new ventures can be distinguished from domestic new ventures based on firm assets and related competitive advantages.

A firm's sustained competitive advantage mainly derives from the tangible and intangible capabilities and resources the firm is able to develop and control (Wernerfelt 1984; Barney 1991). RBV research was rejuvenated when Grant (1991) introduced a practical framework

that mapped resources, capabilities, and competitive advantage onto the formulation of strategy and the identification of resource gaps, using a "strategic" and "nonstrategic" classification system. Barney (1991) was among the first to specify the criteria used in this classification. Rumelt (1984), Dierickx and Cool (1989), and others contributed to the subsequent development of the resource-based view, especially with regard to the types of firm resources that contribute to a sustainable competitive advantage. Barney (1991) notes that two assumptions are elemental to the resource-based view: (1) resources are distributed heterogeneously across firms, and (2) these productive resources, because they are "sticky," cannot be transferred from firm to firm without costs (von Hippel 1994). Given these assumptions, Barney (1991) makes two fundamental arguments. First, rare and/or valuable resources can create a competitive advantage for the firm that possesses them. If these resources also have the attributes of not being easily imitated or substituted for, the resources will provide a sustainable competitive advantage. However, firms may have different expectations about the future value of a strategic asset. As firms' resources are heterogeneous, they should focus mainly on their "unique" skills and resources rather than on the competitive environment.

One implication of the resource-based view is that managerial ability is a critical element in developing competitive advantage. Penrose (1959) found that the entrepreneurial capabilities of management are key to understanding how firms grow and attain a competitive position. Management must first identify and evaluate resources (Barney 1991; Aragon-Sanchez and Sanchez-Marin 2005), and then exercise discretion over which resources to utilize and how to utilize them (Castanias and Helfat 1991; Prahalad and Hamel 1990). It is particularly important for managers to keep in mind that it is the "bundle of assets, rather than the

particular product market combination chosen for its deployment, lies at the heart of their firms' competitive position" (Dierickx and Cool 1989: 1504).

Some of the existing literature in the field of international entrepreneurship and competitive advantage (McDougall, Shane, and Oviatt 1994; Bloodgood, Sapienza, and Almeida 1996) is devoted to discovering relevant characteristics of international new ventures and their impact on entrepreneurial performance. For example, Wright and Ricks (1994) use a comparative analysis of entrepreneurial activities within the domain of international entrepreneurship to investigate the relationship between business performance and international environment. McDougall (1989) uses a discriminate analysis to measure the impact of firm-related advantages for domestic and international entrepreneurs in the manufacturing industry. These studies have found that some types of advantages support domestic firm activity whereas others are more effective in contributing to a successful international market performance. However, these earlier studies have not been able to formulate a theoretical explanation for their results.

5.2.2 The Second Side of Liability of Foreignness

There are two sides of liability of foreignness: foreign enterprises are very much "strangers in a strange land" (Heinlein 1961). On the one hand, the host consumers' know nothing, as yet, about the foreign company or the quality of its products (Eden and Molot 2002); they are quite likely prone to certain possibly unfavorable assumptions, perhaps based on name or country of origin alone, and usually will not expend the effort to prove themselves wrong. On the other hand, foreign companies may know nothing of local business practices or preferences, the nuances of the culture escape them and their lack of knowledge can lead to

misunderstandings, thus furthering any already present prejudice (Hymer, 1976). But whereas the host country consumers need make no effort to learn about the new enterprise in order to survive, it is essential to the new enterprise's survival to learn everything it can about local needs and preferences and the differences between home and host country rules—and the sooner the better. The degree of its responsiveness to local conditions can literally make the difference between "life and death" for the firm (Bartlett and Ghoshal 1989).

Current research demonstrates that young firms, as compared to more mature ones, have an advantage in learning about and adapting to relevant knowledge about the host country market and related consumer preferences (Fujita 1995; Autio, Sapienza, and Almeida 2000; Sapienza et al. 2006, see also chapter 4). Young firms have the so-called learning advantage of newness (Autio, Sapienza, and Almeida 2000): they can assimilate new knowledge about the foreign environment much faster than can their more mature counterparts. Moreover, young firms are more flexible in reacting to novel situations and are more open to organizational changes and new procedures (Nelson and Winter 1982, Audretsch 1995, Shane 2000). Thus, it is easier for them to incorporate the new knowledge and translate it into improved firm performance.

However, even though all young new ventures have the ability to incorporate local knowledge faster than do more mature ventures, not all of them are equal in their ability to overcome the second aspect of the liability of foreignness—the disadvantage inherent in the host country consumers' lack of knowledge about the new foreign venture's product quality. Thus, young firms that venture abroad need some specific advantages derived from their unique mix of assets (Caves 1971; Hymer 1976; McDougall 1989) to reduce the resulting consumer uncertainty and thus compete successfully in host country markets. Hence, international new ventures can be distinguished from domestic new ventures based on the

ability to *increase* the awareness of host country consumers and their knowledge about the company's product, and thus *decrease* the related host consumers' uncertainty about the new venture's products.

5.3 Conceptual Framework

Facing the lack of awareness and uncertainty of host consumers, firms active in foreign markets have to transmit information about their product persistently to local customers. They have to send valuable firm and product information to increase the awareness of the market participants and to reduce their uncertainty. Communicating product information means transmitting information from those with more to those with less information. Thereby, informing host consumers are things one does that are visible and that are in part designed to communicate (Spence 2002). At the heart of this approach is information asymmetry. The theory assumes that at least one party of a transaction has relevant information whereas the other does not (Akerlof 1970). For example, buyers may not know the quality of the sellers' product, organizations are maybe uncertain about the qualification of job applicants, and investors lack the knowledge about the profitability of a firm. These asymmetries may lead to a biased selection. When markets are vulnerable to these kinds of problem it is in the interest of the participating actors to provide information that can help to communicate the missing knowledge.

Ventures active in foreign markets face a situation where host consumers have a lack of knowledge about the foreign product. This asymmetric distribution of necessary information leads to a biased selection of host consumers where they are less willing to buy products of

foreign ventures (Zaheer and Mosakowski 1997, Sofka and Zimmermann 2005). To counter this disadvantage foreign ventures have to rely on assets that compensate for the reasons of the information asymmetry and the subsequent selection bias. Thus, they have to focus on helpful instruments that can communicate the product characteristics to host country consumers. Valuable instruments increase the awareness of host consumers about the availability of the foreign product and reduce their uncertainty about the product quality.

Research already identified several resources that are valuable instruments. Relevant assets are, e.g. reputation, advertising, warranty, design, and others (Milgrom and Roberts 1986, Dodds et al. 1991, Grossman 1981, Ippolito 1990). Whereas these instruments are helpful to reduce information asymmetries in general, only a few of them are helpful to decrease the information asymmetry between foreign ventures and host consumers. Relying on firm assets entrepreneurs possess I divide between assets that are helpful to bridge the knowledge gap between foreign companies and host customers; and resources that do not. Thus, the concepts of efficiency and effectiveness are introduced to provide a theoretical explanation for why certain resources support an entrepreneur's foreign market activity and others do not.

According to Grönroos and Ojasalo (2004), efficiency and effectiveness have different targets. The authors distinguish the two as customer-generating capability (effectiveness) and cost-effective use of resources (efficiency). Effectiveness has to do with how effectively firm-specific resources and capabilities increase or create an external interest in the firm's output. Thus, resources that increase the demand for a product or service are described as effective. Efficiency, on the other hand, relies on firm-specific or market-based restrictions that force entrepreneurs to save on costs. Hence, resources that improve the relation between input and output are measures of efficiency.

5.3.1 Effectiveness

Effectiveness can be defined as the accuracy and completeness with which firms achieve certain goals (Achabal, Heineke, and McIntyre 1984; Walker and Ruekert 1987; Drucker 1974; Hemmert 2004; Grönroos and Ojasalo 2004). The paramount goal of organizational effectiveness is to increase the organizational output (Achabal, Heineke, and McIntyre 1984). Thus, effectiveness is the evaluation of the sales output. The indicator for an effectiveness measure is, therefore, a goal, in contrast to the input indicator from efficiency (Mahoney 1988; Katsikeas and Morgan 1994). Considerable empirical research (e.g. Cravens et al. 1972, LaForge and Cravens 1985, Ryans and Weinberg 1987, Babakus et al. 1996, Katsikea et al. 2007) consistently supports the notion that sales effectiveness is partially explained by environmental, organizational, and personal factors.

Their lack of embeddedness makes it essential for international entrepreneurs to devote a certain amount of time and energy to overcoming the lack of awareness and uncertainty of host country consumers. When the entrepreneur's home country operates under a social system different from that found in the host country, it can lead to misunderstandings about host country consumer preferences and, in the worst case, to a total market failure (Lord and Ranft 2000). Therefore, success in a foreign market can crucially depend on first learning about any possible differences in consumer preferences and then acting on this knowledge by appropriately employing the firm's assets to increase awareness and acceptability of the new venture's products or services.

To decrease the lack of awareness of host country consumers, firms would do well to focus on assets that are helpful to attract host consumers. Such an orientation will provide a

company with a better understanding of its potential customers and the new environment (Kara, Spillan, and DeShields 2005). Three indicators are identified that are useful in measuring a firm's effectiveness at reducing the lack of awareness and the uncertainty of host consumers by employing certain firm-specific assets: marketing and promotion, product design, and creativity.

Marketing as a firm resource has been extensively investigated in the literature and results show that it has a strong impact on promoting a product or service. The work of Nelson (1974), Kihlstom and Riordan (1984), Thomas et al. (1998), have led to wide acceptance that firm advertising can be explained as signaling of product quality. In many markets, customers cannot test product quality prior to purchase. When consumers cannot observe quality at purchase, firms may be tempted to provide less than promised. Nelson (1970) provides evidence about the signaling role of advertising. In particular, he finds that experience goods, and so those goods for which providing product information might be important, has larger advertising outlays than those goods that he had classified as search goods. It is argued that sellers of such "experience goods" may have an incentive to advertise heavily to promote the quality of the product. In this way, marketing is a helpful instrument to increase the awareness of the consumers and to communicate the advantages of the promoted product (Zhao 2000). Firms can use advertising to inform potential customers about the existence, characteristics, and prices of the commodities they offer (Milgrom and Roberts 1986). Therefore, marketing is helpful for consumers to evaluate the quality of the product and, thus, to reduce their uncertainty.

In the case of foreign market activity, marketing and the related promotion of the firms' product should be very helpful for foreign ventures to decrease the lack of awareness and

uncertainty of host consumers. As result, ventures active in foreign markets should be more likely to possess a competitive advantage based on marketing skills.

At second, product design can also be employed to increase consumer awareness as product "look and feel" are well known to influence consumer purchase decisions. Product design could be used as an instrument to communicate certain unobservable characteristics. For example, Daughety and Reinganum (1995) have shown that product design is a useful instrument to communicate "safety", which subsequently reduces the uncertainty of potential consumers. Moreover, product design is helpful to communicate the functionality of a product which influences the consumers' choice (de la Fuente and Guillen 2005). Thus, product design should help potential consumers to reduce their lack of knowledge about the product.

Finally, creativity is also an important resource in this regard. Creativity is a measure of the firm's ability to adjust its product to host consumer needs and to find new solutions to host consumer problems and/or preferences. Researchers did already show that creativity has a positive impact on firm performance increasing the consumer satisfaction in complex situation (Gilson et al. 2005). Creativity is beneficial to enhance the firm performance in vibrant environments.

Summarizing the contribution of marketing, product design, and creativity I conclude, that these effectiveness-related resources positively contribute to increase the awareness of consumers and/or decrease the lack of knowledge of products. In this way they help consumers to evaluate the product. Facing the liability of foreignness and the subsequent consumer-related disadvantages in host country markets these assets should be more important instruments for entrepreneurs active in foreign markets than for their home-market

counterparts. This leads to the first hypothesis:

> ***Hypothesis 1****: The larger the competitive advantage of a firm with respect to effectiveness-based resources, the more likely it will be that the firm is active in a foreign market.*

5.3.2 Efficiency

Efficiency can be defined as the best allocation of resources across alternative uses (Achabal, Heineke, and McIntyre 1984; Katsikeas and Morgan 1994; Drucker 1974; Grönroos and Ojasalo 2004; Haber and Reichel 2005). Efficiency uses a firm internal point of view to judge organizational performance. It is the relation between (1) the accuracy and completeness with which users achieve certain goals and (2) the resources expended in achieving those goals, with the aim of maximizing the former relative to the latter (Bonoma and Clark 1988). Walker and Ruekert define efficiency as the "outcome of a business program in relation to the resources employed" (1987: 19). Perhaps the simplest definition of efficiency is Drucker's (1974: 45), who said that efficiency is "doing things right." An efficiency approach examines how best to allocate activities and assets to produce the most output. Efficiency strongly suggests managers should see a negative relationship between resources employed and judged firm performance. At any given level of output, the fewer resources used, the better.

There is a wide variety of inputs (e.g., money, skill, time) that can be used as indicators of efficiency, including task completion time and learning time (Achabal, Heineke, and McIntyre 1984). According to Gonzalez and Carcaba (2004), the main element of efficiency

is organizational experience. Organizational learning and the accumulation of related resources are necessary before efficiency is possible, which necessarily will involve a certain amount of time (Gonzalez and Carcaba 2004). Additionally, as efficient resources are more geared toward organizational performance, and less focused on customer needs, this type of resource is not especially helpful in ameliorating a lack of embeddedness in foreign markets. Indicating elements that promote firm efficiency are for example resources that focus on cost advantages (Achabal, Heineke and McIntyre 1984). These resources positively contribute to firm success in communicating the profit margin of a company and related benefit (Hossain et al. 2005). That kind of instrument should be very helpful for entrepreneurs to bridge the knowledge gap to shareholders and potential investors (Certo et al 2001, Honig et al. 2006). But, cost advantage and the related profit margin should be less valuable for ventures to decrease the lack of knowledge about the product quality of potential customers. Therefore, I conclude that cost advantages are less helpful to increase the awareness or reduce the uncertainty of consumers.

Moreover, for routine tasks firm performance depends on the efficient, fast execution of a sequence of actions which yields stable results. These tasks are routinely achieved, and task completion time may therefore be used as an indicator of firm efficiency (Frokjaer et al. 2000). A program which requires substantial engagement is less efficient than one which operates fast and smoothly with less additional attention (Bonoma and Crittenden 1988, Cespedes 1990). Therefore, firm assets that help firms to generate a competitive advantage based on task completion time should be less helpful to promote product quality and reduce the consumers' uncertainty. In this way, these instruments should be less helpful for firms active in host markets to decrease their degree of liability of foreignness.

Finally, firm assets that support efficiency should have a negative impact on entrepreneurs' ability to be active in foreign markets as efficiency-related firm assets rely on organizational routines and available resources. Several researchers (e.g. Caves 1971) have examined the impact that competitive advantages by foreign ventures have on generating economic rents in host country markets that compensate for the additional costs of being foreign. Therefore, these resources should support a successful foreign market activity. But, without the necessary organizational experience and the required organizational resources firms could not be efficient (Cohen and Bacdayan 1994, Benner and Tushman 2002). That is even more complicated for young ventures as they face a lack organizational experience and resource constraints (Tornhill and Amit 2003). Focusing on new ventures, it is probable that the entrepreneurs have great difficulty generating sufficient economic rents focusing on efficiency related firm assets that are high enough to compensate for the additional costs of being foreign and, in this way, to avoid the liability of foreignness problem (Caves 1971). Thus, focusing on firm assets that support efficiency should be counterproductive for entrepreneurs that want to be successfully active in foreign markets.

In essence, it is suggested that entrepreneurs with greater efficiency-supporting resources, as compared to their effectiveness-supporting resources, are likely to do better in a domestic market than in a foreign market as the resources at their disposal are not appropriate for overcoming the disadvantages inherent in a foreign market. This leads to the second hypothesis:

> ***Hypothesis 2****: The greater is the competitive advantage of a firm with respect to efficiency-based resources, the less likely it will be that the firm will be successfully active in foreign markets.*

5.4 Analytical Framework

5.4.1 Data

To test Hypotheses 1 and 2, I use a cross-sectional dataset, the Cambridge Centre Business Research SME Dataset of 1997. The sampling framework used in constructing the survey was the Dun & Bradstreet database, which has several advantages (CBR 1997, Bullock and Hughes 1998). First, it provides indicative information about enterprises such as competitive advantage, network, firm activity, and employment. Second, the database has been used in a series of studies about SMEs so that its properties have been carefully explored (Cosh and Hughes 1998, Cosh and Wood 1998, Hughes and Moore 1998, Keeble 1998). However, as the database has its origins in the credit rating business, it is biased toward the inclusion of a relatively higher proportion of expanding firms seeking finance and sole proprietorships, partnerships, and single-person self-employed enterprises are underrepresented compared to the overall enterprise sector (Bullock and Hughes 1998).

Stratified random sampling of this database by size band within the 1–500 employees range, along with telephone screening, was used to identify 12,000 manufacturing and business service SMEs. Subsequently, a postal questionnaire survey was conducted between June and October 1997, which yielded 2,520 completed, usable questionnaires (CBR 1997, Bullock and Hughes 1998).

This study concentrates on new ventures located in England, Scotland, and Wales. A firm was considered a "new venture" if it was 6 years old or younger. Even though different age ranges have been used in the literature, there is a growing consensus that firms 6 years and

younger are those most likely to be international entrepreneurs (Brush 1995; Brush and Vanderwerf 1992; Kirchhoff and Phillips 1988; Zahra, Ireland, and Hitt 2000).[19] These new ventures were classified according to the share of sales generated in foreign markets. Ventures with no sales derived from foreign activities were considered "domestic" entrepreneurs and firms with sales from international markets comprising greater than 5 percent of total sales were considered "international" entrepreneurs. Using the 5-percent of total sales as a cutoff eliminates those firms with sporadic or irregular international activity, a procedure in line with McDougall (1989).[20] As all the data are from Great Britain, there is no complication arising from cross-border business with immediate neighbor countries.[21] The final dataset contains 272 independent entrepreneurs.

