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DETERMINANTS OF LOCATION STRATEGIES OF FINNISH FIRMS IN ASIAN COUNTRIES

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Abstract

The purpose of this paper is to empirically investigate how the ownership, location, internalization and strategic advantages have influenced the location strategies of the Finnish firms in ten South and Southeast Asian countries from 1980 to 2000. Despite the increased interest in FDIs, very few studies have been undertaken to empirically analyze the influential ownership, location and internalization (OLI) variables together with the strategic advantages in order to analyze the FDI choices of foreign investors. To the best of our knowledge, particularly the strategic motives have remained primarily anecdotal. This is apparently the first study trying to analyze how the ownership, location, internalization and strategic advantages have influenced the location strategies of Finnish manufacturing firms in Asian countries. The research results indicate that the large size of the parent firm, large international experience, a large market size in the target country, low cultural distance and low wage rates increase the probability of undertaking *market-seeking and efficiency-seeking FDIs*. Secondly, it has been found that low levels of inflation, low levels of risks and the high level of exchange rate fluctuations in the target country increase the probability of undertaking *risk-reduction seeking* FDIs. Finally, the results show that the high R&D intensity of the parent firm increases the probability of undertaking *knowledge-seeking FDIs* in Asian countries.

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

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ABSTRACT

The purpose of this paper is to empirically investigate how the ownership, location, internalization and strategic advantages have influenced the location strategies of the Finnish firms in ten South and Southeast Asian countries from 1980 to 2000. Despite the increased interest in FDIs, very few studies have been undertaken to empirically analyze the influential ownership, location and internalization (OLI) variables together with the strategic advantages in order to analyze the FDI choices of foreign investors. To the best of our knowledge, particularly the strategic motives have remained primarily anecdotal. This is apparently the first study trying to analyze how the ownership, location, internalization and strategic advantages have influenced the location strategies of Finnish manufacturing firms in Asian countries. The research results indicate that the large size of the parent firm, large international experience, a large market size in the target country, low cultural distance and low wage rates increase the probability of undertaking *market-seeking and efficiency-seeking FDIs*. Secondly, it has been found that low levels of inflation, low levels of risks and the high level of exchange rate fluctuations in the target country increase the probability of undertaking *risk-reduction seeking* FDIs. Finally, the results show that the high R&D intensity of the parent firm increases the probability of undertaking *knowledge-seeking FDIs* in Asian countries.

1. INTRODUCTION

In Asia, foreign direct investment (FDI) has increased significantly over the past two decades. However, this FDI has been concentrated in a few countries. In the early 1990s, seven East Asian countries – China, Korea, Singapore, Indonesia, Malaysia, Philippines and Thailand received more than sixty percent of the FDI inflows to the all-Asian countries (see Table 1). During that time, most of the foreign companies in these Asian countries had been able to capitalize on their inexpensive labor, huge market potential and tariff protection. The Asian crisis of 1997 has not been a deterrent to the flow of FDI into the region. Although currency depreciation decreases the stream of dividends from the subsidiary back to the home country, this effect is offset by gains in terms of ability to acquire local assets more cheaply and of a greater advantage for exports (OECD, 1998). Indeed, a survey by the United Nations of 198 multinational corporations (MNCs) shows that the turmoil in East and Southeast Asia has had minimal effect on the flow of FDI into the region (Business World, 1998). On the contrary, the UN survey reports that firms will increase their FDI because of lower costs in the region, increased competitiveness of Asian exports due to currency depreciation, and more liberal attitudes that includes the use of various incentives for attracting FDI. Given the importance of FDI to firms and policy makers, the present paper investigates the factors and motivations that determine the flow of Finnish firms in the manufacturing sector in Asian countries.

The purpose of this paper is to empirically investigate how the different ownership-specific, location-specific, internalization and strategic advantages that have influenced the location strategies of Finnish firms in ten South and Southeast Asian countries from 1980 to 2000. Dunning (1993:56) and Ekström (1998:90) identified four main strategic motives of FDIs: *market-seeking* (MS), *efficiency-seeking* (ES), *knowledge-seeking* (KS) and *risk-reduction seeking* (RRS). Despite the increased interest in FDI, very few studies (e.g. Chandprapalert, 2000; Vyas, 2000) have been undertaken so far to empirically analyze the influential ownership, location and internalization variables together with the strategic motives in order analyze the FDI choices of the foreign investors. These strategic motives have remained primarily anecdotal. Empirical analysis of strategic motives along with the influencing ownership, location and internalization (OLI) variables can add to our understanding of the eclectic paradigm and also enriches our knowledge of FDI in general.

Table 1. FDI net inflows into 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

This study contributes to the literature of international business by focusing on firms based in Finland, a small industrialized country, where the domestic market conditions are very different from those of the multinationals from the USA 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 firms in Asian markets. The present study combines ownership, location, internalization and the strategic advantages of manufacturing FDI under one analytic framework. It therefore presents new data and new empirical insights into the determinants as well as the strategic motives of Finnish manufacturing firms that engage in FDI ventures in Asia.

In the next section general aspects of foreign direct investment theories will be discussed. The theoretical and empirical literature on the location strategies and a discussion of the crucial ownership-

specific, location-specific, internalization and strategic advantages of the investing firm will be presented. In section three, the methodology and the data will be elaborated. 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 HYPOTHESES

One stream of literature (see Table 2) within the theory of FDI suggests that ownership-specific advantages may be shaped by the location-specific characteristics of the home country (Vernon, 1966 & 1974, Coase, 1937; Dunning, 1980 & 1993). Another school suggests (see Table 2) that these advantages may be contingent upon the host country's competitive characteristics (Buckley & Casson, 1976;Williamson, 1975 & 1979). The host country characteristics become particularly important when different configurations of the host country factor endowments, demand conditions and competition can strengthen a firm's advantages (Dunning, 1996; Itaki, 1991). The main difference between the ownership and location advantage is that in contrast to ownership advantages, location or country-specific advantages are spatially embedded. Aside from this difference, the relationship between ownership and location variables becomes complicated (Dunning, 1996). After a firm goes through the process of capitalizing on a location-specific advantage abroad, it can conceivably develop the ability to internalize the same location advantage abroad, it can conceivably develop the ability to internalize the same location advantages as ownership advantage in other locations (Dunning, 1980). A location-specific advantage that can internalize and exploit as firm specific in another location may come from patents, trademarks, factor inputs and distribution outlets.

