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DETERMINANTS OF OWNERSHIP CHOICES OF FINNISH FIRMS IN ASIAN COUNTRIES

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Authors

Rizwan Tahir
University of Vaasa
Department of Marketing
P.0.Box 700, FIN-65101 Vaasa,
Finland.
Fax: 358-6-3248251
Email: Rizwan.Tahir@uwasa.fi

Jorma Larimo
University of Vaasa
Department of Marketing
P.0.Box 700, FIN-65101 Vaasa,
Finland.
Fax: 358-6-3248251
Email: Jorma.Larimo@uwasa.fi

ABSTRACT

The purpose of this study is to empirically investigate how the ownership, location, internalization and strategic advantages have influenced the ownership structure choices of Finnish manufacturing firms in ten South and Southeast Asian countries from 1980 to 2000. Very few studies in FDIs have been undertaken so far to empirically analyzed the ownership, location and internalization (OLI) variables together with the strategic motives in order to understand the the ownership structure choices of the investing firms. To the best of our knowledge, this is the first study trying to analyze how the ownership, location, internalization and strategic advantages have influenced the ownership structure choices of Finnish manufacturing FDIs in Asian countries. The research results indicate that large size of the parent firm, large international experience, low cultural distance, large market size, and high levels of economic welfare in the target country increases the probability of choosing wholly owned subsidiary (WOS) in order to undertake *market-seeking and efficiency-seeking FDIs*. Similarly it has also been found that low levels of risks in the target country increases the probability to choose wholly owned subsidiary (WOS) in order to undertake *risk-reduction seeking FDIs*.

Key words Foreign direct investments (FDIs), eclectic paradigm, ownership strategies, strategic motives and Asian countries.

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1. INTRODUCTION

There has been a clear growth trend in foreign direct investments (FDIs) in the last forty years (e.g. United Nations World Investment Reports). From the early 1960s to the mid-1980s the investment flows were mainly targeted to Western European counties and to the USA. However, in the late 1980s and in the 1990s the interest towards FDIs in the Asian countries increased remarkably (see Table 1). During that time, most of the foreign companies in the Asian countries had been able to capitalize on inexpensive labor, huge market potential and tariff protection. In the late 1990s the Asian economic crisis had an effect on the amount of investments to Southeast Asia. However, there still exists a great interest among Western firms towards FDIs in Asia. For instance a study made by the United Nations (1998) indicated that more than one quarter of the responding 198 firms had in February-March 1998 short and medium term plans to increase their FDIs in Asia. Another indicator of the great interest of foreign firms towards FDIs in Asia is also the fact that from 1993 onwards China has been the biggest recipient of foreign investments in the world after the USA. Other main destinations of FDIs within Asia have been Hong Kong, Singapore, and Indonesia.

The main goal of this study is to empirically investigate how different ownership-specific, location-specific, internalization advantages and strategic advantages have influenced the ownership strategies of Finnish manufacturing firms in ten South and Southeast Asian countries

from 1980 to 2000. Dunning (1993:56) identifies strategic advantages: *market-seeking (MS)*, *efficiency-seeking (ES) and risk-reduction seeking (RRS)*. Very few studies on FDIs (e.g. Vyas, 2000) have been undertaken to empirically analyze the influential ownership, location and internalization (OLI) variables together with the strategic motives in order to analyze the ownership structure choices of the investing firms. Empirical analysis of strategic motives along with the ownership-specific, location-specific and internalization (OLI) variables can not only add to our understanding of the eclectic paradigm but also enrich our knowledge of FDI in general.

Table 1. FDI net inflows in Asia (millions of dollars) (based on WDI Online by the World Bank Group)

Host country	**1980**	**1985**	**1990**	**1995**	**1998**	**1999**	**2000**
Asia	1,503	3,447	11,599	56,070	66,545	58,972	55,223
China	430	1,659	3,487	35,849	43,751	38,753	38,399
India	79	106	162	2,144	2,635	2,169	2,315
Indonesia	180	310	1,093	4,346	-356	-2,745	-4,550
Japan	280	638	1,777	39	3,268	12,308	8,227
Korea, Republic	6	234	788	1,776	5,413	9,333	9,283
Malaysia	934	695	2,333	4,178	2,163	1,553	1,660
Pakistan	63	131	244	723	506	532	308
Philippines	-106	12	530	1,478	2,287	573	2,029
Singapore	1,236	1,047	5,575	8,788	6,316	7,197	6,390
Thailand	190	163	2,444	2,068	7,315	6,213	3,366

In past studies analyzing ownership strategy decisions the focus has been on FDIs made in Western Europe and in the USA (for a review of earlier studies see e.g. Bell 1996 and Larimo 2000). If the ownership decisions in other geographic areas have been analyzed then the focus has usually been in non-OECD countries in general or the focus has been on FDIs made in one single country (mainly in China). A review of previous studies seems to indicate that in fact the study made by Delios and Beamish (1999) focusing on the ownership strategy of Japanese firms in various Asian countries is the only study giving more basis for comparisons (the sample had 1424 FDIs in nine Asian countries). Thus there is so far very limitedly information on the ownership strategy behavior of non-Asian firms in Asian markets.

This study focuses on firms based in Finland, a small-industrialized country, where the domestic-market conditions are very different from those of the multinationals from the US or Japan that have dominated past research attention. Moreover, studies on the determinants of FDI rarely combine ownership, location, and internalization advantages with strategic motivations of the investing firms in Asian markets. This is apparently the first study trying to analyze how different

ownership-specific, location-specific, internalization and strategic advantages have influenced the ownership structure choices of Finnish manufacturing firms in Asian countries.

In the next section general aspects of foreign direct investment theories will be discussed. The theoretical and empirical literature on ownership structure choices will be summarized and the crucial ownership, location, internalization and strategic advantages of the investing firms will be discussed. In section three, the methodology and the sample of this study will be discussed. Section four will discuss the empirical results of the study. Finally in section five a summary and the main conclusions of this study will be presented.

2. LITERATURE REVIEW AND DEVELOPMENT OF THE HYPOTHESES

Several theoretical approaches (see Table 2) have been used to explain the foreign entry strategies and ownership structure decisions in FDIs, e.g. bargaining power, behavioral / growth of the firm / resource based, strategic behavior, internalization, and transaction cost approaches (for detailed review, see e.g. Benito 1995; Bell 1996).

Most past studies on foreign market entry strategies of multinational firms have adopted either the transaction cost or so called eclectic approach. The transaction cost approach (Caves 1982; Gatignon & Anderson, 1986; Erramilli & Rao, 1993) prescribes cross-border activities according to the economic rationale that the firm will minimize all costs associated with the entire value-added chain (from production to consumption of goods). This approach stresses the importance of firm-specific variables and has been used to explain how US firms enter and operate in foreign markets (Agarwal & Ramaswami 1992; Kogut & Singh 1988).