5.4.2 Variables

Dependent Variable

This section describes how the theoretical constructs presented above are actually operationalized. The central dependent variable is whether the firm operates in the international (1) or domestic market (0). Internationalization is defined as the decision to

[19] Previous researchers have used different cutoff points like 5, 8 and 10 years (Covin, Slevin, and Covin 1990; McDougall 1989; McDougall and Oviatt 1996; Zahra 1996). Nevertheless, there is a growing consensus that firms 6 years and younger are those most likely to be international entrepreneurs (Brush 1995; Brush and Vanderwerf 1992; Kirchhoff and Phillips 1988; Zahra, Ireland, and Hitt 2000). Given this evidence, and my desire to be consistent with the literature, I used only firms 6 years of age or younger in this study. But, I run certain consistency checks, defining entrepreneurs as firms up to 5, 8, and 10 years. The results are consistent with those reported here (see Appendix C –Table 7).

[20] The same estimations were done for more than 0 percent, 10 percent, and 20 percent as the export rate. The results are consistent with those reported here (see Appendix C –Table 8).

[21] Note that the sample includes no international entrepreneurs in North Ireland.

generate revenue in foreign markets. Firms that report an export volume exceeding 5% of the company's total sales revenue for the year 1997 are defined as companies that are active in foreign markets. Ventures that report no exports in 1997 are coded as domestic.

Resource Variables

I estimate the impact of different resource-related competitive advantages on firm internationalization. A competitive advantage is measured using a Likert scale ranging from 1 to 5 (indicating the level of the competitive advantage; 1 = insignificant advantage, 5 = crucial advantage), which the entrepreneurs identify whether the firm has a competitive advantage and on which resources the advantage is based. Respondents indicated the relative emphasis their business unit placed on each competitive advantage they possess. This method of operationalizing has been used extensively in strategic management research (Bourgeois 1980; Gupta and Govindarajan 1986) and has the advantage of allowing respondents to convey firm-specific strategic emphasis with respect to each variable, while subsequently allowing independent ascertainment of firm strategies. Taking into account differences between companies in belong to their evaluation of firm-specific advantages (some firms value their competitive advantage in principle high; other firms are more conservative) I apply the quotient consisting of the value for each competitive advantage divided by the average evaluation of all investigated competitive advantages for each company. Thus, the estimation result for each competitive advantage reflects the deviation from the mean value of all investigated advantages for each company. The indicator, competitive advantage, is the focal point of interest in the following estimation and related discussion.

Examining the impact of different firm-resources I already implemented the differentiation

between efficient and effectiveness-related firm resources. Efficiency measurements deal with the input-output relation between resources expended and resulting products. Thus, efficiency-based strategic resources allow firms to operate faster or at lower cost compared to competitors. Hence, a variable representing the importance of cost advantage is used as a first indicator of firm efficiency. As second indicator, I rely on speed of the firm as source of the competitive advantage, reflecting the task completion time of firms needed to produce and deliver the companies goods.

Effectiveness reflects management's expertise in identifying firm-specific advantages, further developing them, and using them to improve firm performance (Buckley, Pass, and Prescott 1988). Effectiveness related assets allow firms to increase the awareness of consumers and reduce their uncertainty which subsequently should lead to an increase of a firm's sales performance. I already identified three potential resources that could create a firm advantage to overcome the liability of foreignness. These advantages indicate the effectiveness of firm-specific assets in attracting new customers. I include three variables to measure effectiveness—importance of product design, marketing and promotion skills, and creativity. Marketing is a form of so-called non-price competition, a concept that involves extending the notion of competitiveness to the level of consumers, in whose hands, ultimately, the success of a company lies (Buckley, Pass, and Prescott 1988).

Control Variables

To be in compliance with the desirable research design proposed by McDougall, Oviatt and Shrader (2003), and to free the estimations from omitted variable bias, several control variables are added. Choosing adequate instrument variables that reflect the concept and still

allow qualified empirical analysis in the internationalization context is a challenging task. Below is a brief description of the control variables that will be employed in this study.

- As I am interested in identifying the factors that contribute to internationalization, I use variables to control for the industry impact. Dummy variables are introduced that control for differences between firms of different industries (manufacturing and service sector) and, at second, that control for differences between firms within the particular industry.

- Additionally, the number of overseas competitors in the home market (UK) is introduced to control for industry-specific international competition in the home markets and the related impact on firm internationalization. The logarithmic form is applied to correct for skewness. It is reasoned that industries with an especially high percentage of foreign competitors push companies to enter foreign markets very early in a firm's life (Oviatt and McDougall 1994).

- Lindqvist's (1990) finding relating the emergence of specialized global market niches and the costs of R&D to the necessity of early international sales of new technology-based firms is often cited in the field of international entrepreneurship. Taking into account the impact of R&D intensity on firm internationalization I rely on the already established literature about measuring R&D intensity. With regard to Butchard (1987), the firm-specific share of employees working in R&D is used to control for it.

- To account for liabilities of size, I include sales volume in the home market of each firm. The logarithmic form for sales volume is applied to correct for skewness. Additionally, the survey design restricts firm size to less than 500 employees so as to focus on small and

medium-sized firms (Cosh and Hughes 1996); a size limit frequently used in the literature to define SMEs (Bonaccorsi 1992; Erramilli 1991).

- To control for a company's international network, a dummy variable is introduced that indicates whether the entrepreneur has existing arrangements that provide access to overseas markets. Herby, the database gives information about potential partnership arrangements of the entrepreneur with foreign universities or other institutions. International networks can lead to opportunity identification and market knowledge, both of which encourage internationalization (McDougall, Oviatt, and Shrader 2003).

- Finally, liabilities of newness are addressed by limiting the sample to firms not older than 6 years (see data description in section 5.4.1).

5.4.3 Measurement

A probit estimation is utilized to analyze the determinants of foreign market activity by new ventures. A dummy variable indicates whether the new venture is internationally active.

(1) $y_i = \alpha_i + \beta_1 \text{Effective Resources} + \beta_2 \text{Efficient Resources} + \beta_3 \text{Control Variables} + \varepsilon$

(2) $$P(y_i = 1) = \Phi(X_i \beta_1)$$

Where $y_i = 1$ indicates that firm i is active in foreign markets, X_i is a row vector of the explanatory variables described in Equation (1), and Φ is the standard normal distribution function. The hypotheses will be supported if the coefficients for effective resources are positive and significant and the coefficients for efficient resources are significant negative.

5.4.4 Descriptive Statistics

The following section provides a brief overview of average firm characteristics and the differences between firms active in the domestic market and those active in the international one. A more detailed and complete list of means and standard deviations for the variables used in this study can be found in Table 5.1. To ensure that the estimations are in line with the necessary econometric requirements, common tests are used (for the correlation matrix, see Appendix C: Tables 5.3-5.5). Appendix C (Tables 5.3) provides the correlation matrix and variance inflation factors (VIF) for the used sample of firms. It identifies a strong correlation between the efficiency indicators (cost advantage, speed of service) on the one side, and the variables indicating effectiveness (marketing, creativity, design) on the other side. The correlation effects are close to 0.5 and, more important, the VIF is above the common threshold of 10. The VIF measures how much multicollinearity has increased the variance of a slope estimate. Chatterjee and Price (1991), Neter et al. (1985) and Hair et al. (1998) suggest that values above 10 are large enough to indicate a problem. I found that the VIF for the mentioned competitive advantages is above 100. Thus, the correlation between the independent variables hampers the interpretability of the results. Hence, two separate models are run to neglect the correlation between the variables of interest (the correlation matrix and variance inflation factors are listed separately; see Appendix C - Table 5.4 and Table 5.5). Calculations of the VIF ranged from a low of 1.07 to a high of 1.88 (see Table 5.4 and Table 5.5). Thus, estimating two separate models the effects of the correlation between the independent variables do not hamper anymore the interpretability of the results.

Table 5.1: Descriptive Statistics: Mean and [Standard Errors]

Definition	*Complete Sample*	*International Entrepreneurs*	*Domestic Entrepreneurs*
Competitive Advantage			
Cost advantages	2.95	2.78	3.02
Speed of service	3.67	3.38	3.79
Marketing and promotion skills	2.67	2.74	2.64
Product or service design	3.37	3.70	3.24
Creativity	3.36	3.55	3.28
Control Variables			
Overseas competitors in the home market (No., in logs)	1.66	1.98	1.53
Share of R&D employees	8.52	14.51	6.05
International Network (yes / no)	0.17	0.31	0.11
Home market sales volume (in 10 000)	981.12	1123.69	922.34
No. of Observations	272	80	192

Judging from the central success indicator, internationally active firms' exhibit different sources of competitive advantage than do their home market competitors. International entrepreneurs have higher levels of marketing and promotion skills, product design, and creativity than do domestic firms. However, when it comes to speed of service and cost advantages, domestic start-ups are superior to international entrepreneurs. Applying the segmentation between resources that support effectiveness and assets that drive firms' efficiency the descriptive statistics give a first hint. International entrepreneurs are more likely to focus on competitive advantages that are based on effectiveness-related firm resources, whereas entrepreneurs that stay in their home market are more likely to possess efficiency-related firm assets.

Examining the level of international competition in the home market (UK), the average for international entrepreneurs (1.98) is higher than for domestic ones (1.53). This supports the

notion of McDougall (1989) that foreign competition in the home market pushes firms to enter the international market. The same pattern prevails for international experience and sales volume in the home market. International entrepreneurs are more likely to have a network which includes foreign partners than entrepreneurs that stay local. And, domestic new ventures are smaller in size, measured by home market sales volume, than entrepreneurs that are active in foreign markets. In line, the share of employees working in R&D is more than double as high for ventures that are active in foreign markets (15%) than for their home market competitors (6%). Finally, looking for industry-related aspects that influence the entrepreneurs decision to internationalize, descriptive statistics identify that manufacturing firms are more likely to be active in host markets (46%) than ventures active in the service sector (14%). That could be traced back to the fact that initiating firm exports, in general, should be less cost intensive for manufacturing firms than for ventures active in the service sector. In conclusion, the prima facie comparison provides some trends but no clear picture on how firm resources and the likelihood of a firms' foreign market activity interact. A multivariate analysis is warranted.

5.5 Results

The empirical analysis yields some interesting insights. Results of the probit estimation employed to test differences between domestic and international entrepreneurs using standardized estimates are presented in Table 5.2.

The research design allows interpreting the coefficient of a specific resource-related advantage as that resource's contribution to the firm's activity in the domestic or international

market. Because of the high correlation (Nunnally 1978) between the variables indicating efficiency and effectiveness-related competitive advantages, it was necessary to run two separate estimations (Models 1 and 2). Model 1 includes the indicators of efficiency, cost advantage and speed of service, but excludes advantages that communicate effectiveness. Model 2, therefore, excludes the advantages supporting efficiency, but includes marketing and promotion skills, product or service design, and creativity. The overall model was significant for both Model 1 and Model 2 ($p < 0.0001$). The sample was comprised of 80 international and 192 domestic entrepreneurs.

Table 5.2: Probability to Export for British New Ventures in the Manufacturing or Service Sector for the year 1997

		Robust		***Robust***
Definition	***Coeff.***	***Std. Error***	***Coeff.***	***Std. Error***
Efficiency				
Cost advantages	-0.30	[2.87]***		
Speed of service	-0.35	[3.02]***		
Effectiveness				
Marketing and promotion skills			0.36	[3.19]***
Product or service design			0.29	[2.43]**
Creativity			0.32	[2.78]***
Control variables				
Home market sales volume (in logs)	-0.14	[2.31]**	-0.15	[2.42]**
Overseas competitors in the home market (No., in logs)	0.44	[3.53]***	0.45	[3.55]***
International Network	0.70	[2.64]***	0.70	[2.65]***
Share of R&D employees	0.01	[1.82]*	0.01	[1.83]*
Sector-dummies	Yes		Yes	
Constant	-1.20	[3.41]***	-1.18	[3.29]***
LR chi2	272		272	
R-squared adjusted	112.58		112.78	
P > 0	0.00		0.00	
Observations	0.35		0.35	

Absolute value of z statistics in brackets

* significant at 10%; ** significant at 5%; *** significant at 1%

The results indicate that there are significant differences between the international active and domestic ventures as regards efficiency- and effectiveness-related resources. Significant variables include speed of service (-), cost advantage (-), marketing and promotion skills (+), product or service design (+), and creativity (+). Therefore, Hypothesis 1 (effectiveness) and Hypothesis 2 (efficiency) are supported.

The results for the control variables confirm the existing theory in the field of international entrepreneurship (see section 5.4.2). The estimation results indicate that the likelihood for entrepreneurs to be active in foreign markets is driven by overseas competition in the home market (+), the availability of an international network (+), sectoral attributes, home market sales volume (-), and the share of employees working in R&D (+). These results are consistent for both models.

5.6 Discussion

Based on the above results of the applied probit estimation, international and domestic entrepreneurs are found to be significantly different on the basis of their competitive advantages communicating either efficiency or effectiveness. By analyzing the impact of effectiveness- and efficiency-related sources of a company's advantage, this study finds that effectiveness-related advantages are supportive of foreign market activity by entrepreneurs. International new ventures compete on the basis of marketing and promotion skills, product or service design, and creativity-related resources. Domestic entrepreneurs place more emphasis on speed of service and cost advantages. Thus, both of its hypotheses are confirmed, the study shows that competitive advantages based on effectiveness and efficiency-related resources

distinguish international entrepreneurs from their domestic counterparts.

More specifically, this study focuses on the competitive advantages of entrepreneurs and the likelihood of becoming active in foreign markets. The empirical analyses demonstrate that entrepreneurs active in foreign markets are more likely to possess a competitive advantage based on effectiveness-related resources than are their domestic counterparts. For example, the results show that international entrepreneurs are characterized by high levels of marketing and promotion skills. To explain this, remember that it is often argued that a lack of embeddedness in host country markets creates a barrier to success. To overcome this barrier, international entrepreneurs need to use resources that reduce the psychological distance between the new venture and host country consumers. Good marketing skills can be of obvious assistance in this task, for example, by using local scenery or national highlights of the host country in an advertising layout. They could be helpful to communicate the advantages of the product in a manner that the product characteristics fit with local peculiarities.

High levels of creativity and design ability are also found among international entrepreneurs. Both characteristics are helpful in adapting foreign products and services to host country consumer preferences and needs, and work in a complementary manner with skillful marketing. For example, marketing can be used to communicate the superiority of the firm's products; creativity and design ability will be the tools that back up the ad campaigns. In other words, creativity and design can be used to customize the international entrepreneur's product to the new foreign market, making it "less foreign," so to speak, and increasing host country consumer comfort with it.

All three of these effectiveness-related resources—marketing, design, and creativity—are involved in successfully adapting to local peculiarities, reflective of a key characteristic of entrepreneurs—flexibility. It is already well known that all young ventures share this quality of flexibility (Fujita 1995); this study has contributed to the literature by showing that international entrepreneurs are more likely to make use of it than are their domestic competitors.

Another finding of this study is that speed of service is not very important to achieving success in foreign markets. A competitive advantage based on speed of service is much more likely for domestic entrepreneurs than for their international counterparts. This advantage is based on a firm's ability to react very quickly to consumer demand, and therefore to meet such demand in a time-saving manner.

Finally, a significant difference was found between domestic and international entrepreneurs as regards cost advantages. In line with speed of service are cost advantages not helpful to reduce the reasons of liability of foreignness in host markets; neither the companies' lack of knowledge about host consumer preferences, nor the lack of awareness and the uncertainty of host consumers about the product quality.

An explanation for the negative impact of speed of service and cost advantages on the firms' probability to be active in foreign markets is based on the fact that these firm-specific assets are not helpful to compensate for the disadvantage arising from foreignness. Further, being active in the home market a firm has already an understanding about local needs and preferences. Thus, the firm products are likely to fit with local peculiarities. In such a situation, companies can focus on additional aspects that support the firm performance, like

profitability.

Furthermore, the negative impact of efficient resources rest in the assumption that competitive advantage based on efficiency-related resources, like speed of service and cost-advantage, depend on organizational experience and resource constraints of young ventures (Thornhill and Amit 2003, Oviatt and McDougall 1994, Zacharakis 1998). As the study focuses on ventures that are only 6 years old or less, it is probable that the group of new ventures is not able to generate significant rents in this period of the firm life cycle when relying on efficient resources that are high enough to compensate for the disadvantage arising from foreignness (Caves 1971). Over time, accumulating the necessary experience to improve the speed of service and the minimum requirements to generate economies of scale, firms should be able to rely on these assets when entering into a foreign market. In a later stage of the firm life cycle, companies should be able to generate sufficient rents when relying on efficient competitive advantages that can compensate for the disadvantages arising from foreignness (Caves 1971). On the opposite resources that support effectiveness should be consistently helpful for all firms, independent of firm age.

Consistency checks were run, including firms of all age. The results show that the negative effect of speed of service is turning into a positive impact with increasing firm age. With regard to the cost advantage and the resource constraints of young ventures the estimation results show that (1) the impact of firm size (as indicator of available resources) on the likelihood to be active in foreign markets is depending on firm age. The impact of firm size increases as firms become mature. Moreover, the estimation results show that (2) with increasing firm size the impact of cost advantage on the probability to act successfully in host markets is increasing too. Mature ventures could accumulate the required resources to

establish a cost advantage that would allow them to compensate for the additional costs of being foreign in host country markets, and in this way to avoid the liability of foreignness. The estimation results are shown in Table 5.6 (Appendix C). As result, the theoretical framework applied in this paper focusing on liability of foreignness and firm-specific advantages of international entrepreneurs is supported.