The Dunning eclectic model is criticized for not sufficiently theorizing the relations between the ownership (O), location (L) and internalization (I) advantages, particularly for not making a clear distinction between the internalization and ownership advantages. However, the eclectic paradigm remains the most comprehensive explanation of international production. This theory not only provides a rich and rebut framework for analyzing and explaining the determinants of international production and how it varies between firms, industries and countries over time; but theory also helps us to understand of a wide variety of other firm-related issues. It is rather a paradigm or, more precisely, the taxonomy of various determinants of FDI. Theorists, empiricists and historians can freely invent new determinants to describe a particular case of FDI as long as they fall under one of the three headings. Thus, the OLI approach has been selected as the framework in this study because of the above-referred integrative nature of the approach.

Table 2. Main FDI theories (related to location choices)

Name of Researcher	Theory Type	Main focus of the theory
Hymer (1960 & 1976)	Partial	Characteristics of FDI FDI in general
Vernon (1966 & 1979)	Product life cycle	Explains FDI from developed to developing countries
Williamson (1975 & 1979)	Transaction cost approach	Cost of hierarchies as an alternative way of transactions.
Buckley & Casson (1976)	Firm-specific advantages / disadvantages	Cost and benefits of intermediate items specific to the firms but transferable between countries.
Luostarinen (1970 & 1979)	Internationalization approach	Firms acquire experience in culturally and economically close markets before moving further into culturally and physically distant markets.
Dunning (1980, 1988, 1993 & 1995)	OLI approach	The theory seeks to explain international production and determinants principally by hypothesizing that a firm engages in foreign production if these three conditions are meet: 1. The firm must possess net ownership advantage. 2. It must be profitable for the firm to internalize those O advantages rather than to sell or lease them to a foreign firm. 3. It must be profitable for the firm to utilize those O advantages in conjunction with at-least some factor inputs outside its home country.

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 impact upon a firm's choice of location.

R&D Intensity. FDI is seen as a vehicle by firms to accumulate new technologies when old technologies become obsolete (Shan & Song, 1997). As the pace of technology increases, acquiring new capabilities become important to technology-intensive firms. In the support of this perspective, a growing amount of literature (e.g. Cantwell, 1989; Teece, 1992; Dunning 1993 & 1995; Shan & Song, 1997; Chang, 1995; Almeida, 1996; Anand & Kogut, 1997; Frost, 2001; Makino et al. 2002) suggest

that ownership-specific advantages would arise only from the possession of proprietary assets but from the capacity to acquire, or the efficient coordination of, the complementary assets owned by other firms in a host country (Dunning, 1995, 1998 & 2000). Firms that intend to build advantages through FDI therefore have a natural incentive to seek opportunities to invest in a particular location in which their needed technologies are available.

Almeida (1996) have studied inward FDI in the U.S. semiconductor industry and concluded that foreign firms tended to cite local plants more frequently than similar domestic firms, suggesting that a primary purpose of inward FDI by foreign firms in the U.S. semiconductor industry was to source local technology. In investigating a longitudinal analysis of the relationship between technology and FDI, Cantwell (1989) also finds that German and US firms are attracted to locations that are important sites for innovations within a specific industry. Likewise Cantwell (1995) confirms the firms are increasingly interested in developing new technologies in countries that are among the leaders in product and process innovation. Belderbos and Sleuwaegen (1996) argued that the desire to exploit existing technology or firm-specific intangible assets is the main determinant of Japanese investment in North America and Europe.

Dunning (1992) also argued that firms undertake FDI in manufacturing R&D to exploit their existing advantages and firms invest in international R&D locations to improve the process of producing existing products to market in a cost-efficient manner. Furthermore Serapio and Dalton (1999) suggest that firms invest in overseas R&D to secure assets that are complementary to their core assets. These complementary assets may also help firms internalize operations by facilitating adaptation of their products and services to local markets. Serapio and Dalton (1999: 305) maintain that firms undertake FDI in R&D to "provide complimentary assets that are essential to the success of their overseas manufacturing or sales operations." Transplanted production and manufacturing operations in foreign locations often require adaptive development efforts; the product often has to be redesigned and reengineered. In such cases, firms often need to compliment its overseas manufacturing and production presence with a R&D presence in the local market. Based on previous studies we therefore expect that R&D intensive Finnish firms will undertake *knowledge seeking* FDIs in a target Asian country in order to enhance their technological competitiveness. Thus,

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

Firm's size. Foreign direct investment ventures unlike exporting require substantial financial as well as managerial resources. The literature on US and British multinationals suggests that the ability to generate internal sources for financing a project is an important determinant of planned overseas investment. Large firms, due to their large resource base, are often considered being in a better position than smaller firms to make such commitments. It has been argued that the size and resources of the firms are likely to influence the perceived risk of a project, one might expect that the readiness to engage in FDIs projects – which are associated with a higher perceived risk – is dependent on the availability of resources (Benito, 1995). Horsct (1972b) confirmed that size, more than any other variable explained the propensity of US firms to invest in Canada in the 1960s. The impact of the firm's size has been investigated in several studies. In most of the previous studies (Owen, 1982; Pearce, 1989; Li and Guisinger, 1992) it has been emphasized that large firms are more willing to undertake the risk and costs associated with FDI projects in the distant and unfamiliar markets due to their large resource base. Wolf (1977) and Owen (1982) also demonstrated a positive relationship between US firm size and FDI. Juhl's (1979) analysis of German manufacturing FDI in less developed countries found firm size to be a positive and significant determinant for FDI.