The second approach, the eclectic paradigm developed by Dunning (1980, 1988, 1993) integrates several strands of international business theories on cross-border activities. It proposes that three types of advantages/ variables influence cross-border business activities: ownership-specific variables, location-specific variables and internalization variables. Ownership advantage specific variables can be divided into asset specific advantages (Oa) and transaction variables (Ot). Ownership asset specific variables include various tangible and intangible assets owned by the investing firm whereas transaction specific advantage includes variables related to the ability of firms to capture the transactional benefits from the common governance of multiple and geographically dispersed activities. The degree of possession of various ownership-specific variables influences the degree of ownership chosen in foreign FDIs. Location-specific advantages

(L) are essential in determining where firms will engage in cross-border value-adding activities. The level of location specific advantages may also be expected to influence the ownership strategies chosen. The last strand of the eclectic approach comprises of the internationalization advantages (I) that the company has in transferring assets within their organizations instead of via the market, because of the market failures. The greater the perceived costs of transactional market failure – and the greater the benefits of circumventing market failure – the more likely the company will exploit its ownership-specific advantages within the firm and the greater the degree of ownership they will prefer in their FDIs.

Table 2. Most referred studies using the OLI paradigm

Researcher	**Industry**
Dunning (1980)	US manufacturing industries
Dunning & McQueen (1981)	Hotel Industry
Yu & Ito (1988)	Tire Industry
Sabi (1988)	Banking industry
Agarwal & Ramaswami (1992)	Leasing Industry

Dunning (1980) analyzed the foreign operations of fourteen U.S. manufacturing industries in seven countries. The study suggested that the competitive advantage of a U.S. firm consisted of a combination of ownership-specific and location-specific advantages. More empirical support for the eclectic theory can be found in Dunning and McQueen's (1981) study of the hotel industry, Sabi (1988) in the banking industry and Yu and Ito (1988) in the tire industry. A 1992 study conducted by Agarwal and Ramaswami tested the impact of interactions between ownership-specific advantages of firms in the leasing industry using both internalization advantages and location-specific advantages. The results of the study reported that large, diversified, more internationally experienced firms chose ownership-based market entry modes over licensing or joint venture modes. This held true for firms with a higher ability to adopt and develop differentiated products in markets with higher contractual risks, they also chose ownership-based entry modes over conceptual type modes. In countries with higher investment risks, firms chose a lower resource mode such as export.

The eclectic theory provides a multi-theoretical approach for studying the choice of entry mode: international trade theory, resource-based theory and transaction cost theory are the basic theories used. It is an overall organizing paradigm for identifying the variables from each approach that are most relevant in explaining a wide range of different environments affecting the entry mode

choices of the investing firms. The eclectic theory claims that the choice of the WOS mode occurs when all three types of advantages are beneficial. If one of the three legs falls short the firm should then consider a non-internal mode of entry. The eclectic theory permits researchers to create determinants in order to predict entry mode. The strengths of the theory could be characterized by its richness (several explanations) and its creativity (generations of new determinants and combinations of these and the existing ones). The strengths represents, however, also potential weaknesses (Anderson, 1997). The strongest criticism to the theory has come from Itaki (1991). Itaki claimed that an ownership-specific advantage actually comes from an internalization advantage. Therefore, it is redundant to consider these two separate determinants. Also, Dunning's theory has been called ambiguous regarding the sources of location advantages. Despite these shortcomings, Dunning's theory is considered by many as one of the more comprehensive frameworks on ownership structure choices. Thus, the eclectic approach has been selected as the framework in this study because of the above-referred integrative nature of the approach.

2.1 Ownership-specific advantages

To compete with host country firms in their own markets, firms must possess superior assets and skill that can earn economic rents that are high enough to counter the high costs of servicing these markets (Agarwal & Ramaswami, 1992). Ownership variables are unique internal factors that generate the firm's competitive advantage in the marketplace. A number of these ownership specific variables are expected to have an impact on a firm's choice of ownership structure.

R&D Intensity. The speed of applications of new technology to products, partly fueled by changing consumer demand, has made access to technology essential for survival in many firms. At the same time new technology has bought a degree of complexity and has made it more difficult for firms to have in-house mastery of increasingly diverse technologies required to develop sophisticated products (James, 1992). As developing advanced technologies may take a level of effort beyond one firm's abilities, international joint ventures (IJVs) may be considered an important vehicle to pool complementary technologies between partners (Contractor & Lorange, 1988). For instance, many companies specialize in one particular segment of technology but often lack the breadth of knowledge to integrate other technologies to develop new products. This situation defined, as "hybridization of technologies" by Lynch (1989), can be best accomplished by integrating the technologies of partners. Hence, an entering firm that is seeking technology and tacit knowledge is more likely to enter the foreign market through a JV with a firm that has the

needed technology (Phatak et al. 1996). E.g. many joint ventures (JVs) in the pharmaceutical and biotechnology fields have this kind of rationale (Contractor, 1986).

By contrast, an investor that possesses the full complement product and production know-how has strong incentives to keep control and to enter through WOSs. If knowledge is difficult to transact in markets, then transferring significant amounts of knowledge to a JV is likely to create problems. However, Kumar (1984) argued that FDI was the dominant mode of operation in those sectors that were characterized by a high level of R&D intensity or firm-specific technology. Furthermore, the level of firm-specific technology influences the ownership structure, since the firm with greater technology may also incur higher transaction costs in safeguarding their technology from misappropriation (Williamson, 1985; Gatignon & Anderson, 1988; Hennart, 1988; Brouthers & Brouthers, 2000).

A high level of firm-specific technology tends to create contracting hazards because of the impact of opportunism (Willliamson, 1985; Hill, 1990). Opportunism results when a partner organization takes advantage of the other firm's dependency through shrinking, free-riding or technology dissemination (Williamson, 1985; Gatignon & Anderson, 1988; Hill, 1990; Hennart, 1991). This risk is especially relevant in the Asian countries where the legal infrastructures and controls are often poorly developed. To safeguard specific assets from potential opportunism problems, firms may utilize high control governance structures, such as WOSs (Gatignon & Anderson, 1988; Hennart, 1991; Makino & Neuport, 2000). Empirical support for a positive relationship between R&D intensity and WOSs has been found in studies by (Sanna-Randaccio, 1990; Padmanabhan & Cho, 1999; Buckley & Casson, 1976; and Larimo, 2000). Firms with low level of R&D intensity or firm-specific technology may be less concerned with opportunism and safeguarding their technology and more concerned with mode efficiency. It has been argued (e.g. Williamson, 1985; Hill, 1990) that a less integrated ownership structure like JVs provide more efficient organizational structures when there is a reduced threat of opportunism. We expect that Finnish firms have mainly been transferring technology to Asian countries. We, therefore suggest that Finnish firms will choose WOSs in order to undertake *risk-reduction seeking* FDIs in a target Asian country hence:

H 1 The higher the R&D intensity of the Finnish firm, the greater the probability that its WOS will undertake *RRS* FDI in a target Asian country.

Firm size. Frequently, it is the firm's ability to determine its choice of ownership structure. The typical argument in the literature is that integration entails significantly higher resource

commitments such as WOSs and carries greater risk than shared-control structures. Consequently, larger firms have a greater ability to expend resources and absorb risks than smaller ones and therefore are more likely to establish WOSs. Also, larger firms may have greater bargaining power to negotiate for greater ownership and control in countries with restrictive investment policies (Lecrew, 1984). . It has also been argued (e.g. Gomes-Casseres, 1985; Kogut & Singh, 1985 & 1988; Benito 1995; and Mutinelli & Piscitello, 1997) that firms can access more control by holding more shares and consequently investing firm with strong financial resources may enter foreign markets via WOSs.