5.7 Conclusion

This study examined the relationship between firm-specific advantages and the scope of the firm activity, domestic or international. The investigation revealed that the scope varies systematically for UK SMEs depending on what type of advantages the firms hold. The study identified effectiveness-related resources as leverage points that drive early internationalization.

In essence, after evaluating the impact of different kinds of resource-related competitive advantages, I found that effectiveness-related firm-specific assets support successful foreign market activity. Effective resources such as creativity and design ability are resources available from the moment the business is established and thus developing a competitive advantage based on these resources can be done almost immediately. The sooner a firm attains and then focuses on effectiveness-related resources, the sooner it will be a success in a foreign market. Thus, next to foreign experience and the related network, the study shows that early internationalization is strongly influenced by the resources a firm possesses at its inception, in particular, the effectiveness-related abilities of the founding team.

On the opposite, firm resources like cost advantages and speed of service are less likely to

support a successful foreign market activity of new ventures. Due to the lack of organizational experience and resource constraints, these assets are more likely for firms that stay in the home market during the early stages of the firm life cycle. Over time, adapting the relevant knowledge and resources companies should be able to achieve sufficient rents with efficient competitive advantages that can compensate for the disadvantages arising from foreignness.

This study presents a new theoretical approach for comparing international and domestic entrepreneurs; however, there are several limitations that merit comment. First, internationalization is examined only in terms of international revenues. The dataset does not allow taking into account the subsidiaries performance of British companies within host markets or a direct comparison with foreign competitors. Second, the sample consists entirely of UK companies. Conditions affecting new ventures born outside the UK could be different from those affecting the firms in my sample. Relying on Miller and Richards (2002), there exist home and host country influences that determine the degree of liability of foreignness. Third, the sample is strongly concentrated on the service and manufacturing sector, which may affect the generalizability of the results. And, finally, I relied on a cross-sectional dataset that did not allow an investigation of dynamic effects. Nevertheless, these very limitations could be the foundation for some very interesting and enlightening further research.

5.8 Appendix C

Table 5.3: Correlation Matrix and Variance Inflation Factor (all Variables)

	Variable	1	2	3	4	5	6	7	8	9	10	11
1	Cost Advantages	1.00										
2	Speed of Service	0.13	1.00									
3	Creativity	-0.37	-0.20	1.00								
4	Product Design	-0.34	-0.40	-0.22	1.00							
5	Marketing & Promotion Skills	-0.49	-0.44	-0.11	0.04	1.00						
6	No. of Overseas Competitors	-0.05	-0.07	-0.05	0.13	0.04	1.00					
7	Share of Employees in R&D	-0.09	-0.15	-0.06	0.12	0.17	0.20	1.00				
8	International Network	-0.05	-0.13	0.03	0.04	0.10	0.26	0.25	1.00			
9	Sales Volume in Home Market	-0.16	0.04	0.15	-0.02	0.00	0.13	-0.08	0.05	1.00		
10	Sector Dummy (Manufacturing)	0.07	-0.02	0.12	-0.03	-0.15	-0.16	-0.09	-0.13	0.02	1.00	
11	Sector Dummy (Manufacturing)	0.12	-0.01	-0.07	-0.03	-0.03	0.09	0.06	-0.01	-0.02	-0.10	1.00
12	Sector Dummy (Manufacturing)	0.07	0.11	-0.10	0.04	-0.12	0.11	-0.05	-0.04	0.12	-0.14	-0.11
13	Sector Dummy (Manufacturing)	-0.01	-0.03	-0.03	0.10	-0.03	0.15	0.09	0.18	0.01	-0.10	-0.07
14	Sector Dummy (Manufacturing)	0.01	0.06	-0.03	0.00	-0.04	0.08	-0.04	-0.01	0.07	-0.06	-0.04
15	Sector Dummy (Manufacturing)	0.01	-0.12	-0.03	0.11	0.02	0.03	0.10	0.08	0.00	-0.05	-0.04
16	Sector Dummy (Manufacturing)	-0.15	-0.11	0.07	0.13	0.07	-0.06	-0.03	-0.05	0.00	-0.04	-0.03
17	Sector Dummy (Manufacturing)	0.06	-0.13	-0.03	0.11	-0.04	0.06	0.01	-0.04	-0.04	-0.03	-0.02
18	Sector Dummy (Manufacturing)	-0.02	-0.02	0.06	0.06	-0.07	-0.06	0.04	-0.08	0.01	-0.06	-0.05
19	Sector Dummy (Service)	0.02	0.06	-0.09	-0.04	0.05	-0.03	0.11	0.07	-0.03	-0.11	-0.08
20	Sector Dummy (Service)	-0.17	-0.09	0.13	-0.04	0.18	-0.01	0.04	0.07	-0.01	-0.18	-0.14
21	Sector Dummy (Service)	-0.02	-0.05	0.09	-0.02	-0.01	-0.04	-0.11	-0.01	0.03	-0.08	-0.06
	Variance Inflation Factor (VIF)	>100	>100	>100	>100	>100	1.20	1.20	1.22	1.12	1.57	1.37

	Variable	12	13	14	15	16	17	18	19	20	21	
12	Sector Dummy (Manufacturing)	1.00										
13	Sector Dummy (Manufacturing)	-0.11	1.00									
14	Sector Dummy (Manufacturing)	-0.07	-0.04	1.00								
15	Sector Dummy (Manufacturing)	-0.06	-0.04	-0.02	1.00							
16	Sector Dummy (Manufacturing)	-0.04	-0.03	-0.02	-0.01	1.00						
17	Sector Dummy (Manufacturing)	-0.03	-0.02	-0.01	-0.01	-0.01	1.00					
18	Sector Dummy (Manufacturing)	-0.07	-0.05	-0.03	-0.02	-0.02	-0.01	1.00				
19	Sector Dummy (Service)	-0.13	-0.08	-0.05	-0.04	-0.03	-0.03	-0.05	1.00			
20	Sector Dummy (Service)	-0.21	-0.14	-0.08	-0.07	-0.06	-0.04	-0.09	-0.16	1.00		
21	Sector Dummy (Service)	-0.09	-0.06	-0.04	-0.03	-0.02	-0.02	-0.04	-0.07	-0.12	1.00	
	Variance Inflation Factor (VIF)	1.68	1.42	1.17	1.15	1.12	1.10	1.19	1.44	1.89	1.26	
	Mean VIF	>100										

Table 5.4: Correlation Matrix and Variance Inflation Factor (Efficiency)

	Variable	1	2	3	4	5	6	7	8	9
1	Cost Advantages	1.00								
2	Speed of Service	0.13	1.00							
3	No. of Overseas Competitors	-0.05	-0.07	1.00						
4	Share of Employees in R&D	-0.01	-0.11	0.20	1.00					
5	International Network	-0.03	-0.13	0.26	0.28	1.00				
6	Sales Volume in Home Market	-0.21	0.03	0.13	-0.08	0.05	1.00			
7	Sector Dummy (Manufacturing)	0.07	0.01	-0.16	-0.09	-0.13	0.02	1.00		
8	Sector Dummy (Manufacturing)	0.13	0.00	0.09	0.08	-0.01	-0.02	-0.10	1.00	
9	Sector Dummy (Manufacturing)	0.06	0.11	0.11	-0.03	-0.04	0.12	-0.14	-0.11	1.00
10	Sector Dummy (Manufacturing)	-0.01	-0.02	0.15	0.08	0.18	0.01	-0.10	-0.07	-0.11
11	Sector Dummy (Manufacturing)	-0.03	0.09	0.08	-0.03	-0.01	0.07	-0.06	-0.04	-0.07
12	Sector Dummy (Manufacturing)	0.01	-0.12	0.03	0.15	0.08	0.00	-0.05	-0.04	-0.06
13	Sector Dummy (Manufacturing)	-0.16	-0.12	-0.06	-0.03	-0.05	0.00	-0.04	-0.03	-0.04
14	Sector Dummy (Manufacturing)	0.07	-0.13	0.06	0.02	-0.04	-0.04	-0.03	-0.02	-0.03
15	Sector Dummy (Manufacturing)	-0.02	-0.01	-0.06	0.05	-0.08	0.01	-0.06	-0.05	-0.07
16	Sector Dummy (Service)	0.02	0.05	-0.03	0.08	0.07	-0.03	-0.11	-0.08	-0.13
17	Sector Dummy (Service)	-0.21	-0.09	-0.01	0.01	0.07	-0.01	-0.18	-0.14	-0.21
18	Sector Dummy (Service)	-0.01	-0.06	-0.04	-0.11	-0.01	0.03	-0.08	-0.06	-0.09
	Variance Inflation Factor (VIF)	1.17	1.13	1.2	1.18	1.21	1.11	1.5	1.36	1.65

	Variable	10	11	12	13	14	15	16	17	18
10	Sector Dummy (Manufacturing)	1.00								
11	Sector Dummy (Manufacturing)	-0.04	1.00							
12	Sector Dummy (Manufacturing)	-0.04	-0.02	1.00						
13	Sector Dummy (Manufacturing)	-0.03	-0.02	-0.01	1.00					
14	Sector Dummy (Manufacturing)	-0.02	-0.01	-0.01	-0.01	1.00				
15	Sector Dummy (Manufacturing)	-0.05	-0.03	-0.02	-0.02	-0.01	1.00			
16	Sector Dummy (Service)	-0.08	-0.05	-0.04	-0.03	-0.03	-0.05	1.00		
17	Sector Dummy (Service)	-0.14	-0.08	-0.07	-0.06	-0.04	-0.09	-0.16	1.00	
18	Sector Dummy (Service)	-0.06	-0.04	-0.03	-0.02	-0.02	-0.04	-0.07	-0.12	1.00
	Variance Inflation Factor (VIF)	1.4	1.15	1.15	1.11	1.07	1.16	1.42	1.88	1.25
	Mean VIF	1.28								

Table 5.5: Correlation Matrix and Variance Inflation Factor (Effectiveness)

	Variable	1	2	3	4	5	6	7	8	9	10
1	Creativity	1.00									
2	Product Design	-0.23	1.00								
3	Marketing & Promotion Skills	-0.12	0.07	1.00							
4	No. of Overseas Competitors	-0.05	0.13	0.04	1.00						
5	Share of Employees in R&D	-0.11	0.12	0.10	0.20	1.00					
6	International Network	0.00	0.05	0.10	0.26	0.28	1.00				
7	Sales Volume in Home Market	0.15	0.01	0.03	0.13	-0.08	0.05	1.00			
8	Sector Dummy (Manufacturing)	0.15	-0.07	-0.18	-0.16	-0.09	-0.13	0.02	1.00		
9	Sector Dummy (Manufacturing)	-0.09	-0.02	-0.02	0.09	0.08	-0.01	-0.02	-0.10	1.00	
10	Sector Dummy (Manufacturing)	-0.11	0.03	-0.07	0.11	-0.03	-0.04	0.12	-0.14	-0.11	1.00
11	Sector Dummy (Manufacturing)	-0.06	0.11	-0.01	0.15	0.08	0.18	0.01	-0.10	-0.07	-0.11
12	Sector Dummy (Manufacturing)	0.04	0.01	-0.10	0.08	-0.03	-0.01	0.07	-0.06	-0.04	-0.07
13	Sector Dummy (Manufacturing)	-0.03	0.09	0.04	0.03	0.15	0.08	0.00	-0.05	-0.04	-0.06
14	Sector Dummy (Manufacturing)	0.07	0.14	0.07	-0.06	-0.03	-0.05	0.00	-0.04	-0.03	-0.04
15	Sector Dummy (Manufacturing)	-0.03	0.13	-0.05	0.06	0.02	-0.04	-0.04	-0.03	-0.02	-0.03
16	Sector Dummy (Manufacturing)	0.05	0.06	-0.09	-0.06	0.05	-0.08	0.01	-0.06	-0.05	-0.07
17	Sector Dummy (Service)	-0.08	-0.01	0.02	-0.03	0.08	0.07	-0.03	-0.11	-0.08	-0.13
18	Sector Dummy (Service)	0.13	-0.04	0.22	-0.01	0.01	0.07	-0.01	-0.18	-0.14	-0.21
19	Sector Dummy (Service)	0.05	-0.02	0.05	-0.04	-0.11	-0.01	0.03	-0.08	-0.06	-0.09
	Variance Inflation Factor (VIF)	1.29	1.24	1.15	1.20	1.20	1.21	1.09	1.55	1.35	1.67

	Variable	11	12	13	14	15	16	17	18	19
11	Sector Dummy (Manufacturing)	1.00								
12	Sector Dummy (Manufacturing)	-0.04	1.00							
13	Sector Dummy (Manufacturing)	-0.04	-0.02	1.00						
14	Sector Dummy (Manufacturing)	-0.03	-0.02	-0.01	1.00					
15	Sector Dummy (Manufacturing)	-0.02	-0.01	-0.01	-0.01	1.00				
16	Sector Dummy (Manufacturing)	-0.05	-0.03	-0.02	-0.02	-0.01	1.00			
17	Sector Dummy (Service)	-0.08	-0.05	-0.04	-0.03	-0.03	-0.05	1.00		
18	Sector Dummy (Service)	-0.14	-0.08	-0.07	-0.06	-0.04	-0.09	-0.16	1.00	
19	Sector Dummy (Service)	-0.06	-0.04	-0.03	-0.02	-0.02	-0.04	-0.07	-0.12	1.00
	Variance Inflation Factor (VIF)	1.42	1.17	1.14	1.12	1.07	1.19	1.42	1.89	1.24
	Mean VIF	1.30								

Table 5.6: Interaction Effects of Competitive Advantages and Firm Age

Definition	*Coeff.*	*Robust Std. Error*	*Coeff.*	*Robust Std. Error*
Efficiency				
cost advantages	-0.175	[3.73]***		
speed of service	-0.216	[4.29]***		
Effectiveness				
marketing and promotion skills			0.186	[3.65]***
product or service design			0.272	[5.45]***
creativity			0.111	[2.30]**
Interaction variables				
home market sales volume* firm age	0.048	[1.97]**		
cost advantages * home market sales volume	0.061	[2.16]**		
speed of service * firm age	0.081	[1.92]*		
marketing and promotion skills * firm age			-0.044	[0.87]
product or service design * firm age			-0.033	[0.66]
creativity * firm age			-0.059	[1.20]
Control variables				
Firm age (in logs, centered)	0.523	[8.78]***	0.531	[8.87]***
Overseas competition	0.039	[0.68]	0.086	[1.57]
Share of R&D employees	0.097	[3.07]***	0.063	[2.16]**
International Network	0.013	[3.46]***	0.013	[3.28]***
Home market sales volume (in logs)	0.826	[6.79]***	0.839	[6.91]***
Sector-dummy (Manu 1)	0.371	[2.46]**	0.361	[2.39]**
Sector-dummy (Manu 2)	1.441	[8.21]***	1.412	[8.05]***
Sector-dummy (Manu 3)	0.831	[6.39]***	0.783	[6.01]***
Sector-dummy (Manu 4)	0.911	[5.37]***	0.821	[4.80]***
Sector-dummy (Manu 5)	1.336	[4.91]***	1.275	[4.65]***
Sector-dummy (Manu 6)	1.551	[6.28]***	1.502	[6.09]***
Sector-dummy (Manu 7)	1.103	[3.21]***	1.070	[3.11]***
Sector-dummy (Manu 8)	1.007	[2.02]**	0.979	[1.99]**
Sector-dummy (Manu 9)	1.262	[4.40]***	1.204	[4.20]***
Sector-dummy (Serv 1)	0.466	[2.30]**	0.403	[1.99]**
Sector-dummy (Serv 3)	0.168	[0.60]	0.156	[0.56]
Constant	-1.373	[13.11]***	-1.348	[13.40]***
Observations	1180		1180	
LR chi2	481.05		475.67	
P > 0	0.00		0.00	
R-squared adjusted	0.31		0.3	

Absolute value of z statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5.7: Consistency Check: International Entrepreneurs (firm age up to 5, 6, or 10 years; exports >5%)