Similarly, Lall and Mohammad (1983) also concluded that FDI in India is positively related to the size of the investing firm. Bergsten et al. (1978:243) produced results that indicate that for US firms size is critical within the industry but not between industries. However, in a broad base investigation of the world's largest industrial enterprises, Pearce (1989) ascertains that there was no statistically significant relationship between size and the degree of multinationality of firms. Traditionally it has been argued that production units are thought to be located where the marginal cost of production is lowest. It is considered much easier for a large business to organize their production structure in such a way that they can exploit benefits of economies of scale in production. It could then lead to higher efficiency gains, a lower marginal cost of production and a large market share. We, therefore expect that large Finnish firms will locate *market* and *efficiency* seeking FDIs in a target Asian country. Hence,

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

Firm's international experience. A firm's international experience can be considered an important source of ownership-specific advantages. Buckely and Casson (1985) argue that experience reduces the cost and uncertainty of serving a market. Padmanabhan and Cho (1999) maintain that the firm's past

experiences manifest themselves in organizational routines that form the blueprint for the firm's future actions, and more importantly, serve as an important source of competitive advantage. Similarly, Agarwal and Ramaswami (1992) conclude that firms without foreign market experience are likely to have more problems in managing foreign operations. The firm's knowledge base will increase with repeated experiences and be embodied in personal and organizational memory (Penrose, 1959). For instance prior experience with a similar type of environment in a foreign country will allow the firm to "learn" from its past experience, and the learning will become very valuable when dealing with similar circumstances. Consequently the firm will prefer to use the same strategies, because these enhance the firm's value by reducing implementation costs in another foreign country, since the existing routines can be used. Tallman (1992:462) also alludes to the importance of past decision specific experience in the firm's organizational structure decisions by noting that "the firm may reduce the uncertainty in a given situation by attempting to imitate either its own previously successful structures or its competitors' in the new market."

Chang (1995) maintains that more internationally experienced firms face less knowledge disadvantages. The literature is not, however entirely free of discord. Maclayton, Smith and Hair (1980) found overseas business experience, measured in number of years, to have no relationship with a firm's evaluation criteria of a foreign market. But still most of the previous research points to a positive relationship between the level of experience and FDI decisions. Furthermore, highly experienced firms will also be motivated to undertake market-seeking FDIs by the advantages associated with staying close to their customers and thus protecting their ownership-specific advantages from deteriorating. We, therefore expect that internationally experienced Finnish firms will undertake *market* as well as *efficiency seeking* FDIs in a target Asian country. Thus,

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

2.2   Location-specific variables

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. Though it has been known that both the firm and location-specific advantages separately and jointly 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 ownership-specific advantages (Dunning, 1997).

Cultural distance. Culture can be described as "the collective programming of mind that differentiate the motives and behavior of one social group to those of another" (Hofstede, 1980:23). Culture provides challenge for the firms in terms of how to deal with the cultural distance within individual markets as well as across the markets. Two approaches exist with regard to this question. Proper understanding of cultural differences allows determining when adaptation may be necessary and when regional or even global approaches could be applied. Culture is inherently conservative, but borrowing and interaction between various cultures (for example, by introducing new products and practices, new words in languages etc.) may lead to narrowing the distance between them. Dubin (1975) found that UK based firms have very often made their first FDI in Canada or in the US. Similarly Bergholm and Jagren (1985) also maintain that Swedish firms have often made their first FDIs in other Nordic countries.

However, Benito and Gripsud (1992) found a very weak tendency for the first FDIs by Norwegians firms to be made in countries that are culturally closer than those where later investments are made. Further, they did not find any evidence that the greater cultural distance between the home and host country could have a negative affect on the FDI decisions of the firms. In investigating FDI flows to Central and Eastern Europe, Mikalak (1992) suggests that inherent variations in language and culture dissuade potential investors, except in countries that have traditional ties with Central and Eastern Europe. Likewise Grosse and Trevino (1996:152) conclude that those countries culturally dissimilar to the US and / or farther away tended to have less FDI into the US. Dividson (1980) also finds that US firms have usually made their first foreign investments in countries like Canada and the UK. Root (1990) maintains that uncertainty due to cultural distance also may cause executives to undervalue foreign investments. Moreover, the potential rents realized from investment are generally higher in culturally familiar countries than in unfamiliar countries. We therefore expect that Finnish firm will undertake *market* as well as *efficiency seeking* FDIs in a culturally close target Asian country. Hence,

H 4 The larger the cultural distance between the host and home country the Finnish investing firm, the lower the probability that it will undertake *MS* and / or *ES* FDI in that Asian country.

Market potential. Market size and the domestic competitive environment are considered to be important determinants of FDI (Dunning, 1980; Porter, 1990; Vernon, 1966). Firms usually invest in large markets to capitalize on firm-specific assets by entering the market first, or by following leading

firms in the new markets (Knickerbocker, 1973). In either case, the future share of new markets is the driving force behind expansion into foreign markets. Haq (2001) concluded that firms are attracted to large and prosperous markets because these markets offer higher returns on investment, although they also present high entry barriers and competitive pressures. Culem (1988) reviews bilateral flows of FDI between six industrialized countries and shows that host-market size and rate of growth are a significant determinant of inward FDI.