There is, however, another argument that leads to the opposite prediction namely that large firms prefer shared equity ventures. Hennart and Larimo (1998) concluded that WOSs may increase the managing costs of the parent company and by contrast, a JV arrangement between foreign investors and the local firms may make it possible to better access the resources without incurring the large management costs. Larimo (1993) has also found that large size Finnish manufacturing firms had a higher propensity to enter OECD countries through JVs. Sanna-Randaccio (1990) also found the same for the Italian investors abroad. However, other scholars (e.g. Buckley & Casson, 1976; Cho, 1985; Yu & Ito, 1988; Kimura, 1989) suggest that the firm's ability to marshal resources is a potential determinant of ownership structure choices. Similarly, the results by Stopford and Wells (1972), Gommes-Casseres (1985:120) and Kogut and Singh (1985, 1988: 425) gave support to the assumption that the probability of choosing a joint venture is greater among small firms than among big firms. Larimo and Tahir (2001) also found that large size Nordic manufacturing firms have preferred WOSs in Asian markets.

Furthermore organizational scientists (e.g. Lawrence & Lorsch, 1967) argued that as the organization's size increases, its extent of specialization, standardization and formalization would increase correspondingly. Conventional wisdom would also suggest that for the large size firms, it also becomes possible that economies of scale can be realized in the areas of production, marketing, advertising, purchasing and R&D. It could then lead to higher efficiency gains, lower marginal cost of production and larger market share. We, therefore suggest that large Finnish firms will choose WOSs in order to undertake *market and efficiency seeking* FDIs in a target Asian country. Hence,

H 2 The larger the size of the Finnish firm, the greater the probability that its WOS will undertake *MS* and/or *ES* FDI in a target Asian country.

International experience. Almost all research that studied the determinants of FDI considers experience as a key determinant of a firm's asset. The traditional argument here is that the longer a firm operates in a foreign markets the more experiential knowledge should have been accumulated within its organizational structures. Ekeledo (1998) have indicated that a firm with limited international experience that enters foreign markets is likely to use a low-involvement mode of operation to gain experience before getting involved in sole ownership structures. Gatignon and Anderson (1988) also found that the manufacturing firm's propensity to employ WOSs increased with cumulative international experience. Further, Makino and Delios (1996) stated that the comparative utility of structuring a foreign investment as a local JVs, as opposed to a wholly owned subsidiary, decreased with greater levels of international experience because of the foreign firm's development of local knowledge. Similarly, Davidson (1980, 1982) noticed that aggregate experience (as measured by the number of market entries or product transfers already executed), and prior manufacturing experience in the recipient country increased the firm's relative preference for WOSs. Dunning (1993:79) concluded that firms must have ownership-specific advantages (O) like "privileged possession of intangible assets" the exploitation of which creates firm value. Furthermore Padmanabhan and Cho (1999) argued that the firm's past experience manifests itself in organizational routines that form the blueprint for the firm's future action and more importantly, serve as an important source of competitive advantage. Consequently the firm will prefer to use the same strategies, because these enhance the firm's value by reducing implementation costs in the foreign country, which in turn could stimulate the firms to choose WOSs and to undertake market as well as efficiency seeking FDIs in a target country.

The literature, however, is not without controversy. There is some evidence to indicate that international experience may not have any effect on the degree of control. Kogut and Singh (1988) observed that experience (as measured by the firm's pre-entry presence in the host country, and the degree of multinationality) play no significant role in explaining why foreign entrants into the United States used JVs in preference to WOSs. Some researchers even suggest a negative relationship between the firm's international experience and its desire for control. Daniels and Patil (1980) observed a tendency among firms investing overseas to start with complete control and share it after operations became established. Taking a comparative perspective, Shetty (1979) argued that European firms were more agreeable to JVs than their American counterparts because their longer overseas experience. However, most of the empirical studies (Gomes-Casseres, 1985 & 1987; Agarwal & Ramaswami, 1992; Sanna-Randaccio, 1990; Tang, 1994; Bell, 1996; and Mutinelli & Piscitello, 1997) point to a positive relationship between international experience and

preference for WOSs. We, therefore suggest that internationally experienced Finnish firms will choose WOSs in order to undertake *market and efficiency* seeking FDIs in a target Asian country. Hence,

H 3 The larger the international experience of the Finnish firm, the greater the probability that its WOS will undertake *MS* and/or *ES* FDI in a target Asian country.

Industry experience. The extent of a firm's industry experience can influence its ownership choices. The more experienced the firm is in business sector, the less it will have need for the contributions of a potential partner. Consequently when a firm launches a subsidiary in a business with which it is well acquainted, it can be expected to choose a WOSs. When a firm decides to manufacture in a foreign market a product that it does not make at home, it is likely to need industry-specific knowledge and access to distribution. In that case, a shared equity venture with a local manufacturer may be the most efficient way to obtain the complementary inputs. The greater the level of experience in the relevant industry, it is argued, the more confident a firm tends to be about making commitments, and about its judgment of the degree of risk exposure. The case of Gillette illustrate this argument. For example, Gillette prefers to own 100% of the equity in its subsidiary making razor blades abroad. One reason is that they have enough industry experience and also they are best in the field worldwide. The management in Gillette sometimes feels that local partners provide useful information about the host country environment. However, they feel that at least in this business, there is a little industry know-how that locals could bring to a venture. The knowledge of local customs that is needed in Gillette's ventures abroad could usually be acquired by hiring local managers (Gomes-Casseres 1985).

As discussed earlier, one type of tacit knowledge is how to operate in a given industry. In cases where the new investment is more comparable with or even totally similar to the current core activities, the investing firm does not need inputs from local firms. Relevant experience is, however, acquired preeminently through actual involvement, providing an important feedback loop in the process. Without appropriate experience, from the decision-maker's perspective, there tends to be a stronger sense of risk and uncertainty, which is likely to constraint the decision. At the same time though, perceived risk exposure can be altered by the ownership structure choice: for example, a high risk might be counterbalanced by the use of a low-commitment mode such as JV arrangements (Benito & Welch, 1994). The positive relationship between relevant industry experience and the propensity to set up WOSs is also confirmed by several empirical studies (e.g. Stopford & Wells, 1972; Gomes-Casseres 1985; Hennart 1991; Mutinelli & Piscitello 1997, and

Larimo, 2000). Furthermore firms with related experience will also be motivated to undertake market seeking FDIs by the benefits associated to stay close to their customer and thus protecting their competitive advantage from deteriorating. We, therefore suggest that Finnish firms with relevant experience will choose WOSs in order to undertake *market* and *efficiency* seeking FDIs in a target Asian country. Hence

H 4 The larger the industry-related experience of the Finnish firm, the greater the probability that its WOS will undertake *MS* and/or *ES* FDI in a target Asian country.

2.2 Location-specific advantages

Firms interested in servicing foreign markets are expected to use a selective strategy and favor entry into more attractive markets. This is because their chances of obtaining higher returns are better in such markets (Agarwal & Ramaswami, 1992). FDI theories suggest that investing firms will prefer those countries that provide greater location-specific advantages. It has been known that both firm and location-specific advantages jointly and separately influence the firm for the choice of target country for its FDI venture. Recent theoretical developments have expanded the role of location-specific variables by suggesting that it may be tied to firm-specific variables (Dunning, 1997).