	<= 5 Years		<= 8 Years		<= 10 Years	
	Robust	***Robust***	***Robust***	***Robust***	***Robust***	***Robust***
Definition	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***
Efficiency						
Cost advantages	-0.35 [2.83]***		-0.20 [2.47]**		-0.18 [2.47]**	
Speed of service	-0.43 [3.09]***		-0.32 [3.43]***		-0.31 [3.87]***	
Effectiveness						
Marketing and promotion skills		0.34 [2.63]***		0.26 [2.76]***		0.26 [3.18]***
Product or service design		0.46 [3.15]***		0.30 [3.11]***		0.32 [3.82]***
Creativity		0.36 [2.55]**		0.21 [2.39]**		0.18 [2.28]**
Control variables						
Overseas competition (No., in logs)	0.48 [3.40]***	0.47 [3.36]***	0.49 [4.52]***	0.48 [4.44]***	0.45 [5.04]***	0.45 [5.04]***
Share of R&D employees	0.01 [1.51]	0.01 [1.50]	0.01 [2.43]**	0.01 [2.47]**	0.01 [2.49]**	0.01 [2.57]**
International Network	0.67 [2.25]**	0.71 [2.39]**	0.73 [3.35]***	0.76 [3.52]***	0.89 [4.66]***	0.92 [4.83]***
Home market sales volume (in logs)	-0.17 [2.32]**	-0.18 [2.45]**	-0.04 [0.76]	-0.04 [0.88]	-0.02 [0.50]	-0.03 [0.65]
Sector-dummy (Manu 1)	1.44 [3.27]***	1.50 [3.35]***	0.89 [3.08]***	0.89 [3.02]***	0.84 [3.41]***	0.83 [3.38]***
Sector-dummy (Manu 2)	2.10 [4.23]***	2.11 [4.27]***	1.54 [4.70]***	1.55 [4.70]***	1.54 [5.39]***	1.55 [5.41]***
Sector-dummy (Manu 3)	1.83 [4.74]***	1.82 [4.70]***	1.23 [4.70]***	1.21 [4.60]***	1.09 [4.77]***	1.08 [4.72]***
Sector-dummy (Manu 4)	1.64 [3.28]***	1.59 [3.11]***	0.97 [3.15]***	0.92 [2.96]***	0.98 [3.44]***	0.92 [3.19]***
Sector-dummy (Manu 5)	2.47 [3.50]***	2.42 [3.38]***	1.92 [3.71]***	1.88 [3.60]***	1.55 [3.53]***	1.50 [3.36]***
Sector-dummy (Manu 6)			1.57 [2.59]***	1.59 [2.59]***	1.71 [3.53]***	1.71 [3.52]***
Sector-dummy (Manu 7)			1.63 [2.36]**	1.58 [2.32]**	1.98 [3.44]***	1.90 [3.30]***
Sector-dummy (Manu 8)					2.23 [2.84]***	2.20 [2.85]***
Sector-dummy (Manu 9)	1.51 [2.31]**	1.51 [2.27]**	0.75 [1.38]	0.71 [1.30]	0.89 [1.91]*	0.83 [1.78]*
Sector-dummy (Serv 1)	0.92 [2.11]**	0.88 [1.99]**	0.73 [2.36]**	0.75 [2.44]**	0.67 [2.52]**	0.69 [2.60]***
Sector-dummy (Serv 3)	0.85 [1.49]	0.86 [1.52]	0.43 [1.10]	0.46 [1.15]	0.21 [0.57]	0.25 [0.67]
Constant	-1.16 [2.93]***	-1.20 [2.95]***	-1.45 [4.76]***	-1.46 [4.70]***	-1.46 [5.32]***	-1.47 [5.23]***
Observations	207	207	370	370	481	481
LR chi2	84.35***	84.75***	134.62***	134.08***	185.27***	185.59***
R-squared adjusted	0.35	0.35	0.30	0.30	0.31	0.31

Absolute value of z statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5.8: Consistency Check: International Entrepreneurs (exports > 0%, >10%, >20%; up to 6 years old)

	> 0 Percent		> 10 Percent		> 20 Percent	
	Robust	*Robust*	*Robust*	*Robust*	*Robust*	*Robust*
Definition	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***	***Coeff. Std. Error***
Efficiency						
Cost advantages	-0.15 [1.71]*		-0.22 [1.97]**		-0.31 [2.45]**	
Speed of service	-0.38 [3.69]***		-0.38 [3.12]***		-0.41 [3.04]***	
Effectiveness						
Marketing and promotion skills		0.26 [2.66]***		0.33 [2.79]***		0.42 [3.10]***
Product or service design		0.28 [2.72]***		0.25 [1.97]**		0.31 [2.12]**
Creativity		0.21 [2.13]**		0.31 [2.47]**		0.35 [2.49]**
Control variables						
Overseas competition (No., in logs)	0.39 [3.34]***	0.39 [3.27]***	0.44 [3.35]***	0.44 [3.34]***	0.53 [3.81]***	0.54 [3.84]***
Share of R&D employees	0.02 [3.20]***	0.02 [2.99]***	0.01 [1.92]*	0.01 [1.90]*	0.01 [1.69]*	0.01 [1.68]*
International Network	0.46 [1.91]*	0.49 [2.02]**	0.78 [2.80]***	0.79 [2.84]***	0.33 [0.99]	0.31 [0.95]
Home market sales volume (in logs)	-0.02 [0.43]	-0.03 [0.53]	-0.16 [2.44]**	-0.17 [2.61]***	-0.17 [2.52]**	-0.18 [2.63]***
Sector-dummy (Manu 1)	1.03 [3.46]***	1.01 [3.36]***	1.12 [2.68]***	1.14 [2.68]***	1.05 [2.31]**	1.04 [2.22]**
Sector-dummy (Manu 2)	1.27 [3.45]***	1.31 [3.56]***	1.49 [3.31]***	1.57 [3.47]***	1.08 [2.03]**	1.14 [2.14]**
Sector-dummy (Manu 3)	1.28 [4.48]***	1.25 [4.38]***	1.75 [4.96]***	1.79 [5.00]***	1.60 [4.24]***	1.66 [4.29]***
Sector-dummy (Manu 4)	1.54 [4.37]***	1.51 [4.26]***	1.68 [4.02]***	1.73 [4.04]***	1.44 [3.05]***	1.49 [3.08]***
Sector-dummy (Manu 5)	2.25 [3.78]***	2.13 [3.63]***	2.51 [3.49]***	2.50 [3.58]***	2.61 [3.50]***	2.57 [3.51]***
Sector-dummy (Manu 6)	1.59 [2.26]**	1.73 [2.36]**	1.56 [1.80]*	1.72 [1.88]*	1.66 [1.96]*	1.82 [2.04]**
Sector-dummy (Manu 7)	1.51 [1.70]*	1.42 [1.63]	2.11 [2.32]**	2.12 [2.34]**	1.87 [1.79]*	1.91 [1.80]*
Sector-dummy (Manu 8)	1.01 [2.17]**	0.95 [2.05]**	1.22 [2.09]**	1.26 [2.12]**	0.93 [1.33]	0.93 [1.31]
Sector-dummy (Serv 1)	0.74 [2.23]**	0.75 [2.27]**	1.00 [2.47]**	1.05 [2.57]**	0.83 [1.83]*	0.85 [1.85]*
Sector-dummy (Serv 3)	0.44 [1.00]	0.44 [1.00]	0.65 [1.26]	0.67 [1.29]	0.74 [1.40]	0.75 [1.43]
Constant	-1.39 [4.38]***	-1.42 [4.39]***	-1.23 [3.36]***	-1.24 [3.32]***	-1.23 [3.08]***	-1.21 [2.99]***
Observations	294	294	256	256	238	238
LR chi2	106.07	103.30	98.53	98.02	79.90	80.07
P > 0	0.00	0.00	0.00	0.00	0.00	0.00
R-squared adjusted	0.28	0.27	0.35	0.35	0.35	0.35

Absolute value of z statistics in brackets; * significant at 10%; ** significant at 5%; *** significant at 1%

Chapter Six

6 Conclusion and New Avenues for Liability of Foreignness Research

The established theories on the performance of the international firm in host country markets raise a puzzle: on the one hand, foreign ventures may be more likely to possess certain advantages that could help them outperform local competitors. On the other hand, foreign ventures suffer a disadvantage stemming from their unfamiliarity with the host market conditions. Thus, certain questions arise about the severity of the foreigners disadvantage and the use of compensating factors to overcome the liability of foreignness in order to understand the factors that moderate a company's foreign market activity.

In this thesis I applied the concept of information asymmetries to explain the alien status of foreign ventures and the existence of liability of foreignness. I identified strategic instruments that could be used to overcome the separate reasons of the home biased selection behavior of host consumers and the resulting competitive disadvantage of foreign ventures. Relying on instruments to handle asymmetric information – the active communication of product characteristics and environmental scanning of host market peculiarities – give an opportunity to identify and understand the separate sources of the stranger status more in detail and to overwhelm the inherent sources.

Explaining the theoretical approach in chapter 2, I incorporate three empirical studies that support my theoretical claim. All of these studies investigate important issues of liability of foreignness research. I employ relevant quantitative methods, and address the results of the studies to research scholars as well as practitioners.

In the following section I summarize the main results obtained from these three papers. That is followed by concluding remarks in section 6.2 and an overview about the main managerial implications in section 6.3. Finally, I close with suggestions for new avenues in research of liability of foreignness, taking into account the information asymmetries behind the foreigners' disadvantage and the related abilities of entrepreneurs to handle the inherent sources to be successfully active in foreign markets immediately after firm establishment.

6.1 Summary of Research Results

This thesis was designed to answer two critical questions about liability of foreignness: What is the degree of liability of foreignness ventures face in host country markets? And what are strategic instruments to overcome the lack of embeddedness in host country markets? I have addressed these questions in the light of regional economic stress, market orientation, firm age, and competitive advantages. The purpose of this section is to discuss the main findings of the study and indicate the theoretical and managerial contributions of the research. I start by summarizing the results of the empirical analyses. Especially, the theoretical contributions of the research are assessed in more detail.

This thesis extends Mezias (2002b) point of view by taking into account the compensating impact of competitive advantages – for example in marketing, research and development,

production, and others – to avoid the liability of foreignness. Mezias (2002b) has laid the theoretical foundation about how to measure the degree of liability of foreignness but failed to take into account the work of Caves (1971). Caves (1971) argued that international ventures make use of their competitive advantages to generate rents in host markets that allow them to avoid the additional costs of being foreign. To assess the identification of liability of foreignness and the related impact on foreign firm performance, I adopted a quantitative research approach. As result this study can show that foreign car manufacturers face a significant disadvantage in the German car market.

While identifying the degree of liability of foreignness for foreign ventures in the German car market, the issue of strategic instruments emerges that help foreign companies to cope with three factors: the lack of market knowledge, the uncertainty of local customers and host consumers home bias. These factors are investigated separately, to identify instruments that can reduce the reasons for the information asymmetry behind the liability of foreignness.

Firstly, although assessment of customer needs is the cornerstone of firm activity, it is still not simple to attract customers in foreign markets. A strong barrier is the home bias of local consumers. Focusing on a regional dimension shows a significant variation of the degree of liability of foreignness depending on economic stress within supranational regions. For regions experiencing a disruptive change, customers neglect the home bias and start to evaluate the products of all market participants more objective. In comparison, in regions with low economic stress and high economic performance, customers are much more likely to rely on home market products and are less dependent on the objectively best product. This result was not discovered up to now and opens new avenues of research as well as important starting

points for ventures to manage their foreign market activity and the related liability of foreignness.

Secondly, the lack of market knowledge of the foreign venture is a key driver of liability of foreignness. The accumulation of market knowledge is challenging because of the different mental model of preference evaluation between foreign companies and local consumers. Foreign firms have to increase their local responsiveness to decrease their lack of local understanding and compete on equal level like host firms. Market orientation becomes the factor of success. Especially, it is helpful for international companies to use market research as instrument to adopt local knowledge. It helps to decrease the distance between foreign firms and their local competitors. However, the contribution of market research for foreign ventures is not equal over firm age. Young foreign ventures gain more intensively using market research. That is traced back to the flexibility and the learning behaviour of young foreign companies that allows them transfer adopted knowledge much faster into superior products than for mature companies. Moreover, these results extend research in the field of international entrepreneurship. It could be argued that entrepreneurs are successful in foreign markets as it is easier for them to adopt and transform the necessary host market knowledge into superior firm performance. In this way they are more likely to handle the liability of foreignness in foreign markets than their mature foreign counterparts.

Thirdly, even though all young firms possess the flexibility and learning advantage to compensate the lack of market knowledge faster than mature ones, only a few of them are able to increase the lack of awareness of foreign customers and decrease their uncertainty about the foreign venture's product quality. Caves (1971) posited the argument that firms need a competitive advantage in foreign markets to generate economic rents that are high

enough to compensate for the additional costs of being foreign. I extend this approach for entrepreneurs active in foreign markets by proposing that only effectiveness-related firm assets are helpful to decrease their lack of awareness and the uncertainty of host consumers, whereas efficiency-related resources cannot generate sufficient rents to avoid the barriers of liability of foreignness. Thus, new ventures who possess a competitive advantage based on resources that increase the awareness and decrease uncertainty of consumers are more likely to be active in international markets than firms that do not. On the contrary, firm assets that support efficiency show a negative impact on a new ventures ability to be active in foreign markets. Due to the lack of organizational routines and resource constraints, new ventures are not able to generate rents that can compensate the additional costs of being foreign. In this way, relying on efficiency-related firm assets prevent a successful early internationalization of entrepreneurs.

6.2 Theoretical Contributions

Relying on the questions that constitute the research focus of this thesis I can make the following theoretical contributions. Even though several researchers mention the advantages of MNEs in host markets, foreign ventures still face a significant competitive disadvantage in host country markets when competing with domestic companies. On the contrary, there exist instruments that allow firms to handle the inherent sources of the foreigners' liabilities and to overcome the disadvantage. Relying on the knowledge about information asymmetries and instruments to resolve this problem I could identify strategic instruments that are helpful to reduce the firms' degree of liability of foreignness. The instruments are:

- Scanning activities of foreign ventures that are helpful to identify and adopt local market peculiarities and host consumer preferences. In this way foreign ventures can decrease the firm-based reasoning for the liability of foreignness.

- Scanning advantages of young ventures in host country markets. Young ventures adapt more easily to the new environment and customize the firm products according to the host market peculiarities.

- Foreign ventures' communication of the product characteristics is helpful to reduce the lack of awareness and the uncertainty of host consumers. In this way firms can actively decrease the consumer-based reasoning for the existence of liability of foreignness.

- Finally, environmental factors, for example economic stress, force host consumers to scan foreign product characteristics. In this way host consumers adopt knowledge about the foreign product and, subsequently, reduce the degree of liability of foreignness.

As result, liability of foreignness is not an unchangeable barrier confronting foreign ventures. There exist instruments that can help companies to overcome it. Depending on the reasons for the lack of embeddedness and the external settings in the host environment foreign ventures can use the above instruments to decrease the disadvantage.

6.3 Managerial Implications

There are certain implications for practitioners that are important to emphasize. For managers it is important to understand that differences of the degree of liability of foreignness exist. For example, it is shown that regional differences of the degree of liability of

foreignness within host markets exist. Thus, economically depressed regions may be more accessible to foreign producers. That should be also valid for other dimensions, like time. In essence, I support the notion that foreign firms should use host market areas under temporary economic stress and future market potential as a starting point or attractive foothold based on the lower disadvantages arising from liability of foreignness. However, I do not suggest that foreign firms should limit their host country engagements to these areas.

Furthermore, this thesis shows that instruments to overcome liability of foreignness are available and that they are very important for international new ventures. For managers of new ventures that enter foreign markets immediately after firm establishment, it is important to understand the inherent sources of liability of foreignness. As the separate sources require customized instruments to handle the liability they also have different implications for entrepreneurs. On the one hand, the research results show that young ventures possess an advantage compared to mature ventures that is helpful to overcome the firms' lack of knowledge about host consumer preferences and adapt to local peculiarities. In this way it is easier for new ventures to overcome the liability of foreignness. On the other hand, empirical results show also that relying on firm assets that force firm efficiency could hinder new ventures to enter successfully into foreign markets immediately after firm establishment. In this way, liability of foreignness is a stronger barrier for young firms than for their mature competitors.

These results imply that firms do not have to identify the one perfect strategy to overcome liability of foreignness but much more that they have to find the right balance between certain strategic tools and the given organizational settings to ensure that all potential reasons for the disadvantage are taken into account before setting up their foreign market activity.

6.4 Future Research – The Road Ahead

As pointed out before the degree of liability of foreignness has a significant economic impact on the performance of foreign ventures. It is a common opinion that this influence will be in existence for all companies that enter host markets.

In this thesis, I contributed to liability of foreignness literature with studies in the fields of economic stress, market orientation, international entrepreneurship, and sources of competitive advantage. Whereas each of these empirical studies itself offers interesting avenues for future research as I described in the respective chapters, there is also a need for scholars to explore new fields. I will close this thesis by suggesting roads for researchers which are under explored in liability of foreignness and international entrepreneurship literature so far.

At first, as young foreign ventures possess the already mentioned adoption advantage compared to mature firms, they should be also able to transfer the newly identified foreign information much easier and more quickly into their home market activity. In particular, being active in innovative industries, these new ventures should be helpful to adopt new knowledge from foreign markets and thus increase the competitiveness in the home economy. Thus, it would be of certain interest to investigate the contribution of young ventures adoption of innovative knowledge in foreign markets to improve their home market performance and indirectly to support the competitiveness of the home economy to reach the same level in industries where the home country is lagging behind in international competition.

Secondly, a common theoretical lens used in international entrepreneurship research is institutional theory. Due to the special impact of learning on firm performance in the early stage of the firm life cycle, it would be of certain interest to investigate the imprinting effect of home and host market institutions on the new ventures performance. Too often researchers default to institutional explanations when they find differences internationally from the existing research without a clear rationale as to whether the result is actually due to institutional differences. But it is not clear if this is just an easy answer to what are in fact very complex issues, or an accurate reflection of international entrepreneurship.

Another interesting aspect is to focus on certain industry-related differences of the degree of liability of foreignness and their position within the value-chain. Depending on the technological regime (entrepreneurial or routinized regime; Nelson and Winter 1982) it should be more or less easy for foreign companies to overcome the uncertainty of host country consumers due to different degrees of liability of foreignness.

A fourth avenue might explore the impact of regional economic performance and certain localization strategies of foreign ventures on their degree of liability of foreignness. Shaver (1998) already examined that the location patterns between foreign-owned and domestic-owned ventures differ. As I described in chapter 3, regional economic stress has a significant influence on the degree of liability of foreignness. Thus, it is of particular interest to examine the impact of market characteristics, like employment rate, GDP growth, financial constraints, investment opportunities, and governmental support on a regional level. That would help foreign ventures to improve their localization strategies, but even more important to detect instruments that are helpful to decrease the liability of foreignness or to detect the supranational region with the lowest degree of liability of foreignness.

Finally, a fifth avenue might be to explore the impact of group effects within the foreign ventures active in the host market. As all foreign ventures face the lack of embeddedness and the home bias of host consumers, it would be certainly important for a foreign company not only to identify the best practice of local companies to compete on equal level, but also to identify certain advantages of foreign competitors and their strategies.