A number of empirical studies on FDI (e.g. Cunningham, 1975; Swedenborg, 1979; Dunning, 1980; Scaperlanda et al., 1983; Papanastassiou & Pearce, 1990) have also confirmed that the market potential of host countries has a significant and positive effect on attracting FDI. Lunn, (1980) found the market size of the EEC to be a significant variable for US direct investment in Europe. Hennart and Park (1994) concluded that in order to avoid protectionism stemming from tariff and non-tariff barriers, Japanese firms were particularly interested in serving the large and sophisticated US product market in the 1980s. For developing countries (e.g. Root & Ahmed, 1979; Torrisi, 1985; Schneider & Frey, 1985; Petrochilas, 1989; Wheeler & Moody, 1992) all those previous studies found market size to be a significant predictor of FDI. In either case, a future share of new markets is the driving force behind expansion into foreign markets. However, Wheeler and Moody (1992) further argue that the relationship between the flow of FDI and the size of the market becomes less significant when FDI is export-based and not market-based. In this case, firms undertake investment in a particular country to capitalize on factor costs such as raw materials and labor. Such countries usually have small markets but are generally endowed with cheap materials and labor. The US department of Commerce's Current Survey of Business (1988) also reports that newly acquired or established foreign affiliates continue the trend of locating production activities in countries with large and prosperous markets, rather than in countries with low labor and input costs. Furthermore it has been argued (e.g. Sabi, 1988) that firms expect to experience greater long-term profits through economies of scale and lower marginal cost of production in countries with larger market potential. We, therefore expect that Finnish firm will undertake *market* as well as *efficiency seeking* FDIs in a target Asian country with a huge market potential. Thus,

H 5   The larger the market size of the target Asian country, the greater the probability that Finnish firm will undertake *MS* and / or *ES* FDI in that Asian country.

Wage rate. According to the neoclassical theories, labor costs differential are considered an important determinant of FDI. The new international division of labor (NIDL) theories also focuses on the cost minimization strategies of firms (Frobel et al. 1980). It can be argued that locational advantage induced

by low wages increases the prospects of low production costs and could also stimulate the firms to establish themselves in new products and in new markets as well. Schoenberger (1988) also argued that US investment in Puerto Rico and Japanese investment in Ireland were mainly made on cost-minimization and tariff-free market access. The research on the determinants of FDI in developing countries also indicates that labor costs differential was a significant determinant of FDI in the 1970s and 1980s (e.g. Schneider & Frey, 1985; Summary & Summary, 1995; Wheeler & Mody, 1992; London & Ross, 1995). London and Ross (1995:21) conclude that foreign investors from developed countries seek labor which is "more domicile and less costly than that in the older industrial regions." Austin (1990) noted that wage cost advantages is a primary reason for businesses to integrate developing countries into their global production strategy. Likewise Rolfe and White (1992) found this to be the most important variable in their judgement modeling study of Caribbean investors.

There is, however, some empirical studies that argue that wage rate is not a significant determinant of FDI (e.g. Buckley & Dunning 1976; Kravis & Lipsey 1982; Papanastassiou & Pearce 1990; Yamawaki 1991). Karvis and Lipsey (1982) find that of the four variables of labor cost, real GDP, GDP and trade openness that labor cost is the least significant determinant of FDI. Dunning (1980) finds that although there is a negative correlation between real wage rates and FDI, however, the effect is not statistically significant. Buckley and Dunning (1976) maintain that there is no significant relationship between wage-rate differential and the flow of US FDI to the United Kingdom. Dunning (1996:38) observes, "real wage costs are more likely to influence the mode of servicing developing country markets than developed country markets." In the context of developed countries, Froot and Stein (1991) claim that the change in the real wage cost of Japanese and US workers was a strong determinant of new investment by Japanese firms in the US in the 1980s. Traditionally it has been argued here that low wage rates may create an opportunity to achieve plant-level scale and scope economies, higher production efficiency and a larger market share. We, therefore expect that Finnish firms will undertake *market* as well as *efficiency seeking* FDIs in target Asian country with relatively low wage rates. Hence,

H 6 The higher the wage levels in the target Asian country, the lower the probability that Finnish investing firm will undertake *MS* and / or *ES* FDI in that target Asian country.

Corporate tax rates. The locational choice of the investing firms can also be influenced by another market imperfection – the income tax rate. Theoretically, higher corporate tax rates reduce the net profit and consequently discourage FDI (Hartman, 1981). Thus, the need to locate manufacturing facilities in countries with relatively low tax rates serves the purpose of market as well as efficiency seeking FDIs. Pioneering work by Hartman (1981 & 1984) finds evidence that taxes and FDI are inversely related.

Boskin and Gale (1986) reestimate Hartman's (1984) equations, using updated series for the tax rate and the rate of return. Their qualitative results are consistent with those of Hartman (1984), even though the estimated elasticity of FDI to the rate of return is somewhat lower. Graham and Krugman's (1991) findings suggest changes in the US corporate tax rate in the early 1990s did not have a noticeable effect on inward FDI. Mody and Srinivasan (1990) do not find a significant relationship between the tax rate and manufacturing FDI. The World Bank report (1995) maintains that pro investment tax policies are often unnecessary and sometimes even detrimental to inbound FDI.

Other studies (e.g. Jun 1989; Lizondo 1990; Brewer, 1991; Cassou, 1997; Wei 2000) indicate that the corporate tax rate is an important determinant of FDI. In a comparative study of FDI location in the US, Hines (1996) finds that state tax rates had a substantial impact on location of inward FDI. Wei (2000) uses a sample of bilateral investment from twelve home-countries to forty-five countries, and finds that a rise in corporate tax is a significant deterrent to FDI. Slemrod (1990) shows that US tax rates influence FDI inflows and the tax policies of the home country do not have a significant impact. Shah and Slemrod (1990) also observe that FDI flows to Mexico, particularly from the US are sensitive to Mexico's tax policies. Gerlowski et al. (1994) also find that foreign investors from Canada, the United Kingdom and Japan all have strong motives to avoid states with high tax rates. Yamada and Yamada (1996) suggest that tax related incentive policies such as lower corporate taxes on earnings are important determinants of FDI by Japanese firms in the European Union. Ermisch and Huff (1999) conclude that lower taxes on foreign corporate investments are a beneficial strategy in attracting FDI to less developed countries like Singapore. We, therefore expect that Finnish firm will undertake *market* as well as *efficiency seeking* FDIs in a target Asian country with a relatively low corporate tax rates. Hence,

H 7 The higher the level of corporate taxes in the target Asian country, the lower the probability that the Finnish investing firm will undertake *MS* and / or *ES* FDI in that target Asian country.