Cultural distance. According to Hofstede (1980, 1983), "culture is a collective mental programming of the mind which distinguishes the member of one group or category of people from another." Traditional entry mode literature (e.g. Gatignon & Anderson, 1988; Kogut & Singh, 1988; Agarwal, 1994) holds that firm minimize the high information costs associated with operating in culturally unfamiliar countries by seeking collaborative modes. Erramilli et al. (2002) argued that sharing the ownership of the subsidiary with a local firm, which essentially manages the entire local interface with local labor, suppliers, regulatory authorities, customer and the community and also consequently reduces the learning costs. Madhok (1997) has also maintained that organization routines that are effective in the home country may not be so in the host market when high cultural distance exists. This impedes the transfer of capabilities and skills within the firm boundaries. Moreover, executives perceive a higher uncertainty about the market and demand structure in culturally distant countries. To reduce the value erosion and uncertainty, a firm must collaborate with host countries entities whose routines are better adapted to the local conditions in the culturally distant host country.

It must be noted here that the relationship between cultural distance and ownership structure is far from certain. The literature (e.g. Pisano, 1989; Larimo, 1993; Contractor & Kundu, 1988a; Erramilli & Rao, 1993; Fladmoe-Lindquist & Jacque, 1995) also offers a very intriguing counterview. Madhok (1997) and Lam (1997) argued that high socio-cultural distance could result in ineffective resource transfers across firm boundaries because of a mismatch in the foreign entrant's and local collaborator's lower absorptive capacity. Therefore, when cultural distance is large, the foreign entrants may actually prefer to internalize the transfer to preserve the value of its capabilities (and the resulting competitive advantage) (Erramilli, et. al. 2002). However, most of the empirical studies (e.g. Kogut & Singh, 1985; Kogut & Singh, 1988b; Gatignon & Andersons, 1988; Benito, 1995; Bell, 1996; Mutinelli & Piscitello, 1997; Hennart & Larimo, 1998; Padmanabhan & Cho, 1999) favored JVs in culturally distant target countries. Kogut and Singh (1988) found that the effect of cultural distance and uncertainty avoidance is to increase the likelihood of favoring JVs over WOS. Hill et al (1991) also argued that faced with uncertainty that arises from the unknown culture, the firm may be unwilling to commit substantial resources to a foreign operation since such a commitment would substantially reduce the firm's ability to exit without cost if the host market proves unattractive. Similarly Anderson and Coughlan (1987) concluded that US electronics firms chose less integrated channels when entering Japan and Asian markets as compared to market entry into western European markets where they choose fully integrated channels. We, therefore suggest that Finnish firms will choose WOSs in order to undertake *market* and *efficiency seeking* FDIs in a culturally close target Asian country. Hence,

H 5 The larger the cultural distance between the target and home country of Finnish firm, the lower the probability that its WOSs will undertake *MS and/or ES* FDI in that target Asian country.

Market potential. In addition to market size, market growth has been found to be an important determinant of overseas investment (Forsyth, 1972; Weinstein, 1977; Khoury, 1979; Terpstra & Yu, 1988). The market potential component may also influence the ownership structure choice because of its impact on market capacity and opportunity costs (Agarwal & Ramaswami, 1992; Kim & Hwang, 1992; Brouthers & Brouther, 2000). Target countries with huge market potential tend to have a greater ability to absorb additional productive capacity, providing an opportunity to improve firm efficiency and market share. In stagnating and low potential markets overcapacity may exist, making firms more reluctant to make large investments. Agarwal and Ramaswami (1992) argued that in huge potential markets firms tend to prefer WOSs so that they can (1) obtain scale economies, hence reducing per unit costs and (2) establish a long-term market presence. In

small markets, firms may find that JVs provide better opportunities either because (1) they do not increase the capacity in the market, hence not impacting on competitor pricing strategies as severely, (2) can provide a better return on investment by minimizing the resource commitment, based on lower expected returns, or (3) reduce the switching cost of market exit if the product sales are low.

Financial and managerial commitments will be required to have more control of the swift establishment of outlets. Such investments are rationalized as a high demand condition that is expected to pay off invested capital. Thus, it can be concluded that a firm enters a high potential market with high resource commitment ownership structures (e.g. WOSs) that allow more control to effectively penetrate the markets. The same logic expects that a firm will use low resource commitment ownership structures in countries where the market potentials are expected to be low. Root (1994) also maintains that a low and uncertain sales potential of a target market should attract low commitment entry modes. The results by Stopford and Haberich (1978; 152-153) and Sanna-Randaccio (1990) also indicated the positive relationship between the market size and ownership structure. We, therefore expect that Finnish firms will choose WOSs in order to undertake *market* as well as *efficiency seeking* FDIs in target Asian country with a huge market potential. Thus,

H 6 The larger the market size of the target country, the greater the probability that the WOS of the Finnish firm will undertake *MS and / or ES* FDI in that target Asian country.

Economic welfare. The gross domestic product growth can be used to appraise the economic infrastructure and welfare in target countries. A high level of economic welfare suggests that a country is well developed and has a growing market. In previous studies (e.g. Onkvisit & Shaw, 1993; Sarathy & Terpstra, 1997) it has been argued that such markets are also highly attractive to foreign firms to produce and market their products for the local consumer. Sharma (2002) agued that particularly western products are generally perceived to be of superior quality than domestic brands in most Asian countries. The main reason being that most of the western brands compete globally and are therefore battle-tested. They also end up selling at a price higher than the local brands. As a result it makes them unaffordable to a large section of the local population. On the one hand, the quality of domestic brands has generally remained stagnant due to their protection against competition from foreign brands. As the per capita GDP grows substantively in many of these markets, the affordability of buying these costly foreign brands also grows for more and more people. On the other hand when the buying power of the consumers becomes low in those

countries, due to macro-economic problems, they return to the purchasing of local brands. As a result, the consumption of foreign brands is cut down because of their usually high prices. Harrigan (1985) also concluded that firms therefore tend not to commit substantial resources to a foreign market with a low growth or high demand uncertainty. Similarly Hill et al. (1990) have demonstrated as well that when demand conditions are unstable and uncertain, then the investing firms will favor a route involving realtively low level of commitments. Furhermore, it has been argued (e.g. Sarathy & Terpstra, 1997) that under such conditions host governments often resort to price and exchange control policies. Brouther (2002) has also maintained that in low growth markets opportunity costs may be lower because of restriction and restrictions on pricing strategies.

However, in markets with a high level of economic welfare, WOSs are expected to provide greater long-term profitability for a firm, compared to a JV subsidiary, through the opportunity to achieve scale economies and consequently a lower marginal cost of production. Even if scale economies are not significant, a firm may still choose WOSs since they provide the firm with opportunity to establish a long-term market presence. Papanastassiou and Pearce (1990) also found support for WOSs in countries with high economic welfare. Likewise Dunning (1980) in his analysis of US firms supported this conclusion as well. We, therefore expect that Finnish firms will choose WOSs in order to undertake *market* as well as *efficiency seeking* FDIs in a target Asian country with a high level of economic welfare. Therefore,

H 7 The higher the level of economic infrastructure in the target Asian country, the greater the probability that the WOS of the Finnish firms will underatke *MS* and / or *ES* FDI in that Asian country.