In summary, the discussion above illustrates that liability of foreignness is still an under explored field with plenty of opportunities for researchers. Although we have yet learned a lot, we still know little. This thesis is an attempt to further advance the understanding of different phenomena in the context of liability of foreignness. In the future, scholars from different disciplines need to explore further issues along the exciting road ahead.

Summary in German

Die vorliegende Arbeit trägt den Titel “Die Überwindung des Wettbewerbsnachteils Ausländischer Unternehmen”. Schwerpunkt der Dissertation ist die Messung des ökonomischen Nachteils ausländischer Unternehmen und die Identifikation von strategischen Instrumenten, welche es international aktiven Unternehmen ermöglicht die fehlende soziale Einbindung als Quelle des Nachteils zu überwinden.

Bisher wurde im Rahmen verschiedener wissenschaftlicher Studien aufgezeigt, dass Unternehmen die in ausländischen Märkten aktiv sind bestimmte Wettbewerbsvorteile gegenüber ihren lokalen Konkurrenten besitzen (Dunning 1977, Barney 1991). Die dazu angeführten theoretischen und empirischen Untersuchungen beruhen auf dem so genannten ressourcen-basierten Ansatz. Es wird davon ausgegangen, dass unternehmensspezifische Ressourcen, die einzigartig und nicht imitierbar sind, einen Wettbewerbsvorteil generieren können der langfristig sichere zusätzliche Unternehmensgewinne sicherstellt (Dunning 1981, Rugman 1981) und es den Unternehmen erlaubt besser zu sein als ihre lokalen Konkurrenten. Ressourcen die dafür in Frage kommen sind z.B. Markennamen, erfahrene Mitarbeiter, technologisches Wissen, und effiziente Produktionsprozesse (Wernerfelt 1984). Darüber hinaus haben verschiedene wissenschaftliche Arbeiten aufgezeigt, dass multinationale Unternehmen ihr Netzwerk von international verteilten Niederlassungen dazu benutzen können, zusätzliche Wettbewerbsvorteile zu generieren (Bartlett and Ghoshal 1989, Kogut 1989, Birkinshaw 1997, Pearce 1999). Die Niederlassungen des international agierenden Unternehmens adaptieren das spezifische lokale Wissen in dem von Ihnen bearbeitenden

Markt und stellen die daraus gewonnen Erfahrungen mit Hilfe des internationalen Unternehmensnetzwerkes allen anderen Mitarbeitern des Unternehmens zur Verfügung. Die daraus resultierenden Erfahrungs- und Effizienzgewinne generieren einen Wettbewerbsvorteil gegenüber Unternehmen die nicht international aktiv sind.

Nichtsdestotrotz, zeigen aktuelle wissenschaftliche Ergebnisse aber auch, dass international aktive Unternehmen in ausländischen Märkten einen signifikanten ökonomischen Nachteil gegenüber ihren inländischen Konkurrenten haben. Dieser beruht auf der so genannten „Liability of Foreignness“. Ursprünglich beschreibt „Liability of Foreignness“ den Wettbewerbsnachteil ausländischer Unternehmen gegenüber inländischen Konkurrenten bei der Gewinnung von lokalen Konsumenten und dem damit verbunden Absatz in Gastmärkten aufgrund von Barrieren die beim Markteintritt in einen ausländischen Market bestehen (Hymer 1976, Kindleberger 1969). Als Gründe hierfür führt Zaheer (1995) Mehrkosten beruhend auf der räumlichen Entfernung zwischen dem Heimatmarkt des ausländischen Unternehmens und den lokalen Kunden, höhere Lernkosten aufgrund unterschiedlicher lokaler Kundenpräferenzen, höhere Reputationsbildungskosten, und nationale gesetzliche Beschränkungen an, die ausländische Unternehmen in Ihrer Handlungsweise behindern.

Die vorliegende Arbeit beschäftigt sich mit der Identifikation strategischer Instrumente, die Unternehmen unterstützen sollen ihre “Liability of Foreignness” (Zaheer 1995), den Nachteil ausländischer Unternehmen in Gastmärkten, zu überwinden. Dazu wird auf die Quellen der „Liability of Foreignness“ zurückgegangen. Im Rahmen der vorliegenden wissenschaftlichen Untersuchung werden die Gründe für den nachteiligen Ausländer-Status dahingehend erklärt, dass zwischen ausländischen Firmen und inländischen Kunden eine so genannte asymmetrische Aufteilung von relevanten Informationen besteht. Diese führt dazu, dass

lokale Kunden weniger oft dazu bereit sind Produkte ausländischen Unternehmen zu kaufen als die ihrer inländischen Konkurrenz.

Um die Konsistenz dieses theoretischen Models zu prüfen, werden in der vorliegenden Arbeit drei empirische Untersuchungen durchgeführt, die die Plausibilität des theoretischen Modells der asymmetrischen Informationsverteilung als Erklärung für den Nachteil ausländischer Unternehmen in Gastmärkten erklären und unterstützen sollen. Als Test für die Wertigkeit dieses Ansatzes werden etablierte Instrumente zur Reduktion von Informationsasymmetrien auf die Firmenaktivität von ausländischen Unternehmen in Gastmärkten und den lokalen Konkurrenten angewendet. Insbesondere wird die Wirkung der aktiven Kommunikation von Produktmerkmalen sowie Marktrecherche über lokale Kundenpräferenzen und Länderbesonderheiten untersucht. Ein stärkerer Einfluss beider Instrumente auf den Markterfolg von ausländischen Unternehmen gegenüber ihren inländischen Konkurrenz ist dahingehend zu interpretieren, dass die vorliegende Informationsasymmetrie zwischen Unternehmen und Kunden bei ausländischen Firmen stärker ausgeprägt ist und daher zu einer höheren Notwendigkeit führt diese überwinden zu wollen.

Kapitel 2 stellt eine detaillierte und theoretisch fundierte Aufarbeitung bisheriger Forschungsansätze und -ergebnisse zu „Liability of Foreignness“ vor. Hierbei werden insbesondere die Ursprünge, Entwicklung und bisherige empirische Resultate erläutert. Es wird deutlich, dass bei bisherigen empirischen Ansätzen eine genaue methodische Analyse des Nachteils ausländischer Unternehmen, die für firmenspezifische Wettbewerbsvorteile und andere unternehmensspezifische Charakteristika kontrolliert, fehlt. Des Weiteren werden die einzelnen Quellen für den Nachteil des Ausländerstatus von Unternehmen in Gastmärkten

näher erläutert. Insbesondere, die Unwissenheit ausländischer Unternehmen über lokale Kundenpräferenzen, sowie die Unwissenheit lokaler Kunden über die Qualität ausländischer Produkte sind entscheidende Faktoren, welche das selektive Kaufverhalten lokaler Kunden und den damit verbundenen ökonomischen Nachteil ausländischer Unternehmen begründen. In Folge dessen werden Informationsasymmetrien als wesentliche Ursache des Wissensnachteils ausländischer Unternehmen identifiziert, und die Kommunikation von Produktmerkmalen sowie Marktrecherche als wesentliche Instrumente zur Reduktion des Wettbewerbsnachteils adaptiert. Die empirische Überprüfung dieses theoretischen Modells erfolgt im Rahmen ökonometrischer Untersuchungen in den Kapiteln 3, 4, und 5.

In Kapitel 3 folgt die erste empirische Untersuchung. Untersuchungsobjekt ist der deutsche Automobilmarkt im Jahr 2003. Ausgehend von den bisherigen Analysen zu „Liability of Foreignness“ wird in diesem Kapitel ein verbesserter empirischer Ansatz zur Messung des Nachteils angewendet. Insbesondere wird für firmspezifische Wettbewerbsvorteile, welche die Unternehmensleistung beeinflussen können, kontrolliert. Darüber hinaus, wird geprüft inwieweit ökonomischer Stress und eine damit einhergehende objektivere Bewertung von Produkteigenschaften durch lokale Konsumenten dazu führen kann den Nachteil ausländischer Unternehmen im Gastland zu reduzieren. Die empirischen Ergebnisse zeigen, dass ökonomischer Stress lokale Konsumenten dazu anhält ihr Wissen über alle im Markt befindlichen Produkte zu erhöhen, und dementsprechend diese Quelle von „Liability of Foreignness“ zu reduzieren. Aufgrund dieses Ergebnisses kann festgehalten werden, dass der Nachteil ausländischer Unternehmen in den Märkten geringer ausfällt in denen lokale Konsumenten ein Interesse daran haben die Kaufkonditionen aller verfügbaren Produkte für eine potentielle Kaufentscheidung in Betracht zu ziehen.

In Kapitel 4 wird die Wirkung von Marktforschungsaktivitäten ausländischer Unternehmen auf „Liability of Foreignness“ untersucht. Da international aktive Unternehmen in Gastmärkten einen Wissensnachteil über Kundenpräferenzen gegenüber lokalen Unternehmen besitzen, sollten sie stärker von Marktforschung, als Instrument zur Akkumulation von relevantem Wissen und der diesbezüglichen Anpassung der Firmenprodukte an lokale Konsumentenwünsche, profitieren als ihre lokalen Konkurrenten. Darüber hinaus, haben mehrere Forschungsansätze bereits gezeigt, dass bezüglich des Lernverhaltens von Firmen etwaige Unterschiede bestehen. Die Adaption von Wissen und die weitergehende Transformation in Unternehmenswachstum ist teilweise von der Industrie abhängig in der ein Unternehmen aktiv ist (Audretsch 1995), dem industriespezifischem Wettbewerb und dem Innovationsverhalten innerhalb der Sektoren. Dem Gegenüber, hat sich aber auch gezeigt, dass firmeninterne Eigenschaften das Lernverhalten von Unternehmen beeinflussen können. Insbesondere wird deutlich das Lernunterschiede zwischen alten und jungen Unternehmen bestehen (Nelson und Winter 1982). Junge Unternehmen sind in der Lage sich schneller Veränderungen anzupassen, und sollten somit stärker von den Marktforschungsergebnissen in ausländischen Märkten als ihre älteren ausländischen Konkurrenten profitieren (Autio et al. 2000, Sapienza et al. 2006). Aufgrund dessen, wird in Kapitel 4 zusätzlich untersucht inwieweit der Lernvorteil junger Unternehmen dazu benutzt werden kann um den Wissensnachteil in ausländischen Märkten gegenüber lokalen Konkurrenten zu reduzieren.

Die empirischen Untersuchungsergebnisse zeigen zum einen, dass ausländische Unternehmen stärker von Marktforschung profitieren als ihre inländischen Konkurrenten. Zum zweiten wird deutlich, dass junge ausländische Firmen stärker von Marktforschung profitieren als ihre älteren ausländischen Konkurrenten, und somit schneller zu ihren

inländischen Konkurrenten aufschließen können. Dies beruht auf den bereits erwähnten Lernvorteilen junger Unternehmen. Jungen ausländischen Unternehmen fällt es leichter neues Wissen in ihren Gastmärkten zu adaptieren, und den damit einhergehenden Wettbewerbsnachteil gegenüber lokalen Konkurrenten zu reduzieren. Darüber hinaus kann dieses Untersuchungsergebnis als eine indirekte Erklärung für die sehr gute betriebswirtschaftliche Leistung von so genannten ‚International Entrepreneurs' (schnelle Internationalisier) in ausländischen Märkten gewertet werden.

In Kapitel 5 wird schließlich untersucht inwieweit die aktive Kommunikation von Produktinformationen dazu dienen kann das fehlende Bewusstsein von inländischen Kunden über die Verfügbarkeit von ausländischen Produkten und deren Produktqualität zu erhöhen. Ausgehend von der Existenz von „Liability of Foreignness" sollten Unternehmen die in ausländischen Märkten aktiv sind stärker dazu neigen sich auf Unternehmensressourcen zu konzentrieren die behilflich sind die Kundenunsicherheit zu reduzieren als Unternehmen die nur in ihrem Heimatmarkt aktiv sind.

Die empirische Untersuchung kann aufzeigen, dass international aktive Unternehmen sich stärker auf effektive Unternehmensressourcen konzentrieren die behilflich sind die Unsicherheit neuer Konsumenten zu reduzieren. Insbesondere Werbung, Produktgestaltung und Kreativität sind hierbei behilflich. Auf der anderen Seite zeigt sich, dass Unternehmensressourcen die stärker auf Unternehmenseffizienz abzielen, junge Unternehmen davon abhalten frühzeitig zu internationalisieren. Dies ist darauf zurückzuführen, dass es jungen Unternehmen an organisatorischer Erfahrung und notwendigen finanziellen Mitteln fehlt, die es ihnen erlauben würden mit effizienz-basierten Ressourcen Gewinne zu generieren, die die zusätzlichen Kosten des Wettbewerbsnachteils aufgrund der ‚liability of

foreignness' aufwiegen könnten.

Zusammenfassend kann festgehalten werden, dass beruhend auf den empirischen Ergebnisses der vorliegenden Dissertation ausländische Unternehmen einem signifikanten Leistungsnachteil gegenüber ihren inländischen Konkurrenten im Gastland gegenüberstehen. Da dieser Nachteil zum Teil auf Informationsasymmetrien zurück zuführen ist, können Instrumente zur Reduktion der daraus resultierenden Selektion inländischer Konsumenten positiv dazu beitragen den Nachteil zu verringern und damit erfolgreich gegenüber der lokalen Konkurrenz zu bestehen.

Publications

The paper *Regional Economic Stress as Moderator of Liability of Foreignness* (chapter 3), co-authored with Wolfgang Sofka (Ph.D. candidate, ZEW), is published in the Journal of International Management. The empirical papers in chapter 4 and chapter 5 are also submitted for journal publication.

All empirical papers in this dissertation have been accepted for presentation at the Academy of Management Conference (Atlanta, 2006; Philadelphia, 2007; and Anaheim, 2008) as well as the Academy of International Business Conference (Beijing, 2006; Indianapolis, 2007; and Milan, 2008). Moreover, the research work in this dissertation has been accepted for presentation at the European Association for Research in Industrial Economics Conference (Amsterdam, 2006), the Strategic Management Society Conference (San Diego, 2007), the Babson Kauffman Entrepreneurship Research Conference (Madrid, 2007), the Babson Doctoral Consortium (Madrid, 2007), the FGF Gründungsforum (Jena, 2005), the Doctoral Workshop on International Entrepreneurship (Atlanta, 2006), the International Entrepreneurship Conference (Montreal, 2007), and many others.

Certain chapters of this dissertation have also been presented at internal seminars of the Entrepreneurship, Growth, and Public Policy Group at the Max Planck Institute of Economics in Jena, Germany.

Literature

Aaker, D.A. (1991), *Managing Brand Equity*, The Free Press: New York.

Achabal, D. D., J. M. Heineke and S. H. McIntyre (1984), Issues and Perspectives on Retail Productivity, *Journal of Retail* 60 (3), 107–127.

ADAC (2004), *Ecotest*, ADAC: http://www.adac.de/images/22930_tcm8-117022.pdf.

Ahuja, G. (2000), The Duality of Collaboration: Inducements and Opportunities in the Formation of Interfirm Linkages, *Strategic Management Journal* 21 (3): 317-343.

Aiken, L.S. and S.G. West (1991), *Multiple Regression: Testing and Interpreting Interactions*, Thousand Oaks, CA: SAGE Publications.

Akerlof, G.A. (1970), The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics* 84 (3), 488-500.

Akyol, A. and G. Akehurst (2003), An Investigation of Export Performance Variations related to Corporate Export Market Orientation, *European Business Review* 15 (1), 5-20.

Aliber, R.Z. (1970), The Multinational Enterprise in a Multiple Currency World, in: J. Dunning (ed.), *The Multinational Enterprise*, George Allen and Unwin, London: 49-56.

Allison, P. D. (1977), Testing for Interaction in Multiple Regression, *American Journal of Sociology* 83: 144–153.

Alvarez, I. and J. Molero (2005), Technology and the generation of international knowledge spillovers: An Application to Spanish Manufacturing Firms, *Research Policy* 34 (9), 1440-1452.

Amburgey, T.L. D. Kelly, and W.P. Barnett (1993), Resetting the Clock: The Dynamics of Organizational Change and Failure, *Administrative Science Quarterly* 38 (1), 51-73.

Anderson, U. and M. Forsgren (2000), In Search of Centre of Excellence: Network Embeddedness and Subsidiary Roles in Multinational Corporations, *Management International Review* 40 (4), 329-350.

Anderson, U., M. Forsgren, and U. Holm (2002), The Strategic Impact of External Networks: Subsidiary Performance and Competence Development in the Multinational Corporation, *Strategic Management Journal* 23 (11), 979-996.

Anderson, E. and H. Gatignon (1986), Modes of Foreign Market Entry: A Transaction Cost Analysis and Propositions, *Journal of International Business Studies* 17 (3): 1-26.

Aragon-Sanchez, A. and G. Sanchez-Marin (2005), Strategic Orientation, Management Characteristics, and Performance: A Study of Spanish SMEs, *Journal of Small Business Management* 43 (3), 287–308.

Arnold, H. J. (1982), Moderator Variables: A Clarification of Conceptual Analytic and Psychometric Issues, *Organizational Behavior and Human Performance* 29: 143–174.

Audretsch, D.B. (1995), *Innovation and Industry Evolution*, Cambridge, MA: MIT Press.

Audretsch, D.B. and E.E. Lehmann (2004), Financing High-Tech Growth: The Role of Banks and Venture Capitalists, *Schmalenbach Business Review* 56 (4), 340-357.

Augar, P. (2001), *The Death of Gentlemanly Capitalism: The Rise and Fall of London's Investment Banks*, Penguin: London.

Autio, E., H. Sapienza, and J. Almeida (2000), Effects of Age at Entry, Knowledge Intensity, and Imitability on International Growth, *Academy of Management Journal* 43(5): 909–924.