Inflation. Inflation is also considered a proxy for the quality of macroeconomic management. The inflation rates of any country can substantially influence the relative prices between input goods and final goods within firms. As the anticipated and unanticipated changes in the relative prices of goods, labor and capital within firms and among firms operating in different markets have the potential to influence the cost and benefits of servicing international markets through exports and foreign production, as well as the relative profitability among alternative locations for production. Thus high or low inflation rates in any particular country may trigger firms to expand or contract existing production

operations, as well as enter or exit any foreign country. Foreign capital is known to detract from countries such as Russia, Yugoslavia and Thailand during the periods of high inflation.

Scheider and Frey (1985) suggest that the rate of inflation in host countries is a negative and significant determinant of FDI in developing countries. Hyun and Whitmore (1989) find that high inflation rates in Latin America, Asia and Africa detracts investments by Japanese firms. Similar findings have been reported by Sayek (2000) for FDI from the US. Sayek reports that a 3% increase in Canadian inflation reduces US investment in Canada by 2%. Similarly she also found that a 7% increase in Turkish inflation reduced US investment in Turkey by 1.9%. Finally, Schneider and Frey (1985) and Bajo-Rubia and Sosvilla-Rivero (1994) find that inflation and FDI are negatively related, thus creating an uncertain environment for foreign and domestic investors alike. It can be argued that if foreign investors are risk averse (or even risk neutral), higher inflation rate uncertainty may lead to a reduction in FDIs, because investors do not want to risk their expected profits from investment. As long as there is uncertainty, foreign investors will demand a high price to cover their exposure of inflation risks, and this, in turn, will decrease the volume of investment. Thus, to encourage investment, the stability of the inflation rate might be important. We, therefore expect that Finnish firms will undertake *risk-reduction seeking* FDIs in a target Asian country with a relatively low inflation rates. Thus,

H 8   The higher the level of inflation in a target Asian country, the lower the probability that the Finnish investing firm will undertake *RRS* FDI in that Asian country.

2.3   Internalization advantages

Finally, firms that possess similar firm-specific advantages and are faced with broadly comparable location advantages of countries may still have different impacts on their operations because they organize and control these variables differently. Internalization advantages arise when the potential rents to be realized from the firm-specific advantages are higher if they are transferred across borders within a firm's own organization than if they are sold in the external market for firm-specific advantages. These internalization advantages may be created if the firm is able to reorganize and achieve internal transaction cost economies. This may be done through the introduction of new organizational structures, which reduce internal search, contracting and monitoring costs (Dunning, 1997). A number of internalization variables have impact upon a firm's locational choices. These variables include country risks and exchange rate fluctuations.

Country risks. In many studies, country risk has been categorized as a location-specific variable (e.g. Hill, Hwang & Kim, 1991). However we decided to apply it as internalization variable, as it was

mentioned in (Dunning, 1993:84; Chandprapalert, 2000). Risks in foreign markets are frequently cited as a deterrent to inward FDI (Dunning, 1996). Butler and Joanquin (1998:602) identify political instability as "the risk that a sovereign host-government will unexpectedly change the rules under which businesses operate." As the economic structures of advanced industrial nations have increasingly become integrated, and as more national governments have adopted market-oriented policies, the importance of political risk as a determinant of FDI has declined (Dunning, 1996).

However, studies on the determinants of FDI in developing countries reach opposite conclusions (Edwards 1990; Lizondo 1990; Summary and Summary, 1995). Edwards (1990) suggest that variables such as political instability and political polarization play a significant role in determining the flow of FDI into developing countries. Agarwal (1980) also finds a negative correlation between political instability and FDI. In a study of the post-independence economic transition in the Ukraine, Ishaq (1999) concludes that FDI flows to the Ukraine were relatively small in relation to the country's GDP, mainly due to the country's unstable and uncertain political climate. Likewise Nigh (1985) uses regression analysis to show that political conflict is a strong deterrent of FDI in the developing host countries of Asia and Africa. Summary and Summary (1995) find that the foreign registrant variable or the number of foreign agents registered with the US Justice department showed that political instability is the significant political determinant of FDI only in developing countries. Summary and Summary (1995) further argued " both economic and political variables have a statistically significant effect on the US direct investment in the developing countries."

Some empirical studies, however find mixed results (e.g. Lizondo 1980; and Wheeler & Moody 1992). Lizondo's (1990) review of the literature on the determinants of FDI generally supported the negative relationship between political risk and FDI, albeit not in a conclusive manner. Likewise Wheeler and Moody (1992) suggest little significance in the relationship between political factors and FDI in 42 countries between 1982-88. It can be argued here that a firm only invests in the presence of a highly volatile political and economic environment if the investment is fully reversible, otherwise it may delay, or altogether terminate efforts if the investment is not easily modified or reversed. Traditionally, it has been argued that risks increase uncertainty, thereby discouraging inward FDIs. Based upon a number of empirical studies (e.g. Kogut, 1989; Dunning, 1993) we recognize that firms may take FDIs designed to reduce the corporate risks associated with the changes and moves of national and regional governments of the host country. We, therefore expect that Finnish firms will undertake *risk-reduction seeking* FDIs in a target Asian country with relatively low levels of risk. Thus,

H 9   The lower the risks in the target Asian country, the greater the probability that the Finnish investing firm will undertake *RRS FDI* in that Asian country.