2.3 Internalization advantage

Finally, the internalization (I) variables are concerned with the cost of choosing a hierarchical mode of operation over an external mode (Dunning, 1988, 1993). The internalizing of international operations comes at a cost. These costs must be compared with the costs of finding and maintaining an external relationship to perform the same functions in the international markets. It is strongly believed that some of internalization variables must be included in the consideration of ownership structures. An internalization variable i.e., extent of scale economies is expected to have an impact on a firm's choice of ownership structure in Asian markets.

Country risks. In many studies, country risk has been categorized as a location-specific variable (e.g. Hill, Hwang & Kim, 1990). However we decided to use it as an internalization variable, as it

was mentioned in (Chandprapalert, 2000; Dunning, 1993:84) in the same way. Country risks are often reflected in frequent government changes, frequent changes in economic policies, military coups, riots, insurrections, worker strikes against the national authority, and so forth. For instance, a government that frequently reverses previous decisions discourages investment from abroad. Thus foreign firms are more likely to be cautious with equity investment in countries having political unrest (Root, 1987; Rajib & Turgut, 2000). This contextual risk is usually beyond the control of firms. Kim & Hwang (1992) argued if an environment in a host country is uncertain and unpredictable, firms apparently hesitate to commit themselves too much as they may loose their strategic flexibility. Brouther (2002) also concluded that firms tend to prefer JVs when entering countries characterized by high investment risks.

The previous empirical studies (e.g. Aharoni, 1966; Goodnow & Hansz, 1972; Agodo, 1978; Root & Ahmed, 1978; Root 1987; Gatignon & Anderson, 1988; Fatehi-Sedeh & Safizadeh, 1989; Benito, 1995; Bell, 1996; and Mutinelli & Piscitello, 1997) confirmed that firms under high levels of risks in host countries are likely to choose low control ownership modes. Root (1987) concluded that a firm might also face other possible risks such as ownership or control risk, operation risk and transfer risk. Phatak et al. (1996) argued that firms prefer to avoid countries with high country risks like expropriation or nationalization, or economic risk like restrictions of assets, and limitations on operational and managerial choices. The Business Week (1981) also estimates that five hundred and sixty-three acts of expropriations were carried out against foreign firms in seventy-nine lesser developed countries. Gatignon and Anderson (1988) used the data from the Harvard Multinational Enterprise project embracing some 1267 foreign subsidiaries set up in 87 countries by 180 US firms between 1960 and 1975 and they also found that firms are most likely to opt for partnership when undertaking an investment in high risk countries. Bijur (1995) and Onkvisit & Shaw (1993) argued that levels of risks in the host country places a firm's asset at a heightened risk and the firm cannot afford to lose them or render them unproductive. We, therefore expect that Finnish firms will choose WOSs in order to undertake *risk-reduction seeking* FDIs in a target Asian country with a low level of risks. Hence,

H 8 The lower the level of risks in the target Asian country, the greater the probability that the WOS of the Finnish firms will undertake the *RRS* FDI in that Asian country.

Scale economies. Scale economies arise when inputs of a firm are shared, or utilized jointly with complete congestion. By inputs it refers to the core factors such as R&D, marketing, or manufacturing. The implications of scale economies with respect to competitive advantage have

become increasingly clear; they produce a positive impact on corporate profitability (Hwang & Kim, 1992). This is typically actualized through enhanced innovative capability or some form of cost reduction. For example, Honda's engine technology once developed for producing motorcycles was virtually costlessly available for the production of engines in the different capacities in which Honda exploited it across the globe. Similarly, Yves Siant-Laurent who leveraged its prestigious global brand name in a high fashion to expand into the perfume, cosmetic and recently cigarette industry domains across the globe.

Porter (1986) argued that sharing can take place across segments, products and may also involve joint use of different kinds of assets. Thus a diversified firm may share physical assets, cash or brand names across different business and markets. Hill et al. (1990) maintain that cross-subsidization of markets and exploitation of global brand names are a few examples of sharing tangible and intangible assets across different components of firm product and market portfolios. Furthermore researchers (e.g. Jones & Charles, 1982; Harrigan, 1985a, 1985b; Porter 1980) have also argued that the benefits of global strategy, including economies of scope, increase a firm's commitment to a business unit and can best be exploited through hierarchical control, which in turn helps the firm to achieve market as well as efficiency seeking motives of FDI. Also within many industries, firms are no longer able to compete as a collection of nationally independent subsidiaries. Rather competition is based in part on the ability of scale economies, and for a corporation to link and integrate its subsidiary activities across geographical locations (Porter, 1986). However, regardless of the integration pattern, the common assumption typically made is that the parent firm has global responsibility for issues that involve activities crossing national boundaries. In order to achieve these scale economies, tight co-ordination is necessary, as their implementation often requires business units to "sacrifice" subsystem gains for the benefit of the overall organization. Therefore, when the need for global integration is high, firms are likely to prefer WOS for its affiliates (Phatak et al. 1996). We, therefore expect that Finnish firms will choose WOSs where the possibilities for scale economies are great in order to undertake *market* as well as *efficiency* seeking FDIs in target Asian country. Hence,

H 9 Making the FDI in an industry where possibilities to reach scale economies are great increases the probability that WOS of the investing firm will undertake the *MS* and/or *ES* FDI in a target Asian country.

Table 3. Summary of the results obtained on the impact of ownership, location and internalization (OLI) variables on the ownership structure related choices in previous studies.

Author	Focus of the study	Independent variable	Results
Hennart (1987)	Entry mode choices.	R&D	Positive
Kumar (1990)	Multinational enterprises in India.	R&D	Positive
Phatak et al. (1996)	Entry mode choices in Thailand, Malaysia and Indonesia.	R&D	Negative
Kogut & Singh (1985)	Acquisition or Joint ventures choice by firms entering US.	Firm's large size	Positive
Larimo & Tahir (2001)	Ownership arrangement choices by Nordic manufacturing firms in Asian countries.	Firm's large size	Positive
Sanna-Randaccio (2001)	Italian investors abroad.	Firm's large size	Negative
Makino & Delios (1996)	Ownership choices made by Japanese firms in Asia.	Firm's large international experience	Positive
Padmanabhan & Cho (1999)	FDIs by Japanese firms in US.	Firm's large international experience	Positive
Shetty (1979)	European and American styles.	Firm's large international experience	Negative
Hennart (1991)	Japanese subsidiaries in the US.	Large industry-related experience	Positive
Larimo (2000)	Ownership choice of Finnish manufacturing firms in OECD countries.	Large industry-related experience	Positive
Larimo & Tahir (2002)	Ownership arrangement choices by Nordic manufacturing firms in Asian countries	Large industry-related experience	Not significant
Anderson & Coughlan (1987)	US electronic firms.	Low cultural distance	Positive
Hennart & Larimo (1998)	FDI by Finnish and Japanese MNEs in US.	Low cultural distance	Positive
Madhok (1997)	Entry mode choices.	Low cultural distance	Negative
Root (1994)	Entry mode choices.	Large market size	Positive
Sanna-Randaccio (1990)	Italian investors abroad.	Large market size	Positive
Dunning (1989)	Entry mode choices of US firms.	High level of welfare	Positive
Papansatassiou & Pearce (1990)	Sourcing of UK manufacturing industry.	High level of welfare	Positive
Phatak et al. (1996)	Entry mode choices in Thailand, Malaysia and Indonesia.	Low levels of risks	Positive
Sharma (2002)	Entry mode choices of US firms in Latin American countries.	Low levels of risks	Positive
Larimo & Tahir (2002)	Ownership arrangement choices by Nordic manufacturing firms in Asia	Low levels of risks	Not significant