Babakus, E., D.W. Cravens, K. Grant, T.N. Ingram and R.W. LaForge (1996), Investigating the Relationship among Sales, Management Control, Sales Territory Design, Salesperson Performance, and Sales Organization Effectiveness, *International Journal of Research in Marketing* 13 (4), 345-363.

Bagozzi, R.P. (1984), Expectancy-Value Attitude Models: An Analysis of Critical Measurement Issues, *International Journal of Research in Marketing* 1 (4), 295-310.

Baker, W.E., and J. Sinkula (1999), The Synergistic Effect of Market Orientation and Learning Orientation on Organizational Performance, *Journal of the Academy of Marketing Science* 27 (4), 411-427.

Barkema, H.G. and F. Vermeulen (1998), International Expansion through Start-Up or Acquisition: A Learning Perspective, *Academy of Management Journal* 41 (7), 7-26.

Bannister, J.P. and J.A. Saunders (1978), UK Consumers' Attitudes towards Imports: The Measurement of National Stereotype Image, *European Journal of Marketing* 12 (8), 562-570.

Barney, J. (1991), Firm Resources and Sustained Competitive Advantage, *Journal of Management* 17 (1), 99-120.

Bartlett, C.A. and S. Ghoshal (1987), Managing Across Borders: New Organizational Responses, *Sloan Management Review* 29 (1): 43-54.

Bartlett, C.A. and S. Ghoshal (1989), *Managing Across Borders: The Transnational Solution*, Cambridge, MA: Harvard Business School Press.

Belk, R. (1988), Possession and the Extended Self, *Journal of Consumer Research* 15(2), 139-168.

Bell, J. (1995), The Internationalization of Small Software Firms: A Further Challenge to the 'Stage' Theories, *European Journal of Marketing* 29, 60–75.

Ben-Porath, Y. (1980), The F-connection: Families, Friends and Firms and the Organization of Exchange, *Population and Development Review* 6 (1): 1-30.

Benassi, M. (1995), Governance Factors in a Network process Approach, *Scandinavian Journal of Management* 11 (3): 269-281.

Benner, M.J. and M. Tushman (2002), Process Management and Technological Innovation: A Longitudinal Study of the Photography and Paint Industries, *Administrative Science Quarterly* 47 (4): 676-706.

Berkovec, J., J. Rust (1985), A Nested Logit Model of Automobile Holdings for One Vehicle Households, *Transportation Research Part B: Methodological* 19 (4), 275-285.

Berry, S., J. Levinsohn, A. Pakes (1995), Automobile Prices in Market Equilibrium, *Econometrica* 63 (4), 841-890.

Bettis, R.A. and C.K. Prahalad (1995), The Dominant Logic: Retrospective and Extension, *Strategic Management Journal* 16 (1), 5-14.

Bhide, A. (1986), Hustle as Strategy, *Harvard Business Review* 64 (5), 59-65.

Bilkey, W.J. and E. Ness (1982), Country of Origin Effect on Product Evaluation, *Journal of International Business Studies* 13 (1), 89-99.

Birkinshaw, J. (1997), Entrepreneurship in Multinational Corporations: The Characteristics of Subsidiary Initiatives, *Strategic Management Journal* 18 (3): 207-229.

Birkinshaw, J., N. Hood, and S. Jonsson (1998), Building Firm-Specific Advantages in Multinational Corporations: The Role of Subsidiary Initiative, *Strategic Management Journal* 19 (3): 221-241.

Bloodgood, J., H. Sapienza and J. Almeida (1996), The Internationalization of New High-Potential U.S. Ventures: Antecedents and Outcomes, *Entrepreneurship: Theory and Practice* 20 (4), 61–76.

Bonaccorsi, A. (1992), On the Relationship Between Firm Size and Export Intensity, *Journal of International Business Studies* 23 (4), 605–635.

Bonoma, T. V. and B. H. Clark (1988), *Marketing Performance Assessment.* Boston: Harvard Business School Press.

Bonoma, T.V. and V.L. Crittenden (1988), Managing Marketing Implementation, *Sloan Management Review* 29 (2), 7-14.

Boter, H. and C. Holmquist (1996), Industry Characteristics and Internationalization Process in Small Firms, *Journal of Business Venturing* 11, 471–487.

Bourgeois, L. (1980), Performance and Consensus, *Strategic Management Journal* 1 (3), 227–248.

British Invisibles (2000), *International financial markets in the UK*, City Business Services.

Brownstone, D., D.S. Bunch, K. Train (2000), Joint Mixed Logit Models of Stated and Revealed Preferences for Alternative Fuel Vehicles, *Transport Research Part B: Methodological* 34 (5), 315-338.

Brush, C. G. (1992), Marketplace Information Scanning Activities of New Manufacturing Ventures, *Journal of Small Business Management* 30(4): 41–53.

Brush, C. G. (1995), *International Entrepreneurship: The Effects of Firm Age on Motives of Internationalization,* New York: Garland.

Brush, C. G. and P. A. Vanderwerf (1992), A Comparison of Methods and Sources for Obtaining Estimates of New Venture Performance, *Journal of Business Venturing* 7, 157–170.

Buckley, P.J. and M. Casson (1976), *The Future of the Multinational Enterprise*, Holmes & Meier, New York: 66-84.

Buckley, P., C. Pass and K. Prescott (1988), Measures of Competitiveness: A Critical Survey, *Journal of Marketing Management* 4 (2), 175–200.

Bullock, A. and A. Hughes (1998), Survey Design, Response Bias and Sample Characteristics in the 1997 CBR SME Survey, in: A.D. Cosh and A. Hughes (eds.), *Enterprise Britain: Growth Innovation and Public Policy in the Small and Medium-Sized Enterprise Sector 1994-1997*, ESRC Centre for Business Research, University of Cambridge.

Bunch, D.S., M. Bradley, T.F. Golob, R. Kitmura (1993), Demand for Clean-Fuel Vehicles in California – a Discrete Choice Stated Preference Pilot Project, *Transportation Research Part A: Policy and Practice* 27 (3), 237-253.

Burt, R. S. (1992), The Social Structure of Competition, in: *Networks and Organizations: Structure, Form and Actio*n. (eds.) N. Nohria and R. Eccles. Boston, MA: Harvard Business School Press, 57-91.

Butchard, R. (1987), A New UK Definition of High-Technology Industries, *Economic Trends* 400, 82–88.

Cadogan, J.W., N.J. Paul, R.T. Salminen, K. Puumalainen and S. Sundqvist (2001), Key Antecedents to "Export" Market-Oriented Behaviors: A Cross-National Empirical Examination, *International Journal of Research in Marketing* 18 (3), 261-282.

Cadogan, J.W., C.C. Cui, E. Li and Y. Kwok (2003), Export Market-Oriented Behavior and Export Performance, *International Marketing Review* 20 (5), 493-513.

CBR - Cambridge Centre for Business Research Dataset (1997), *The State of British Enterprise: Growth Innovation and Competitive Advance in Small and Medium Size Firms*, ESRC Centre for Business Research (CBR), University of Cambridge.

Campbell, A. J. (1996), The Effects of Internal Firm Barriers on the Export Behaviour of Small Firms in a Free Trade Environment, *Journal of Small Business Management* 34 (3), 50–59.

Cantwell, J. and R. Mudambi (2005), MNE Competence-Creating Subsidiary Mandates, *Strategic Management Journal* 26 (12), 1109-1128.

Cantwell, J. and O. Janne (1999), Technological Globalisation and Innovative Centres: The Role of Corporate Technological Leadership and Locational Hierachy, *Research Policy* 28 (2-3): 119-144.

Carlson, R.L. (1978), Seemingly Unrelated Regression and the Demand for Automobiles of Different Size, 1965-75: A Disaggregate Approach, *Journal of Business* 51 (2).

Castanias, R. P. and C. E. Helfat (1991), Managerial Resources and Rents, *Journal of Management* 17 (1), 155–171.

Caves, R. (1971), International Corporations: The Industrial Economics of Foreign Investment, *Economica* 38 (149), 1-27.

Caves, R. (1974), Causes of Direct Investment: Foreign Firms' Share in Canadian and United Kingdom Manufacturing Industries, *Review of Economics & Statistics* 56, 279-293.

Caves, R. (1982), *Multinational Enterprise and Economic Analysis*, Cambridge University Press, Cambridge.

Caves, R. (1996), *Multinational Enterprise and Economic Analysis*, Cambridge University Press.

Chao, P. and Gupta, P.B. (1995), Information Search and Efficiency of Consumer Choices of New Cars: Country-of-Origin Effects, *International Marketing Review* 12 (6): 47-59.

Chatterjee, S. and B. Price (1991), *Regression Analysis by Example*, 2nd Edition, Wiley, New York.

Chrisman J. J. and J. Leslie (1989), Strategic, Administrative and Operating problems: The Impact of Outsiders on Small firm Performance, *Entrepreneurship Theory & Practice* 13(3): 37–51.

Christensen, C.M. and J.L. Bower (1996), Customer Power, Strategic Investment, and the Failure of Leading Firms, *Strategic Management Journal* 17 (3), 197-218.

Certo, S.T., C.M. Daily and D.R. Dalton (2001), Signaling Firm Value through Board Structure: An Investigation of Initial Public Offerings, *Entrepreneurship: Theory & Practice* 26 (2), 33-50.

Cespedes, F.V. (1990), Agendas, Incubators, and Marketing Organization, *California Management Review* 33 (1), 27-53.

Cleff, T., O. Heneric and A. Spielkamp (2005), Regulation and Industrial Policy, in: Heneric O, Licht G and Sofka W. (eds.): *Europe's Automotive Industry on the Move: Competitiveness in a Changing World,* Heidelberg, 157-190.

Cohen, J. (1978), Partial Products are Interactions; Partial Powers are Curve Components, *Psychological Bulletin* 70: 259–267.

Cohen, J. and P. Cohen (1983), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences*, 2nd ed., Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohen, J., P. Cohen, S>G> West, and L.S. Aiken (2003), *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd Edition), Mahwah, New Jersey: Lawrence Erlbaum Associates, Publisher.

Connor, T. (1999), Customer-Led and Market-Oriented: A Matter of Balance, *Strategic Management Journal* 20 (12), 1157-1163.

Cosh, A. and A. Hughes (1996), *The Changing State of British Enterprise: Growth, Innovation and Competitive Advantage in Small and Medium Sized Firms,* ESRC Centre for Business Research (CBR), University of Cambridge.

Cosh, A. and A. Hughes (1998), Profitability, Finance, Investment Appraisal and Acquisition, in: A.D. Cosh and A. Hughes (eds.), *Enterprise Britain: Growth Innovation and Public Policy in the Small and Medium-Sized Enterprise Sector 1994-1997*, ESRC Centre for Business Research, University of Cambridge.

Cosh, A. and E. Wood (1998), Innovation: Scale, Objectives and Constraints, in: A.D. Cosh and A. Hughes (eds.), *Enterprise Britain: Growth Innovation and Public Policy in the Small and Medium-Sized Enterprise Sector 1994-1997*, ESRC Centre for Business Research, University of Cambridge.

Court, A.T. (1939), Hedonic Price Indexes. General Motors Corporation, in: Court AT. (eds.), *The Dynamics of Automobile Demand,* New York, 99-117.

Coviello, N., P. Ghauri and K. Martin (1997), International Competitiveness: Empirical Findings from SME Service Firms, *Journal of International Marketing* 6 (2), 8–27.

Coviello, N. and K. Martin (1999), Internationalization of Service SMEs: An Integrated Perspective from the Engineering Consulting Sector, *Journal of International Marketing* 7 (4), 42–66.

Covin, J. G., D. P. Slevin and T. J. Covin (1990), Content and Performance of Growth-Seeking Strategies: A Comparison of Small Firms in High and Low Technology Industries, *Journal of Business Venturing,* 5, 391–412.

Cravens, D.W., R.B. Woodruff and J.C. Stamper (1972), An Analytical Approach for Evaluating Sales Territory Performance, *Journal of Marketing* 36 (1), 31-37.

Crick, D. and M. Jones (2000), Small High Technology Firms and International High Technology Markets, *Journal of International Marketing* 8 (2), 63–85.

Cronbach, L.J. (1987), Statistical Tests for Moderator Variables: Flaws in Analysis Recently Proposed, *Psychological Bulletin* 102 (3), 414-417.

Cyert, R.M. and J.G. March (1963), *A Behavioral Theory of the Firm*, New Jersey: Prentice-Hall.

D'Aveni, R.A. (1994), *Hypercompetition: Managing the Dynamics of Strategic Maneuvering*, New York: Free Press.

Daughety, A.F. and J.F. Reinganum (1995), Product Safety: Liability, R&D, and Signaling, *American Economic* Review 85 (5), 1187-1206.

Davidson, W.H. (1980), The Location of Foreign direct Investment: Country Characteristics and Experience Effects, *Journal of International Business Studies* 11 (9), 9-22.

de la Fuente, J.R. and M.J.Y. Guillen (2005), Identifying the Influence of Product Design and Usage Situation on Consumer Choice, *International Journal of Market Research* 47 (6), 667-686.

De Mooij, M. (2000), The Future is Predictable for International Marketers, *International Marketing Review* 17(2/3): 103–114.

Denrell, J. and J.G. March (2001), Adaptation as Information restriction: The Hot Stove Effect, *Organization Science* 12 (5), 523-538.

DeYoung, R. and D. Nolle (1996), Foreign-Owned Banks in the United States: Earning Market Share or Buying It? *Journal of Money, Credit, and Banking* 28: 622–636.

Dhanaraj, C. and P.W. Beamish (2003), A Resource-Based Approach to the Study of Export Performance, *Journal of Small Business Management* 41 (3), 242-261.

Diamantopoulos, A., B. B. Schlegelmilch, and J. P. Du Preez (1995). Lessons for pan-European marketing? The role of consumer preferences in fine-tuning the product-market fit, *International Marketing Review,* 12 (2), 38-52.

Dierickx, I. and K. Cool (1989), Asset Stock Accumulation and Sustainability of Competitive Advantage, *Management Science* 35 (12), 1504-1511.

Dodds, W.B., K.B. Monroe and D. Grewal (1991), Effects of Price, Brand, and Store Information on Buyers' Product Evaluations, *Journal of Marketing Research* 28 (3), 307-319.

Dollinger, M. (1985), Environmental Contacts and Performance of the Smaller Firm, *Journal of Small Business Management* 23(1): 24–30.

Drucker, P. F. (1974), *Management: Tasks, Responsibilities, Practices*. New York: Harper & Row.

Dunning, J.H. (1973), The Determinants of International Product, *Oxford Economic Papers* 25: 289-336.

Dunning, J.H. (1977), Trade, Location of Economic Activity and the MNE: The Search for an Eclectic Approach, in B.G. Ohlin, P.O. Hesselborn, and P.M. Wijkman (eds.), *The International Allocation of Economic Activity*, New York: Holmes and Meier.

Dunning, J.H. (1981), *International Production and the Multinational Enterprise*, London: George Allen Unwin.

Eden, L. and S. Miller (2001), Opening the Black Box: The Multinational enterprise and the Cost of Doing Business Abroad, in: D.H. Nagao (ed.), *Best Paper Proceedings, Academy of Management Meeting*, Washington, DC, IM C1-C6.

Eden, L. and M.A. Molot (2002), Insiders, Outsiders and Host Country Bargains, *Journal of International Management* 8 (4), 359-388.

Elliott, G.R. and C.R. Cameron (1994), Consumer Perception of Product Quality and the Country-of-Origin Effect, *Journal of International Marketing* 2 (2), 49-62.

Engers, M. (1987), Signalling with many Signals, *Econometrica* 55 (3), 663-674.

Erramilli, M.K. (1991), The Experience Factor in Foreign Market Entry Behavior of Service Firms, *Journal of International Business Studies* 22(3), 479-501.

Eriksson, K., J. Johanson, A. Majkgard and D.D. Sharma (1997), Experiential Knowledge and Cost in the Internationalization Process, *Journal of International Business Studies* 28 (2), 337-360.

European Commission (2004), *EU Industrial R&D Investment Scoreboard*, Brussels.

Fahey, L. amd W. R. King (1977), Environmental Scanning for Corporate Planning, *Business Horizons* 20(4): 61–72.

Farmer, R.N. and B.M. Richman (1970), *Comparative Management and Economic Progress*, Bloomington, IA, Cedarwood Publishing Company.

Fazio, R.H. and M.P. Zanna (1981), Direct Experience and Attitude-Behavior Consistency, in L. Berkovitz (ed.): *Advances in Experimental Social Psychology*, New York: Academic Press 14, 161-202.

Fazio, R.H., M.C. Powell, C.J. Williams (1989), The Role of Attitude Accessibility in the Attitude-to-Behavior Process, *Journal of Consumer Research* 16, 280-288.

Friedkin, N.E. (1984), Structural Cohesion and Equivalence Explanations of Social Homogeneity, *Sociological Methods and Research* 12, 235-261.

Frokjaer, E., M. Hertzum and K. Hornbaek (2000), Measuring Usability: Are Effectiveness, Efficiency and Satisfaction Really Correlated?, *CHI Letters* 2 (1), 345-352.

Frost, T. (1998), The Geographic Sources of Innovation in the Multinational Enterprise: U.S. Subsidiaries and Host Country Spillovers, 1975-1990, Ph.D. dissertation, Massachusetts Institute of Technology.

Fujita, M. (1995), Small and Medium-sized Transnational Corporations: trends and Patterns of Foreign Direct Investment, *Small Business Economics* 7 (3), 183-204.

Ghemawat, P. (1986), Sustainable Advantage, *Harvard Business Review* 64 (5), 53-58.