Exchange rate fluctuations. Caution must be exercised when examining currency fluctuations between host and home countries because the importance of changes in exchange rate to firms can vary based on firm-specific objectives and strategies (Beamish et al. 2000). It is commonly held view that the exchange rates fluctuations increase the risks and uncertainty, thereby affecting incentives to attract investments. This problem is typically analyzed in a microeconomic framework in terms of the theory of the firm under uncertainty. Kwon and Konopa (1993) argued that an unfavorable shift in foreign exchange rates also poses danger to foreign investors. Likewise Baldwin and Krugman (1989) focused on real exchange rate uncertainty. They showed that the sunk cost of entry may encourage firms to move into export activities that would appear profitable in the light of current real exchange rate levels. Moody and Srinivasan (1991) find a negative correlation between exchange rate fluctuations and FDI in some industrial sectors. In a study of currency movement and its effect on the location of FDIs, Caves (1989) and Froot and Stein (1991) show that a negative relationship existed between FDI inflows into the US.

The results are however again not uniform throughout these studies. In the survey of US transnational corporations (TNCs) in Latin America, Wallance (1990) finds that exchange rate fluctuation is the most negligible factor in market entry decisions, and that market size and wage differential are more critical to the investment decisions of TNCs. Dunning (1996) also concluded that exchange rate fluctuations are rarely the most significant determinant in explaining the distribution of FDI. However Grosse & Trevino (1996) find that an increase in the value of home country currency in relation to the US dollar is a significant and positive determinant of the number of FDI transactions in the US. Here it can be argued that firms that seek cheap labor and efficiency for their operation and market for their products would benefit from the strong home-currencies. On the other hand, if the subsidiary of the firm has to use the imported inputs for foreign production, then a low value of the host country's currency will discourage investment in that country. Overall, the exchange rate fluctuations show a significant and negative impact on FDI in developing countries (Summary & Summary, 1995). We, therefore expect that Finnish firms prefer to undertake *risk-reduction seeking* FDIs in a target Asian country with relatively low levels of exchange rate fluctuations. Hence,

H 10   The higher the levels of exchange rate fluctuations in a target Asian country, the lower the probability that the Finnish investing firm will undertake *RRS* FDI in that Asian country.

Table 3. Summary of the results obtained on the impact of OLI related variables on FDI choices in previous studies

Authors	Focus of the study	Independent variable	Results
Belderbos & Sleuwaegen (1996)	Japanese investment in North America and Europe	R&D	Positive
Shan & Song (1997)	FDI in biotech industry	R&D	Positive
Kuemmerle (1999)	FDI in R&D from the US, Japan, Germany, France and U.K.	R&D	Positive
Caves (1971)	Industrial corporations and foreign investment.	Firm's large size	Positive
Lall & Mohammad (1983)	Multinationals in Indian big business	Firm's large size	Positive
Li & Guisinger (1992)	US firms undertaking FDIs	Firm's large size	Positive
Maclayton, Smith & Hair (1980)	Internationalization of US firms in health-care products	Firm's large international experience	Negative
Chang (1995)	Expansion strategies of Japanese firms	Firm's large international experience	Positive
Padmanabhan & Cho (1999)	FDI by Japanese firms	Firm's large international experience	Positive
Bergholm & Jagren (1985)	Internationalization of Swedish firms	Low cultural distance	Positive
Benito & Gripsud (1992)	FDI by the Norwegian firms	Low cultural distance	Negative
Grosse & Trevino (1996)	FDIs by the US firms	Low cultural distance	Positive
Scaperlanda & Balough (1983)	US direct investment in the EEC	Large market size	Positive
Papanastassiou & Pearce (1990)	UK manufacturing industry	Large market size	Positive
Haq (2001)	US direct manufacturing investment abroad	Large market size	Positive
Buckley & Dunning (1976)	US FDI to the UK	Low wage rate	Negative
Wheeler & Moody (1992)	International investment location decisions of US firms	Low wage rate	Positive
Summary & Summary (1995)	Time-series, cross-sectional data on the flow of FDI to developing countries	Low wage rate	Positive
Mody & Srinivasan (1991)	US investment abroad	Low tax rate	Negative
Yamanda & Yamanda (1996)	Japanese FDIs in EU	Low tax rate	Positive
Ermisch & Huff (1999)	Hyper-growth in an East Asian NIC	Low tax rate	Positive
Scheider & Frey (1985)	Economic and political determinants of FDI	Low inflation	Positive
Hyun & Whitemore (1989)	Japanese direct foreign investment	Low inflation	Positive
Bajo-Rubia & Sosvilla-Rivero (1994)	Foreign direct investment in Spain	Low inflation	Positive
Edwards (1990)	Capital flows, foreign direct investment and debt-equity swaps in developing countries	Political instability	Negative
Wheeler & Moody (1992)	International investment location decisions of US firms	Political factors	Positive
Ishaq (1999)	Foreign direct investment in the Ukraine	Uncertain political climate	Negative

Mody & Srinivasan (1991)	US investment abroad	Exchange rate fluctuations	Negative
Froot & Stein (1991)	Foreign direct investments in the US	Exchange rate fluctuations	Negative
Grosse & Trevino (1996)	Foreign direct investments in the US	Exchange rate fluctuations	Positive

- Positive means that this variable increases the probability to undertake FDI
- Negative means that this variable reduces the probability to undertake FDI

3. METHODLOGY AND THE SAMPLE OF THE PRESENT 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 location choices and types of strategic motives are explained by the reviewed variables. The regression coefficient estimates the impact of independent variables on the probability that the foreign investment is *market, efficiency*, *knowledge seeking* and / or *risk-reduction seeking*. A positive sign for the coefficient means that the variable increases the probability of undertaking an investment. The model can be expressed as

$$P\,(y_i = 1)\; =\; 1\,/\;(\,1 + \exp\,(\text{-}a - X_i B\,)$$

Where yi is the dependent variable, Xi is vector of independent variable for the ith observation, a is the intercept parameter and B is the vector of 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 and Table 7 in the appendix.