- Positive means that this variable increases the probability to choose WOS
- Negative means that this variable decreases the probability to choose WOS

3 METHODLOGY AND THE SAMPLE OF THE STUDY

Because of the nature of the dependent and independent variables, the binomial logit model is used in the analysis. In the binomial logistic model the probability of certain types of ownership structure choices and the types of strategic motives are explained by the reviewed variables. The regression coefficient estimates the impact of independent variables on the probability that the WOS is market, efficiency and / or a risk-reduction seeking type of FDI. A positive sign for the coefficient means that the variable increases the probability of choosing WOS and undertaking a certain type of investment. The model can be expressed as

$$P(y_i = 1) = 1 / (1 + \exp(-a - X_i B))$$

Where *yi* is the dependent variable, *Xi* is the vector of the independent variable for the *i*th observation, *a* is an intercept parameter and *B* is the vector of the regression parameters (Amemiya, 1981). The expected results are presented in Table 4, however the detailed operationalization of the measures can be seen in Table 6, Table 7 and Table 8 in the appendix.

Table 4. Expected signs and results for each variable

Variables	SYMBOL	Expected Sign	Expected Results
R&D intensity	R&D	+	RRS FDI
Firm size	SIZE	+	MS & ES FDI
Firm international experience	EXP	+	MS & ES FDI
Industry experience	INDEXP	+	MS & ES FDI
Cultural distance	CULTDIS	-	MS &ES FDI
Market size	MSIZE	+	MS & ES FDI
Economic Welfare	ECON	+	MS & ES FDI
Country risks	CRISK	+	RRS FDI
Scale economies	SCALE	+	MS & ES FDI

The empirical part of this study is based on data from 135 manufacturing FDIs made by Finnish firms in various Asian countries from 1980 to 2000. The sample is based on information drawn from company annual reports of firms, information taken from business journals, survey information and other information received through direct contact by one of the authors from Finnish companies. During our survey the respondents were asked to identify one or two of their main motives for investing in South and Southeast Asian countries from the above-mentioned *MS*, *ES* and *RRS* types of FDI. However, in very few cases investors identified all the three motives as their main motive for investment. These 135 FDIs include 77 *MS*, 78 *ES* and 32 *RRS* FDIs, which make a total of 187, as approximately one-half of the investments are included in more than one type of FDI.

The most common target country for investments was clearly China – 45 (33%) investments. The other most common target countries were Malaysia (25 FDIs, 18.4%) and Singapore (20 FDIs, 14.7%). On average, the same firm had two investments in the sample. The most well known Finnish firm Nokia has made 10 investments, which was highest in number by a single company in whole sample. In all the cases the investing firms had experience already FDIs, and in most of the cases firms had made at least 5 foreign direct investments before the reviewed FDI. Approximately three-fourths of the cases of investing firms did not have previous manufacturing experience from the target country, whereas one-fourth of the cases had at least one, in some cases already three or four previous units in the target countries. The investments were made in ten Asian countries, mainly Southeast Asian countries. Measured with the cultural distance, the distance to the closest target country was 1.52 (Thailand) and to the most distance target country was 5.01 (Japan).

Of the 135 FDIs 113 (83.7%) were JVs and 22 (16.2%) were WOSs. Thus the ownership strategy distribution in FDIs made by Nordic firms in Western Europe and North America seem to have been just the opposite to the ownership structure in Asian countries (see Larimo 2000). However, Delios and Beamish (1999) also found in their study of 1424 Japanese FDIs in nine Asian countries that 21.4 per cent of the FDIs were WOSs (23.0 % of all identified 2594 FDIs in the same period).

The highest correlations were found between SIZE and EXP (0.459), CRISK and CULTDIS (0.337), MSIZE and CULTDIS (0.263) and R&D and ECON (0.228). Those correlations are highest in all the four types of FDIs sampled. The other correlations were clearly low (see Table 10). Thus the problem of multicollinearity should be rather low in this study.

4 THE EMPIRICAL RESULTS

The results of the binomial logistic regression in the basic model are presented in Table 5. The estimated coefficient represents the probability of choosing WOS and undertaking a *market*, *efficiency* and / or *risk-reduction* seeking FDI: a positive coefficient means that WOSs are chosen and a certain type of investment be undertaken, however, the negative coefficient signifies the opposite. The model has a satisfactory overall explanatory power with chi-squares of 85.121 with 3 DF (p=0.000) both for *MS* and *ES* FDIs and 34.586 with 3 DF (p=0.000) for *RRS* FDIs. Another way of measuring how well a maximum likelihood model fits the data is to use the model to classify observations. The ability to classify can be judged against the classification rate that would have been obtained by change. The rate is equal to $a^2 + (1 - a)^2$, where $\boldsymbol{a}$ is the proportion of *MS, ES* and *RRS* in the sample. In the present case the baseline rates for *MS, ES* and *RRS* are 52.3%, 52.6% and 63.8% respectively. Similarly the results

show that 88.6%, 88.6% and 84.4% of the observations are correctly classified for MS, ES and RRS respectively.

Table 5. Parameter estimates for the binomial logit models

	Expected sign	*MS*	*ES*	*RRS*
Constant		16.924 0.000	16.924 0.000	-14.243 0.000
R&D	+	-0.070 0.367	-0.070 0.367	0.006 0.908
SIZE	+	0.000 0.086*	0.000 0.086*	NR
EXP	+	0.039 0.087*	0.039 0.087*	NR
INDEXP	+	0.173 0.849	0.173 0.849	NR
CULTDIS	-	-1.750 0.000****	-1.750 0.000****	NR
MSIZE	+	0.002 0.000****	0.002 0.000****	NR
ECON	+	0.242 0.000****	0.242 0.000****	NR
CRISKS	+	-0.171 0.000****	-0.171 0.000****	0.171 0.000****
SCALE	+	-0.776 0.163	-0.776 0.163	NR
OWNERSHIP		0.133 0.868	0.133 0.868	NR
SAMPLE SIZE		77	78	32
% correct observation		88.6%	88.6%	84.4%

NR = Not Related

**** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

In South and Southeast Asian countries there is a huge market potential and due to this factor most of the Finnish firms have chosen a *MS* type of FDI. In *MS* FDIs the ultimate goal of the investor is to have a large market share and in order to achieve this goal, they produce in huge quantities to have the benefits of scale economies. If we look at the definitions of an *ES* type of FDI then we will find that the ultimate goal in *ES* FDIs is to have scale economies. Therefore *MS* and *ES* FDIs appear to be very closely related. During the survey when the respondents were asked which type of FDI they chose when deciding on the investment, most of the investors whose main motive was *MS* also choose *ES* and vice versa. As a result of this when the empirical analysis on the data was done the results for the *MS* and *ES* type appeared to be almost similar (see Table 5).