Ghemawat, P. (2001), Distance Still Matters: The Hard Reality of Global Expansion, *Harvard Business Review* 79 (8), 137-146.

Ghemawat, P. (2003), The Forgotten Strategy, *Harvard Business Review* 81 (11), 76-84.

Ghoshal, S. (1987), Global Strategy: An Organizing Framework, *Strategic Management Journal* 8 (5): 425-440.

Ghoshal, S. and C. Bartlett (1990), The Multinational Corporation as an Interorganizational Network, *Academy of Management Review* 15, 603-625.

Gilson, L.L., J.E. Mathieu, C.E. Shalley and T.M. Ruddey (2005), Creativity and Standardization: Complementary or Conflicting Drivers of Team Effectiveness?, *Academy of Management Journal* 48 (3), 521-531.

Goldberg, P.K. and F. Verboven (2001), The Evolution of Price Dispersion in the European Car Market, *Review of Economic Studies* 68 (4), 811-849.

Goldberg, P.K. and F. Verboven (2004), Cross-Country Price Dispersion in the Euro Era: A Case Study of the European Car Market, *Economic Policy* 19 (40), 484-522.

Gomes, L. and K. Ramaswamy (1999), An Empirical Examination of the Form of the Relationship Between Multinationality and Performance, *Journal of International Business Studies* 30 (1): 173-188.

Gonzalez, E. and A. Carcaba (2004), Efficiency improvement through learning, *International Journal of Technology Management* 27 (6/7), 628-638.

Govindarajan, V. and A.K. Gupta (2001), *The Quest for Global Dominance: Transforming Global Presence into Global Competitive Advantage* 1, San Francisco.

Granovetter, M. (1973), The Strength of Weak Ties, *American Journal of Sociology* 78 (6), 1360-1380.

Granovetter, M. (1985), Economic Action and Social Structure: The Problem of Embeddedness, *American Journal of Sociology* 91(3): 481–510.

Granovetter, M. (1992), Problems of Explanation in Economic Sociology, in: N. Nohria, R.G. Eccles (eds.): *Networks and Organizations: Structure, Form and Action*: 25-56, Harvard Business School Press, Boston.

Griffiths, W.E., C. Hill, and G.G. Judge (1992), Learning and Practicing Econometrics, New York.

Griliches, Z. (1961), Hedonic Price Indexes for Automobiles: An Econometric Analysis of Quality Change, *The Price Statistics of the Federal Government*, NBER General Series 73 (3), 173-196.

Grossman, S. (1981), The Informational Role of Warranties and Private Disclosure about Product Quality, *Journal of Law & Economics* 24 (3), 461-483.

Grönroos, C. and K. Ojasalo (2004), Service Productivity: Towards a conceptualization of the transformation of inputs into economic results in services, *Journal of Business Research* 57 (4), 414-423.

Guisinger, S. (2001), From OLI to OLMA: Incorporating Higher Levels of Environmental and Structural Complexity into the Eclectic Paradigm, *International Journal of the Economics of Business* 8 (2), 257-272.

Gupta, A. and V. Govindarajan (1986), Resource Sharing Among SBUs: Strategic Antecedents and Administrative Implications, *Academy of Management Journal* 29 (4), 695–714.

Gupta, A.K. and E.D. Westney (2003), Introduction, in: A.K. Gupta, E.D. Westney (eds.), *Smart Globalization: Designing Global Strategies, Creating Global Networks*, San Francisco: 1-12.

Gurhan-Canli, Z. and D. Maheswaran (2000), Determinants of Country-of-Origin Evaluations, *Journal of Consumer Research* 27 (1), 96-108.

Haber, S. and A. Reichel (2005), Identifying Performance Measures of Small Ventures—The Case of the Tourism Industry, *Journal of Small Business Management* 43 (3), 257–286.

Hair, J.F., R.E. Anderson, R.L. Tathum and W.C. Black (1998), *Multivariate Data Analysis with Readings*, Macmillan: New York.

Han, C.M. and V. Terpstra (1988), Country-of-origin effects for uni-national and bi-national products, *Journal of International Business Studies* 19 (2), 235-255.

Hannan, M. T. (1998), Rethinking Age Dependence in Organizational Mortality: Logical Formalizations, *American Journal of Sociology* 104 (1): 126-164.

Hannan, M.T. and J. Freeman (1984), Structural Inertia and Organizational Change, *American Sociological Review* 49 (2), 149-164.

Hannon, J.M. (1996), Organizational attractiveness in Japan: a screening perspective, The *International Journal of Human Resource Management* 7 (2), 489-507.

Harris, L.C. (2001), Market Orientation and Performance: Objective and Subjective Empirical Evidence from UK companies, *Journal of Management Studies* 38 (1), 17-43.

Hart, S. and A. Diamantopoulos (1993), Marketing Research Activity and Company Performance: Evidence from Manufacturing Industry, *European Journal of Marketing* 27 (5), 54-72.

Hasan, I. and W. Hunter (1996), Efficiency of Japanese Multinational Banks in the United States, in A. H. Chen (ed.), *Research in Finance* 14, Greenwich and London: 157–173

Hedaa, L. and T. Ritter (2005), Business relationships on different waves: Paradigm shift and Marketing Orientation revisited, *Industrial Marketing Management* 34 (7), 714-721.

Hedlund, G. (1986), The Hypermodern MNC – A Heterarchy?, *Human Resource Management* 25 (1): 9-35.

Heinlein, R. (1961), *Stranger in a Strange Land*, New York.

Hemmert, M. (2004), The Impact of Internationalization on the Technology Sourcing Performance of High-Tech Business Units, *Journal of Engineering and Technology Management* 21 (3), 149–174.

Hendel, I. and A. Lizzeri (1999), Adverse Selection in Durable Goods Markets, *American Economic Review* 89 (5), 1097-1115.

Hennart, J. (1982), *A Theory of Multinational Enterprise*. Michigan.

Hennart, J. (2001), Theories of the Multinational Enterprise, in A.M. Rugman, T.L. Brewer (eds.), *The Oxford Handbook of International Business*, New York: Oxford University Press: 127-149.

Hennart, J.-F., T. Roehl and M. Zeng (2002), Do Exits Proxy a Liability of Foreignness? The Case of Japanese exist from the US, *Journal of International Management* 8 (3), 241-264.

Hirschman, A.O. (1990), *Exit, Voice, and Loyalty*, Cambridge Massachusetts: Harvard University Press.

Hitt, M.A., R.E. Hoskisson and R.D. Ireland (1994), A Mid-Range Theory of the Interactive Effects of International and Product Diversification on Innovation and Performance, *Journal of Management* 20 (2), 297-327.

Honig, B., M. Lerner and Y. Raban (2006), Social Capital and the Linkages of High-Tech Companies to the Military Defense System: Is there a Signaling Mechanism?, *Small Business Economics* 27 (4/5), 419-437.

Horst, T. (1972), Firm and Industry Determinants of the Decision to Invest Abroad: An Empirical Study, *Review of Economics & Statistics* 54 (3): 258-266.

Hossain, F., R. Jain and R. Govindasamy (2005), Financial Structure, Production, and Productivity: Evidence from the U.S. Food Manufacturing Industry, *Agricultural Economics* 33 (3), 399-410.

Hsieh, M.-H. (2004), An Investigation of Country-of-Origin Effect Using Correspondence Analysis: A Cross-National Context*, International Journal of Market Research,* 46 (3), 267-295.

Hughes, A. and B. Moore (1998), High-Tech Firms: Market Position, Innovative Performance and Access to Finance, in: A.D. Cosh and A. Hughes (eds.), *Enterprise Britain: Growth Innovation and Public Policy in the Small and Medium-Sized Enterprise Sector 1994-1997*, ESRC Centre for Business Research, University of Cambridge.

Hult, G.T. and D.J. Ketchen (2001), Does Market Orientation matter? A Test of the Relationship between Positional Advantages and Performance, *Strategic Management Journal* 22 (9), 899-906.

Hult, G.T., D.J. Ketchen, and S.F. Slater (2005), Market Orientation and Performance: An Integration of Disparate Approaches, *Strategic Management Journal* 26 (12), 1173-1181

Hymer, S.H. (1976), *The International Operations of National Firms: A Study of Direct Investment*, Cambridge

Insch, G. S. and S. R. Miller (2005), Perception of Foreignness: Benefit or Liability? *Journal of Managerial Issues* 17(4): 423–438

Ippolito, P.M. (1990), Bonding and Nonbonding Signals of Product Quality, *Journal of Business* 63 (1), 41-60.

Jensen, R. and G. Szulanski (2004), Stickiness and the Adaptation of Organizational Practices in Cross-Border Transfers, *Journal of International Business Studies* 35(6): 508–523.

Jimenez-Jimenez, D. and J.G. Cegarra-Navarro (2007), The Performance Effect of Organizational Learning and Market Orientation, *Industrial Marketing Management* 36 (6), 694-708.

Johanson, J. and J. Vahlne (1977), The Internationalization Process of the Firm – A Model of Knowledge Development and Increasing Foreign Market Commitments, *Journal of International Business Studies* 8 (1), 23-32.

Johanson, J. and J. Vahlne (1990), The Mechanism of Internationalism, *International Marketing Review* 7 (4), 11-24.

Jones, M. (1999), The Internationalization of Small High technology Firms, *Journal of International Marketing* 7 (4), 15–41.

Kam, C.D. and R.J. Franzese (2007), Modeling and Interpreting Interactive Hypotheses in Regression Analysis, University of Michigan Press.

Kang, J.K., and R.M. Stulz (1997), Why is there a home bias? An analysis of foreign portfolio equity ownership in Japan, *Journal of Financial Economics* 46 (1), 3-28.

Kara, A., J. E. Spillan, and O. W. DeShields (2005), The Effect of a Market Orientation on Business Performance: A Study of Small-Sized Service Retailers using MARKOR Scale, *Journal of Small Business Management* 43 (2), 105–118.

Katsikea, E., M. Theodosiou and R.E. Morgan (2007), Managerial, Organizational, and External Drivers of Sales Effectiveness in Export Market Ventures, *Journal of the Academy of Marketing Science* 35 (2), 270-283.

Katsikeas, C. and R. Morgan (1988), *Assessing Firms' Export Performance: A literature Review and Guidelines for Future Research*, Cardiff: Cardiff Business School, University of Wales.

Katsikeas, C. and R. Morgan (1994), Differences in Perception of Exporting Problems Based on Firm Size and Export Market Experience, *European Journal of Marketing* 28 (5), 17–39.

Kaynak, E. and S.T. Cavusgil (1983), Consumer Attitudes towards Products of Foreign Origin: Do they vary across Product Classes?, *International Journal of Advertising* 2 (2), 147-157.

Keeble, D. (1998), Growth Objectives and Constraints, in: A.D. Cosh and A. Hughes (eds.), *Enterprise Britain: Growth Innovation and Public Policy in the Small and Medium-Sized Enterprise Sector 1994-1997*, ESRC Centre for Business Research, University of Cambridge.

Keller, K.L. (1993), Conceptualizing, Measuring and Managing Customer-based Brand Equity, *Journal of Marketing* 57 (1), 1-22.

Kihlstrom, R.E. and M.H. Riordan (1984), Advertising as a Signal, *Journal of Political Economy* 92 (3), 427-450.

Kindleberger, C.P. (1969), *American Business Abroad: Six Lectures on Direct Investment*, Yale University Press, New Haven, CT.

Kirca, A.H., S. Jayachandran and W.O. Bearden (2005), Market Orientation: A Meta-Analytic Review and Assessment of its Antecedents and Impact on Performance, *Journal of Marketing* 69 (2), 24-41.

Kirchhoff, B. and B. Phillips (1988), The Effect of New Firm Formation and Growth on Job Creation in the United States, *Journal of Business Venturing* 3 (4), 261–272.

Kogut, B. (1989), Foreign Direct Investment as a Sequential Process, in: C.P. Kindleberger and D.B. Audretsch (eds.), *The Multinational Corporation in the 1980s*, Cambridge, MA: MIT Press.

Kogut, B., H. Singh (1988), The Effect of National Culture on the Choice of Entry Mode, *Journal of International Business Studies* 19, 411-432.

Kohli, A.K. and B.J. Jaworski (1990), Market Orientation: The Construct, Research Propositions, and Managerial Implications, *Journal of Marketing* 54 (2), 1-18.

Kostova, T. and S. Zaheer (1999), Organizational Legitimacy Under Conditions of Complexity: The Case of the Multinational Enterprise, *Academy of Management Review* 24(1), 64–81.

LaForge, R.W. and D.W. Cravens (1985), Empirical and Judgment-Based Sales-Force Decision Models: A Comparative Analysis, *Decision Sciences* 16 (2), 177-195.

Lant, T.K., F.J. Milliken, B. Batra (1992), The Role of Managerial Learning and Interpretation in Strategic Persistence and Reorientation: An Empirical Exploration, *Strategic Management Journal* 13 (8), 585-608.

Laursen, K. and A. Salter (2006), Open for Innovation: The Role of Openness in Explaining Innovation Performance among U.K. Manufacturing Firms, *Strategic Management Journal* 27 (2), 131-150.

Lehmann, E.E. and D. Neuberger (2001), Do Lending Relationships Matter? Evidence from Bank Survey Data in Germany, *Journal of Economic Behavior & Organization* 45 (4), 339-359.

Lehmann, E.E., Neuberger, D. and S. Räthke (2004), Lending to Small and Medium-Sized Firms: Is There an East-West Gap in Germany?, *Small Business Economics* 23 (1), 23-39.

Leonidou, L. C. (1995), Empirical Research on Export Barriers: Review, Assessment and Synthesis, *Journal of International Marketing* 3 (1), 29–43.

Lessard, D.R. (2003), Frameworks for Global Strategic Analysis, *Journal of Strategic Management Education* 1 (1), 19-37.

Levitt, T. (1983), The Globalization of Markets, *Harvard Business Review* 67, 152-161.

Lindqvist, M. (1990), Critical Success Factors in the Process of Internationalization of Small Hi-TechFirms, in S. Birley (ed.): *Building European Venture*, New York: Elsevier.

Litvak, I. (1990), Instant International: Strategic Reality for Small High-Technology Firms in Canada, *Multinational Business* 2(summer), 1–12.

Loken, B. and J. Ward (1990), Alternative Approaches to Understanding the Determinants of Typicality, *Journal of Consumer Research* 17, 111-126.

Lord, M. and A. Ranft (2000), Organizational Learning About New International Markets: Exploring the Internal Transfer of Local Market Knowledge, *Journal of International Business Studies* 31 (4): 573-589.

Luo, Y, (2003), Market-seeking MNEs in an emerging market: how parent-subsidiary links shape overseas success, *Journal of International Business Studies* 34 (3), 290-309.

Luo, Y., O. Shenkar, M.K. Nyaw (2002), Mitigating Liabilities of Foreignness: Defensive versus Offensive Approaches, *Journal of International Management* 8 (3), 283-301.

Madsen, T. and P. Servais (1997), The Internationalization of Born Globals: An Evolutionary Process, *International Business Review* 6, 561–583.

Mahoney, T. A. (1988), Productivity Defined: The Relativity of Efficiency, Effectiveness and Change, in J. P. Campbell and R. J. Campbell (eds.): *Productivity in Organizations,* San Francisco: Jossey-Bass, 13–39.

Mathur, A., G.P. Moschis, and E. Lee (2003), Life Events and Brand Preference Changes, *Journal of Consumer Behaviour* 3 (2), 129-141.

Matsuno, K. and J.T. Mentzer (2000), The Effects of Strategy Type on the Market Orientation – Performance Relationship, *Journal of Marketing* 64 (4), 1-16.

McAuley, A. (1999), Entrepreneurial Instant Exporters in the Scottish Arts and Crafts Sector, *Journal of International Marketing* 7 (4), 67–82.

McDougall, P. (1989), International versus Domestic Entrepreneurship: New Venture Strategic Behavior, and Industry Structure, *Journal of Business Venturing* 4 (6), 387-400.

McDougall, P. and B. Oviatt (1996), New Venture Internationalization, Strategic Change, and Performance: A Follow-Up Study, *Journal of Business Venturing* 11 (1), 23–40.

McDougall, P., B. Oviatt, and R. Shrader (2003), A Comparison of International and Domestic New Ventures, *Journal of International Entrepreneurship* 1 (1), 59–82.

McDougall, P., S. Shane, and B. Oviatt (1994), Explaining the Formation of International New Ventures: The Limits of Theories from International Business Research, *Journal of Business Venturing* 9 (6), 469–487.

McGee, J. E. and O. O. Sawyer (2003), Uncertainty and Information Search Activities: A Study of Owners and Managers of Small High-Technology Manufacturing Firms, *Journal of Small Business Management* 41(4): 385–401.

Mehta, R. and R. Belk (1991), Artifacts, Identity, and Transitions: Favourite Possessions of Indians and Indian Immigrants to the US, *Journal of Consumer Research* 17 (4), 398-411.

Mezias, J. M. (2002a), How to Identify Liabilities of Foreignness and Assess Their Effects on Multinational Corporations, *Journal of International Management* 8(3), 265–283.

Mezias, J.M. (2002b), Identifying Liabilities of Foreignness and Strategies to Minimize Their Effects: The Case of Labor Lawsuit Judgement in the United States, *Strategic Management Journal* 23: 229-244.

Milgrom, P. and J. Roberts (1986), Price and Advertising Signals of Product Quality, *Journal of Political Economy* 94 (4), 796-821.

Miller, S.R. and L. Eden (2006), Local Density and Foreign Subsidiary Performance, *Academy of Management Journal* 49 (2), 341-355.

Miller, D. and P.H. Friesen (1984), A Longitudinal Study of the Corporate Life Cycle, *Management Science* 10, 1161-1183.