Table 4. Expected signs and results for each variable

Variables	SYMBOL	Expected Sign	Expected Results
1. R&D intensity	R&D	+	KS FDI
2. Firm size	SIZE	+	MS & ES FDI
3. Firm international experience	EXP	+	MS FDI
4. Cultural distance	CULTDIS	-	MS &ES FDI
5. Market size	MSIZE	+	MS & ES FDI
6. Wage rate	WAGRAT	-	MS & ES FDI
7. Income tax rates	TAX	-	MS & ES FDI
8. Inflation rate	INFLA	-	RRS FDI
9. Country risk	CRISK	+	RRS FDI
10. Exchange rates	EXC	-	RRS 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, 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, RRS* and *KS* types of FDI. However, in very few cases investors identified all the four motives as their main motive for investment. These

135 FDIs includes 77 *MS*, 78 *ES*, 44 *KS* and 32 *RRS* FDIs, which make a total of 231, as approximately three-fourths 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 made 10 investments, which was highest in number by a single company in the whole sample. In the cases the investing firms had experience already FDI, and in most of the cases firms had made at least five 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 10 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).

The highest correlations were found between SIZE and EXP (0.459), CRISK and WAGRAT (0.431), INFLA and EXC (0.418), MSIZE and WAGRAT (0.417) and CRISK and CULTDIS (0.337). Those correlations are highest in all the four types of FDIs samples. The other correlations were clearly low (see Table 8). 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 coefficients represent the probability of undertaking a *market*, *efficiency*, *knowledge* and / or *risk-reduction seeking* FDI: a positive coefficient means that certain type of investment be undertaken and a negative coefficient signifies the opposite. The model has a satisfactory overall explanatory power with chi-squares of 108.671 with 6 DF (p=0.000) both for *MS* and *ES* FDIs, 3.475 with 1 DF (p=0.062) for *KS* FDIs and 51.994 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 ***a*** is the proportion of *MS*, *ES*, *KS* and *RRS* in the sample. In the present case the baseline rates for *MS*, *ES*, *KS* and *RRS* are 52.3%, 52.6%, 55.6% and 63.8% respectively. Similarly, the results show that 93 %, 93 %, 65.2% and 85.9% of the observations are correctly classified for *MS*, *ES*, *KS* and *RRS* respectively.

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).

Table 5. Parameter estimates for the binomial logit models

	Expected sign	*MS*	*ES*	*KS*	*RRS*
CONSTANT		4.675 0.000	4.675 0.000	-0.725 0.000	-13.456 0.000
R&D	+	NR	NR	0.007 **0.074***	NR
SIZE	+	0.000 **0.059***	0.000 **0.059***	NR	NR
INTEXP	+	0.054 **0.084***	0.054 **0.084***	NR	NR
CULTDIS	-	-1.192 **0.001*****	-1.192 **0.001*****	NR	NR
MSIZE	+	0.004 **0.000******	0.004 **0.000*******	NR	NR
WAGRAT	-	-0.001 **0.000******	-0.001 **0.000******	NR	NR
TAX	-	0.011 0.653	0.011 0.653	NR	NR
INFLA	-	NR	NR	NR	-0.332 **0.001*****
CRISK	+	NR	NR	NR	0.168 **0.000******
EXC	-	NR	NR	NR	0.088 **0.007*****
SAMPLE SIZE		77	78	44	32
% correct observations		93%	93%	65.2%	85.9%

NR = Not Related
 ****p < 0.001, *** p < 0.01, ** p < 0.05, * p < 0.1

First in the case of *MS* and *ES* FDIs, it has been found that large **SIZE**, **EXP**, and **MSIZE** increases the probability of Finnish firms to undertake *MS* and *ES* FDIs. Likewise low **CULTDIS** and **WAGRAT** also encourage Finnish firms to undertake *MS* and *ES* FDIs. **SIZE** has a positive sign and it is significant at 0.05 levels both for *MS* and *ES* types of FDIs. Here it can be argued that large firms are often considered it easier to be able to exploit the plant scale economies effectively and efficiently by allocating their large production resources in fewer locations, this in turn can stimulate the investing

firms to undertake *MS* and *ES* FDIs in a target country. The results in the previous studies (e.g. Juhl, 1979; Li & Guisinger, 1992; Benito 1995; Mutinelli & Piscitello, 1997) have also indicated that large firms often have a large resource base and therefore have better possibilities to undertake FDIs.

EXP has a positive sign and it is significant at 0.08 levels both for *MS* and *ES* types of FDIs. Thus, large international experience has increased the probability that Finnish firms undertake *MS* and *ES* FDIs in target Asian countries. It can be argued here that the firm's past experiences manifest themselves in organizational routines that form the blueprint for the firm's future actions, and reducing the implementation costs of the investing firm, and thus encouraging the investing firm to undertake *MS* and *ES* FDI in a target Asian country. The previous studies (e.g. Buckley & Casson, 1985; Agarwal & Ramaswami, 1992; Padmanabhan & Cho, 1999) also indicated that internationally experienced firms faced fewer risks and disadvantages in unfamiliar foreign countries.

MSIZE also has a positive sign and is statistically significant at the 0.001 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 undertake *MS* and *ES* FDIs in the target Asian countries. 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 undertake *MS* and *ES* FDIs in a target country with a huge market potential. The results are in line with the previous studies (e.g. Sabi, 1988; Papanastassiou & Pearce, 1990; Wheeler & Moody, 1992) indicating that large market size of host countries has a significant and positive effect on attracting FDIs.