In the case of *MS* and *ES* FDIs, it has been found that large **SIZE, EXP, MSIZE** and high level of **ECON** increases the probability that Finnish firms will choose WOSs and will also undertake *MS* and *ES* FDIs. However, large CULTDIS decreases the probability that a Finnish firm will choose WOSs and

will undertake *MS* and *ES* FDIs. **SIZE** has a positive sign and is significant at 0.086 levels both for *MS* and *ES* types of FDIs. Here it can be argued that large firms due to their large resource base are often considered to be able to exploit the scale and scope economies effectively as well as efficiently by undertaking WOSs, which in turn can stimulate the investing firms to undertake *MS* and *ES* FDIs in a target country. The results of the previous studies (e.g. Gomes-Casseres, 1985; Kogut & Singh, 1985 & 1988b; Benito 1995; and Mutinelli & Piscitello, 1997) have also indicated that large firms often have a large resource base and have better ability to absorb risks and therefore are more likely to establish WOSs in target countries.

EXP has a positive sign and it is significant at 0.087 levels both for *MS* and *ES* types of FDIs. Thus, the large international experience has increased the probability that Finnish firms choose WOSs and to undertake *MS* and *ES* FDIs in a target Asian country. It can be argued here that the firm's past experiences manifest themselves in organizational routines and also serve as an important source of competitive advantage. Consequently the firm prefers to use the same strategies, thus that can enhance the firm's value by reducing the implementation costs, which in turn could also stimulate the firms to choose WOSs in order to undertake *MS* and *ES* FDIs in a target country. The previous studies (e.g. Gomes-Casseres, 1985 & 1987; Agarwal & Ramaswami, 1992; Sanna-Randaccio, 1990; Tang, 1994; Bell, 1996; and Mutinelli & Piscitello, 1997) also indicated that internationally experienced firms prefer to establish WOSs in unfamiliar foreign countries.

MSIZE also has a positive sign and it is statistically significant at the 0.002 levels both for *MS* and *ES* types of FDIs. Thus a large market size in the target country has increased the probability that Finnish firms choose WOS and undertake *MS* and *ES* FDIs in target Asian country. It can be argued that firms expect to experience greater long-term profits through economies of scale and lower marginal cost of production in target countries with larger market size. Thus, investing firms can be better stimulated to choose WOSs and to undertake *MS* and *ES* FDIs in a target country with a huge market potential. The results from the previous studies (e.g. Agarwal & Ramaswami, 1992; Kim & Hwang, 1992; Brouthers & Brouther, 2000) have also indicated the positive relationship between the large market size and WOSs.

ECON also has a positive sign and it is statistically significant at the 0.002 levels both for *MS* and *ES* types of FDIs. It indicates that a high level of economic welfare in the target country has increased the probability that Finnish firms choose WOS and undertake *MS* and *ES* FDIs in a target Asian country. It can be concluded that high growth markets provide the firms with the long term presence in the market through the opportunities of scale and scope economies and consequently lower production costs and

thus can also encourage the investing firms to choose WOSs in order to undertake *MS* and *ES* FDIs in those countries. The results from the previous studies (e.g. Dunning, 1980; Papanastassiou & Pearce, 1990) have also found support for WOSs in countries of high economic welfare.

CULTDIS has a negative sign and it is statistically significant at the 0.001 levels both for the *MS* and *ES* types of FDIs. This indicates that high cultural distance between the home and host countries have decreased the probability that Finnish firms choose WOSs and undertake *MS* and *ES* FDIs in a target Asian country. It can be argued that organization routines that are effective in the home country may not be so in target countries and moreover managers also perceive uncertainty about the market and demand structures in culturally distant countries and therefore encourage the investing firm to collaborate with the local firms in the target country. The results coincide with the findings of the previous studies (e.g. Kogut & Singh, 1985; Kogut & Singh, 1988b; Gatignon & Anderson, 1988; Padmanabhan & Cho, 1994; Benito, 1995; Bell, 1996; Mutinelli & Piscitello, 1997; Hennart & Larimo, 1998) indicating that investing firms prefer to undertake JV arrangements in culturally distant target countries.

CRISK also has a negative sign and is significant at the 0.001 levels, indicating that low levels of risks in the target country decrease the probability that WOS of the investing firm will undertake *MS* and *ES* FDIs in a target Asian country. According to our model (see H8) we should not have included **CRISK** for *MS* and *ES* types of FDIs, since **CRISK** appeared to be highly correlated with **MSIZE** and **CULTDIS** (see Table 10) we have therefore included it in runs for MS and ES types of FDIs. A similar case is true for **R&D**, which also has a negative sign, but it does not appear to be a significant variable for *MS* and *ES* types of FDIs. We have included it in our runs for *MS* and *ES* FDIs as it also appeared to be highly correlated with **ECON** (see Table 10).

However, in the case of *RRS* FDIs, **CRISK** has a positive sign and it is significant at the 0.001 levels, which indicates that lower risks in the target country increases the probability that Finnish firms choose WOSs in order to undertake the *RRS* FDIs in a target Asian country. The results in the previous studies (e.g. Aharoni, 1966; Goodnow & Hansz, 1972; Agodo, 1978; Root and Ahmed, 1978; Gatignon & Anderson, 1988; Benito, 1995; Bell, 1996; and Mutinelli & Piscitello, 1997) indicated that the firms prefer to undertake WOSs in a country with relatively low levels of risks.

5 SUMMARY AND CONCLUSIONS

The main goal of this study was to empirically investigate how different ownership-specific, location-specific, internalization and strategic advantages have influenced the ownership strategies of the Finnish

manufacturing firms in Asian countries between 1980 and 2000. Dunning (1993:56) and Ekström (1998:90) identified the strategic motives of FDIs: *market-seeking (MS), efficiency-seeking (ES)* and *risk-reduction seeking (RRS)*. Very few studies (e.g. Vyas, 2000) in FDIs have been undertaken so far to empirically analyze the influential ownership, location and internalization (OLI) variables together with the strategic motives in order analyze the ownership structure choices of the foreign investors. In past studies the focus of analyzing ownership strategy decisions has been on FDIs in Western Europe and in the USA. Furthermore, there are also very few studies (e.g. Delios & Beamish, 1999) analyzing the FDI behavior of non-Asian firms in Asian markets.

Based on the literature review it was assumed that a firm's large size, large international experience, large industry experience, low cultural distance between home and the target country, large size of the target market, high level of economic welfare in the target country and a great potential possibilities to reach scale economies increase the probability to choose WOSs and to undertake *MS* and *ES* FDIs. Similarly high R&D intensity of the Finnish firm and low levels of risks in the target country increases the probability to choose WOS and to undertake *RRS* FDIs.

The empirical part of the study was based on 135 manufacturing FDIs made by Finnish firms in various Asian countries between 1980-2000. The sample is based on information drawn from company annual reports, business journals, survey information and other information received by the author through direct contacts with the Finnish companies. A binomial logistic model was used in the analysis of the impact of different ownership, location and internalization variables on the probability to choose WOSs and to undertake *MS, ES* and *RRS* FDIs.