Miller, S. R. and A. Parkhe (2002), Is There a Liability of Foreignness in Global Banking? An Empirical Test of Banks' X-Efficiency, *Strategic Management Journal* 31(1): 323–337.

Miller, S. R. and M. Richards (2002), Liability of Foreignness and Membership in a Regional Economic Group: Analysis of the European Union, *Journal of International Management* 8(3): 323–337.

Miner, A.S., S.J. Mezias (1996), Ugly Ducklings no more: Pasts and Futures of Organizational Learning Research, *Organizational Science* 7, 88-99.

Mitchell, W. (1994), The Dynamics of Evolving Markets: The Effect of Business Sales and Age on Dissolutions and Divestitures, *Administrative Science Quarterly* 39, 575-602.

Mohan-Neill, S. I. (1995), The Influence of Firm's Age and Size on its Environmental Scanning Activities, *Journal of Small Business Management* 33(4): 10–21.

Morck, R., and B. Yeung (1992), Internationalization: An Event Study, *Journal of International Economics* 33: 41-56.

Mudambi, R. and S.A. Zahra (2007), The Survival of International New Ventures, *Journal of International Business Studies* 38 (2), 333-352.

Nachum, L. (2003), Liability of Foreignness in Global Competition? Financial Service Affiliates in the City of London, *Strategic Management Journal* 24 (12), 1187-1208.

Nachum, L. (2006), What Constitutes the Liability of Foreignness?, Proceedings of Academy of Management, Atlanta.

Nagashima, A. (1970), A Comparison of Japanese and U.S. Attitudes toward Foreign Products, *Journal of Marketing,* 34 (1), 68-74.

Nagashima, A. (1977), A comparative "Made in" Product Image Survey among Japanese Businessmen, *Journal of Marketing* 41 (2), 95-100.

Narver, J.C. and S.F. Slater (1990), The Effect of a Market Orientation on Business Profitability, *Journal of Marketing* 54 (4), 20-35.

Narver, S.F. and J.C. Slater (1995), Market Orientation and the Learning Organization, *Journal of Marketing* 59 (3), 63-74.

Nedungadi, P., J.W. Hutchinson (1985), The Prototypicality of Brands: Relationships with Brand Awareness, Preference and Usage, *Advances in Consumer Research* 12 (1): 498-503.

Nelson, P. (1970), Information and Consumer Behavior, *Journal of Political Economy* 78 (2), 311-329.

Nelson, P. (1974), Advertising as Information, *Journal of Political Economy* 82 (4), 729-754.

Nelson, R.R., S.G. Winter (1982), *An Evolutionary Theory of Economic Change*, Cambridge, Mass.: Belknap Press.

Neter, J., W. Wasserman and M.H. Kuttner (1985), *Applied Linear Statistical Models*, Irwin, Homewood, Illinois.

Niosi, J. (1999), The Internationalization of Industrial R&D from Technology Transfer to the Learning Organization, *Research Policy* 28 (1), 107-117.

Nonaka, I. (1994), A Dynamic Theory of Organizational Knowledge Creation, *Organization Science*, 5 (1), 14-37.

Nunnally, J.C. (1978), *Psychometric Theory*, New York, NY: McGraw-Hill.

Ohmae, K. (1990), *The Borderless World: Power and Strategy in the Interlinked Economy*, New York.

Ohta, M. and Z. Griliches (1986), Automobile Prices and Quality: Did the Gasoline Price Increases Change Consumer Tastes in the U.S?, *Journal of Business & Economic Statistics* 4 (2), 187-198.

Oviatt, B. and P. McDougall (1994), Toward a Theory of International New Ventures, *Journal of International Business Studies* 25 (1), 45–64.

Parise, S. and J.C. Henderson (2001), Knowledge Resource Exchange in strategic Alliances, *IBM Systems Journal* 40 (4), 908-924.

Patel, P. and M. Vega (1999), Patterns of Internationalisation of Corporate Technology: Location vs. Home Country Advantages, *Research Policy* 28 (2-3): 145-155.

Pauly, M.V. (1974), Overinsurance and Public Private Provision of Insurance: The Roles of Moral Hazard and Adverse Selection, *Quarterly Journal of Economics* 88 (1), 44-62.

Pavitt, K. (1984), Sectoral Patterns of Technical Change: Towards a Taxonomy and a Theory, *Research Policy* 13 (6), 343-373.

Pearce, R.D. (1999), Decentralized R&D and Strategic Competitiveness: Globalised Approaches to Generation and Use of Technology in Multinational Enterprises (MNEs), *Research Policy* 28 (2-3): 157-178.

Pelham, A.M. (1997), Mediating Influences on the Relationship between Marketing Orientation and Profitability in Small Industrial Firms, *Journal of Marketing Theory and Practice* 5 (2), 1-23.

Peng. M.W. (2001), The Resource-Based View and International Business, *Journal of Management* 27 (6), 803-829.

Penrose, E. (1959), *The Theory of the Growth of the Firm*, Oxford: Oxford University Press.

Peters, M. P. and C. G. Brush (1996), Market Information Scanning Activities and Growth in New Ventures: A Comparison of Service and Manufacturing Businesses, *Journal of Business Research* 36(1): 81–89.

Petersen, B. and Pedersen, T. (2001), Coping with Liability of Foreignness: Different Learning Engagements of Entrant Firms, *Journal of International Management* 8(3), 339-350.

Png, I. and D. Lehmann, *Managerial Economics*, 3rd edition, Blackwell Publishing.

Porter, M.E. (1986), Competition in Global Industries: A Conceptual Framework, in: M.E. Porter (ed.), *Competition in Global Industries*, Harvard Business School Press, Boston, MA: 15-60.

Porter, M.E. (1990), *The Competitive Advantage of Nations*, New York: Free Press.

Prahalad, C. K. and Y. L. Doz (1987), *The Multinational Mission: Balancing Local Demands and Global Vision*, New York.

Prahalad, C. K. and G. Hamel (1990), The Core Competence of the Corporation, *Harvard Business Review* 90 (3), 79–91.

Preece, S., G. Miles, and M. Baetz (1998), Explaining the International Intensity and Global Diversity of Early-Stage Technology-Based Firms, *Journal of Business Venturing* 14, 259–281.

Reierson, C. (1967). Attitude Changes toward Foreign Products, *Journal of Marketing Research* 4 (4): 385-387.

Rennie, M. (1993), Born Global, *McKinsey Quarterly* 4, 45–52.

Rodriguez Cano, C., F.A. Carrillat, and F. Jaramillo (2004), A Meta-Analysis of the Relationship between Market Orientation and Business Performance: Evidence from Five Continents, *International Journal of Research in Marketing* 21 (2), 179-200.

Rose, G.M. and A. Shoham (2002), Export Performance and Market Orientation: Establishing an Empirical Link, *Journal of Business Research* 55 (3), 217-225.

Rosen, S. (1974), Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition, *The Journal of Political Economy* 82 (1), 34-55.

Roth, M. and J.B. Romeo (1992), Matching product category and country image perceptions: a framework for managing country-of-origin effects, *Journal of International Business Studies* 23 (3), 477-498.

Rothschild, M. and J. Stiglitz (1976), Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information, *The Quarterly Journal of Economics* 90 (4), 629-649.

Rugman, A.M. (1981), *Inside the Multinationals: The Economics of Internal Markets*, New York: Columbia University Press.

Rugman, A.M. (1982), *New Theories of the Multinational Enterprise*, Croom Helm, London.

Rugman, A.M., A. Verbeke (2002), Edith Penrose's Contribution to the Resource-Based View of Strategic Management, *Strategic Management Journal* 23 (8): 769-780.

Rumelt, R. P. (1984), Towards a Strategic Theory of the Firm, in R. B. Lamb (ed.) *Competitive Strategic Management*, Engelwood Cliffs, NJ: Prentice Hall.

Ryans, A.B. and C.B. Weinberg (1987), Territory Sales Response Models: Stability over Time, *Journal of Marketing Research* 24 (2), 229-233.

Rynes, S.L. and A.E. Barber (1990), Applicant Attraction Strategies: An Organizational Perspective, *Academy of Management Review* 15 (2), 286-310.

Samiee, S., T.A. Shimp and S. Sharma (2005), Brand Origin Recognition Accuracy: Its Antecedents and Consumers' Cognitive Limitations, *Journal of International Business Studies* 36 (4), 379-397.

Santos-Vijande, M., M.J. Sanzo-Perez, L.I. Alvarez-Gonzales, and R. Vazquez-Casielles (2005), Organizational Learning and Market Orientation: Interface and Effects on Performance, *Industrial Marketing Management* 34 (3), 187-202

Sapienza, H. J, E. Autio, G. George, and S. A. Zahra (2006), A Capabilities Perspective on the Effects of Early Internationalization on Firm Survival and Growth, *Academy of Management Review* 31(4), 914–933.

Schmidt, T. and W. Sofka (2006), Lost in Translation – Empirical Evidence for Liability of Foreignness as a Barrier to Knowledge Spillovers, ZEW Discussion Paper No. 06-001.

Scholler, R.D. (1965), Product Bias in the Central American Common Market, *Journal of Marketing Research* 2, 394-407.

Schumpeter, J.A. (1934), *The Theory of Economic Development*, London: Oxford University Press.

Shane, S. (2000), Prior Knowledge and the Discovery of Entrepreneurial Opportunities, *Organization Science* 11 (4), 448-469.

Shaver, J.M. (1998), Do Foreign-owned and U.S.-owned Establishments exhibit the same location pattern in American Manufacturing Industries?, *Journal of International Business Studies* 29, 469-491.

Sherer, S. A. (2003), Critical Success Factors for Manufacturing Networks as Perceived by Network Coordinators, *Journal of Small Business Management* 41 (4), 325-343.

Shrader, R.C. (2001), Collaboration and Performance in Foreign Markets: The Case of Young High-Technology Manufacturing Firms, *Academy of Management Journal* 44 (1): 45-60.

Sinkula, J.M. (1994), Market Information Processing and Organizational Learning, *Journal of Marketing* 58 (1), 35-45.

Slater, S.F. and J.C. Narver (1998), Customer-Led and Market-Oriented: Let's Not Confuse the Two, *Strategic Management Journal* 19 (10), 1001-1006.

Slater, S.F. and J.C. Narver (1999), Market-Oriented is more than being Customer-Led, *Strategic Management Journal* 20 (12), 1165-1168.

Sofka, W. and J. Zimmermann (2005), *There's No Place Like Home: A Strategic Framework to Overcome Liability of Foreignness*, ZEW Discussion Paper No. 05-84, Mannheim.

Sofka, W. and J. Zimmermann (2007), *Regional Dimensions of Liability of Foreignness: Between a Rock and a Hard Place*, Jena Economic Research Paper No. 2007-023 and Max Planck Discussion Paper on Entrepreneurship, Growth and Public Policy No. 12-2007, Jena.

Sofka, W. and J. Zimmermann (2008), Regional Economic Stress as Moderator of Liability of Foreignness, *Journal of International Management* 14 (2): 155-172.

Spence, M. (1973), Job Market Signaling, *Quarterly Journal of Economics* 87 (3), 355-374.

Spence, M. (1976), Competition in Salaries, Credentials and Signaling Prerequisites for Jobs, *Quarterly Journal of Economics* 90 (1), 51-74

Spence, M. (2002), Signaling in Retrospect and the Informational Structure of Markets, *American Economic Review* 92 (3), 434-459.

Stephenson, H. B. (1984), The Most Critical Problem for the Fledgling Small Business; Getting Sales, *American Journal of Small Business* 9(1): 26–33.

Stiglitz, J.E. (1975), The Theory of "Screening", Education, and the Distribution of Income, *American Economic Review* 65 (3), 283-300.

Stiglitz, J.E. (1976), Monopoly and the Rate of Extraction of Exhaustible Resources, *American Economic Review* 66 (4), 655-661.

Stiglitz, J.E. and A. Weiss (1981), Credit Rationing in Markets with Imperfect Information, *American Economic Review* 73 (1), 393-410.

Stiglitz, J.E. and A. Weiss (1983), Alternative Approaches to Analyzing Markets with Asymmetric Information: Reply, *American Economic Review* 73 (1), 246-249.

Stiglitz, J. and A. Weiss (1990), *Sorting out the Differences between Screening and Signaling Models*, NBER Working Paper No. 93, Cambridge, MA.

Stinchcombe, A. (1965), Social Structure and Organizations, in J. March (ed.), *Handbook of Organizations*, Chicago: Rand-McNally, 142–193.

Stone, E.F. and J.R. Hollenbeck (1984), Some Issues Associated with the Use of Moderated Regression, *Organizational Behavior & Human Performance* 34 (2), 195-213.

Sölvell, O. and I. Zander (1995), Organization of the Dynamic Multinational Enterprise, *International Studies of Management & Organization* 25 (1-2): 17-38.

Teece, D.J. (1981), *The Market for Know-How and the Efficient International Transfer of Technology*, Annals, AAPSS, 458: 81-96.

Tesar, L. and I. Werner (1992), *Home Bias and the Globalization of Securities Markets*, NBER Working Paper 4218.

Tesar, L. and I. Werner (1995), Home Bias and High Turnover, *Journal of International Money and Finance* 14 (4), 467-492.

Thoits, P. (1995), Stress, Coping, and Social Support Processes: Where Are We? What Next?, *Journal of Health and Social Behaviour* 35(Extra Issue: Forty Years of Medical Sociology: The State of The Art and Directions for the Future), 53-79.

Thomas, L., S. Shane and K. Weigelt (1998), An Empirical Examination of Advertising as a Signal of Product Quality, *Journal of Economic Behavior & Organization* 37 (4), 415-430.

Thornhill, S. and R. Amit (2003), Learning About Failure: Bankruptcy, Firm Age, and the Resource-Based View, *Organization Science* 14 (5): 497-509.

Train, K. and G. Sonnier (2002), *Mixed Logit with Bounded Distribution of Correlated Pathworks,* University of California Berkeley Working Paper. http://elsa.berkeley.edu/wp/train1202b.pdf.

Turban, D.B. and T.L. Keon (1993), Organizational Perspective: An Interactionist Perspective, *Journal of Applied Psychology* 78 (2), 184-193.

VDA (2004), *Auto Jahresbericht*, Frankfurt.

Veldhuizen, E., E.J. Hultink and A. Griffin (2004), Modeling Market Information Processing in New Product Development: An Empirical Analysis, *Journal of Engineering & Technology Management* 23 (4), 353-373.

Verboven, F. (1998), *Testing for 'Monopoly' Market Power When Products Are Differentiated in Quality*, Manchester School 70 (1), 115-134.

Verboven, F. (2002), Quality-Based Price Discrimination and Tax Incidence: Evidence from Gasoline and Diesel Cars, *RAND Journal of Economics* 33 (2), 275-298.

Vernon, R. (1971), *Sovereignty at Bay: The Multinational Spread of U.S. Enterprises*, Basic Books, New York.

Von Hippel, E. (1994), Sticky Information and the Locus of Problem Solving: Implications for Innovation, *Management Science* 40 (4), 429–439.

Walker, O. C. and R. W. Ruekert (1987), Marketing's Role in the Implementation of Business Strategies: A Critical Review and Conceptual Framework, *Journal of Marketing* 51 (3), 15–33.

Wan, G. (1998), Nonparametric Measurement of Preference Changes: The Case of Food Demand in Rural China, *Applied Econometrics Letters* 5, 433-436.

Weber, J. and R. Hansen (1972), The Majority Effect and Brand Choice, *Journal of Marketing Research* 9 (3), 320-323.

Wernerfelt, B. (1984), A Resource-Based View of the Firm, *Strategic Management Journal* 5 (2), 171-180.

Williams, J.R. (1992), How Sustainable is Your Competitive Advantage?, *California Management Review* 34 (3), 29-51.

Wooldridge, J.M. (2002), *Econometric Analysis of Cross Section and Panel Data*, Cambridge.

Wright, R. and D. Ricks (1994), Trends in International Business Research: Twenty Five Years Later, *Journal of International Business Studies* 25 (4), 687–701.

Zaheer, S., (1995), Overcoming the Liability of Foreignness, *Academy of Management Journal* 38 (2), 341-364.

Zaheer, S., S. Albert, and A. Zaheer (1999), Time Scales and Organizational Theory, *Academy of Management Review* 24 (4), 725-741.

Zaheer, S. and E. Mosakowski (1997), The Dynamics of the Liability of Foreignness: A Global Study of Survival in Financial Services, *Strategic Management Journal* 18(6): 439–464.

Zaheer, S. and A. Zaheer (1997), Country Effects on Information Seeking in Global Electronic Networks, *Journal of International Business Studies* 28(1): 77–100.

Zaheer, S. (2002), The Liability of Foreignness, Redux: A Commentary, *Journal of International Management* 8, 351-358.

Zahra, S. A. (1996), Technology Strategy and New Venture Performance: A Study of Corporate-Sponsored and Independent Biotechnology Ventures, *Journal of Business Venturing* 11, 289–321.

Zahra, S. A., R. D. Ireland, and M. A. Hitt (2000), International Expansion by New Venture Firms: International Diversity, Mode of Market Entry, Technological Learning, and Performance, *Academy of Management Journal* 43 (5), 925–950.

Zander, I. (1997), Technological Diversification in the Multinational Corporation – Historical Evolution and Future Prospects, *Research Policy* 26 (2): 209-227.

Zhao, H. (2000), Raising Awareness and Signaling Quality to Uninformed Consumers: A Price-Advertising Model, *Marketing Science* 19 (4), 390-396.

Zinam, O. (1974), Role of Consumer Preferences in an Economic System, *The American Journal of Economics and Sociology* 33 (4), 337-350.

Zukin, S., P. DiMaggio (1990), *Structures of Capital: The Social Organization of the Economy*, Cambridge: Cambridge University Press.