The results indicated that six variables were statistically significant in the total sample. As was expected, large firm size, larger international experience, low cultural distance, large size of the target market, and high level of economic welfare have increased the probability of choosing WOSs in order undertake *MS* and *ES* FDIs. Likewise, low levels of risks in the target Asian country have also increased the probability of choosing WOSs in order to undertake *RRS* FDIs.

Further, with reference to the eclectic approach, in the whole sample ownership-specific variables (O), location-specific variables (L) internalization variables (I) and strategic motivations have influenced the ownership structure choices of the Finnish firms in Asian markets. The individual strategic motivations listed above should not be seen as mutually exclusive. FDI projects may be driven by several ownership, location and internalization (OLI) variables and strategic motives simultaneously and in various combinations. Conceptually, however, distinguishing between different types of strategic motivations

facilitates a better understanding of the strategic motives underlying different FDI decisions and key ownership, location and internalization (OLI) variables influencing the different types of FDI projects.

This study has several limitations. First, the R&D – intensity industry level figures had to be used. Company level R&D figures could better explain the real influence of R&D –intensity. Second, because of lack of information about the absolute and relative size of FDIs and competition related information could not be included. Adding to those variables would also be interesting for future research. In addition, other interesting future research topics would be an analysis of the later changes in the ownership structures and an analysis of the relationships between ownership structures chosen and performance of the subsidiaries. Finally, because most of the investments by Finnish firms (and also by firms of other origin) in Asia were JVs, a more detailed analysis of the determinants between minority-, 50-50 –owned, and majority-owned units and/or an analysis of the partner selection criterias used would be of interest.

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Appendix

Table 6. Control variable of the study

0wnership	Ownership is captured in the study by a dummy variable, which receives a value of one if the firm owned 95%, or more of the subsidiary's equity and the zero it owned at least 10%, but not more than 94%. The 95% cut-off point has been chosen because the firm usually has de facto total decision power also in a situations where the share of ownership is a little under 100 % and the 95% cut-off point has been used in several other studies (e.g. in Stopford and Wells 1972, Anderson and Gatignon 1988, Gomes-Casseres 1989, and Hennart 1991).

Table 7. Independent variables of the study

SIZE	Firm size is measured by the parent firm's global sales in the year proceeding the investment in local currency, changed to FIM using the average exchange rate between the local currency and FIM in that year, and finally changed to FIM value in 2000. A logarithmic form of the variable is used because it is expected that influence of size variable is not linear but decreases. The expected sign is positive**.**
R&D	Research and development intensity is proxied by using a classification of various four digits SIC industries into three categories: high-tech branches; medium-tech branches, and low-tech branches. OECD classifies a branch as "high-tech" if on average it uses at least 4 per cent of its value added for R&D. Branches with an R&D – intensity between 1 and 4 percent are classified as "medium-tech," and branches with less R&D – intensity as "low-tech." The following branches were classified as high-tech using the statistics provided by Nordic Statistical Secretariat: SIC 2833 –2834, 3573 –3574, 3579, 36, 37and 38; medium tech branches were all 28 except 2833 & 2834, 30, 3339, 3341, 3356-3357, 3369, 35 except 3573-3574 and 3579, 39 and the rest were classified as low-tech branches. The expected sign is positive.
EXP	International experience is proxied by the number of foreign manufacturing investment made by the firm preceding the investment in case. A logarithmic form of the variable is used as in the case PSIZE because also here the expected influence is not linear but decreasing. The expected sign is positive.
INDEXP	Industrial experience is measured by the related experience of the parent firm. A dummy variable equal to one if one of the products manufactured by the subsidiary was also produced by parents and zero otherwise. The expected sign for RELATED is therefore positive
CULTDIS	Data on the index along the four cultural dimensions (power distance; uncertainty avoidance; individuality; and masculinity and feminity) for each country of the sample FDIs and for Finland were obtained from Hofstede (1980). Cultural distance is computed in the manner suggested by Kogut and Singh (1988), using a composite index based on differences between Finland and the target country of the investment. The expected sign is negative.
MSIZE	Market potential is measured by gross national product (GNP) during years of investment. The figure from Asian countries will be taken from the statistics provided by the World Development Indicators 2001. The expected sign is positive.
ECON	Economic welfare is measured by per capita gross national product (GNP) during previous years of investment. The figure from Asian countries will be taken from the statistics provided by the United Nations and IMF. The expected sign for GNPCC is positive
CRISK	Country risks is measured by using the political risk indexes for various countries. The risk indexes were taken from the Euromoney statistics. For older investments the first country risk figures available for the country were used. The higher the risk, the lower the values for index. The expected sign is positive**.**
SCALE	Scale economies is classified into three categories: maximum, medium and minimium. If scale economies has a value equal to two, it means that the investment was made in an industry where the possibilities to reach scale economies were maximum, if it has one value then it means that the investment was made in an industry where the possibilities to reach scale economies is medium and if it has zero value it means that the investment was made in an industry where the possibilities to reach scale economies is minimum. The classification of industries is based on Porter (1986) Yip (1992) and Calori, Atamer and Nunes (2000). The expected sign for SCALE is positive

Table 8. Dependent variable of the study

MS	Market seeking FDIs are coded as dummy variable equal to one, if the investment is market seeking and zero otherwise. MS, are classified as the FDI undertaken to sustain or protect existing markets or to exploit or promote new markets.
ES	Efficiency seeking FDIs are coded as dummy variable equal to one, if the investment is efficiency seeking and zero otherwise. ES, are classified as the FDI projects are undertaken in order to rationalize the structure of established production units in such a way that a firm can gain from the common governance inter-related activities in different locations.
RRS	Risk reduction seeking FDIs are coded as dummy variable equal to one, if the investment is risk-reduction seeking and zero otherwise. RRS, are classified as the FDI projects represent internal hedging activities conducted in order to reduce the level of risk by the firm.

Table 9. Descriptive Statistics for ownership

	N	Minimum	Maximum	Mean	Std. Deviation
R&D	109	0	12	2,30	2,12
SIZE	123	18,8	69176,3	15615,682	17015,805
EXP	132	0	69	18,26	14,69
INDEXP	132	0	1	2,27E-02	,15
CULTDIS	135	1,52	5,01	3,0973	,9141
MSIZE	135	13,6	4836,0	449,765	645,712
ECON	132	-11	15	7,70	3,75
CRISK	135	39,0	98,4	72,510	11,680
SCALE	135	0	2	1,47	,58

Table 10. Correlation matrix of ownership variables

	R&D	SIZE	EXP	INDEXP	CULDIS	MARSIZ	INFRA	RISKS	SCALE
R&D	1.000								
SIZE	-0.221	1.000							
EXP	-0.124	0.459	1.000						
INDEXP	-0.097	-0.110	-0.025	1.000					
CULTDIS	0.100	0.025	-0.039	-0.117	1.000				
MSIZE	0.091	0.109	0.033	-0.058	0.263	1.000			
ECON	0.228	-0.092	-0.105	0.093	0.156	-0.116	1.000		
CRISK	0.117	-0.150	-0.047	0.040	0.337	0.222	0.198	1.000	
SCALE	0.013	-0.027	-0.163	-0.036	0.091	0.041	-0.162	-0.052	1.000