CULTDIS has a negative sign and is statistically significant at the 0.001levels both for the *MS* and *ES* types of FDIs. This indicates that the high cultural distance between the home and target countries have decreased the probability of Finnish firms to undertake *MS* and *ES* FDIs in a target Asian country. It can be concluded that in culturally similar countries, the demand structures are usually more alike than in culturally more distant countries. Furthermore, marketing, management and production strategies are more easily and less costly transferable to culturally close countries and thus can encourage the investing firms to undertake *MS* and *ES* FDIs in a culturally close target country. The results coincide with the findings of the previous studies (e.g. Mikalak, 1992; Grosse & Trevino, 1996) indicating that investing firms prefer to undertake FDIs in culturally similar countries.

WAGRAT has a negative sign and is significant at 0.001 levels both for the *MS* and *ES* types of FDIs. Therefore, it can be concluded that the high wage levels in the host country reduces the probability of Finnish firms to undertake *MS* and *ES* FDIs in a target Asian country. It can be argued here that with

the increase in market share, it also becomes relatively more profitable to increase the degree of product specialization and to operate within specific product niches. As a result of the reduction in labor costs and further market growth are reasoned to open up new investment opportunities for firms to undertake *MS* and *ES* FDIs in a target country with relatively low wage rates. In the previous studies (e.g. Rolfe & White, 1992; London & Ross, 1995) it has also been argued that low wage rates may create an opportunity to achieve plant-level economies of scale; higher production efficiency and lower marginal costs of production which in turn could lead to large market shares.

TAX does not appeared to be a significant variable, indicating that higher or lower taxes do not increase or decrease the probability that Finnish firms undertake *MS* and / or *ES* FDIs in target Asian countries. These findings are in line with the results of the earlier studies (e.g. Root & Ahmed, 1974; Cable & Persaud, 1987; Moody & Srinivasan, 1991; Graham & Krugman, 1991) focusing on the preferential taxation and / or tax incentives to attract manufacturing FDIs. The World Bank Report (1995) also argued that pro investment policies are often unnecessary and sometimes even detrimental to inward FDIs.

In the case of *KS* FDIs, **R&D** has a positive sign and is significant at 0.074 levels. It can be concluded here that the higher research and development intensity of the Finnish firms increases the probability that they will undertake a *KS* type of FDI. It can be argued that the globalization of manufacturing R&D is becoming a popular strategy for firms to exploit and accumulate technological capabilities. These results correspond with the previous studies (e.g. Cantwell, 1989; Anand & Kogut, 1997; Shan & Song, 1997) concluding that R&D intensive firms acquire new technologies by investing in locations that possess such capabilities.

Finally, in the case of *RRS* FDIs, low levels of **CRISK**, **INFLA** and high levels of **EXC** increases the probability of undertaking *RRS* FDIs. **CRISK** has a positive sign and is significant at 0.001 levels, which indicates that the lower risks in the target country increases the probability that the Finnish firms undertake *RRS* FDI in that Asian country. The results coincide with the results of the previous studies (e.g. Edwards, 1990; Lizondo, 1990; Butler & Joanquin, 1998) indicating that most of the firms often prefer to undertake investment in a country with relatively low levels of risk.

INFLA has a negative sign and is significant at 0.001 levels, indicating that a high level of inflation decreases the probability of Finnish firms to undertake *RRS* FDIs in a target Asian country. The results are in line with the previous studies (e.g. Schneider & Frey, 1985; Hyun & Whitemore, 1989; Sayek, 2000) where it was found that inflation and FDI are negatively correlated. It can be argued that the

inflation rate indicates the macroeconomic stability of the target country and it also captures uncertainties in the economy as well and therefore high inflation rates can detract inward FDIs.

Against expectation **EXC** has a positive sign and is significant at 0.007 levels, indicating that an increase in exchange rate fluctuations would increase the probability of undertaking *RRS* FDIs. It can be argued here that a firm that seeks resources or efficiency for their operations, and those making initial investment outlays, would benefit from weak currencies of the host country. Thus, the depreciation of the local currency may enhance the competitiveness of the host country as well. Further, this reasoning would also support the widely held view that countries can attract FDIs by devaluating their currency (Baldwin & Krugman, 1989).

5. SUMMARY AND CONCLUSIONS

The main goal of this paper was to empirically investigate the role of ownership-specific, location-specific, internalization and strategic advantages in the eclectic paradigm in order to further understand the location choices of Finnish firms in Asian countries. Dunning (1993) identifies four main strategic types of FDIs: *market-seeking (MS), efficiency-seeking (ES), knowledge-seeking (KS)* and *risk-reduction seeking (RRS)*. So far surprisingly very few studies (e.g. Chandprapalert, 2000;Vyas, 2000) have been undertaken to empirically analyze the ownership-specific, location-specific and internalization variables along with the strategic motives in order to understand the FDI choices of the investing firms. Furthermore, there is also very little research done on the FDI behavior of non-Asian firms in Asian countries. Most previous studies focusing on the FDI behavior have analyzed the situation in the USA or in the OECD countries. Information to confirm whether the same variables and motives as in USA and in other OECD countries have also been the key influencing variables and motives in Asian countries is extremely limited.

Based on the literature review it was expected that larger size of the firm, larger international experience, large size of the target market, low cultural distance, low wage rate and low taxes increase the probability to undertake *market* and *efficiency seeking* FDIs. Secondly, high R&D intensity increases the probability to undertake *knowledge seeking* FDIs. Finally, low inflation rates, low exchange rate fluctuations and low levels of risks in the target country increases the probability to undertake *risk-reduction seeking* 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 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 *MS, ES, KS* and *RRS* FDI decisions.

The results indicated that nine variables were statistically significant in the total sample. As was expected, large firm size, larger international experience large size of the target market, low cultural distance and low wage rate had increased the probability of undertaking *MS* and *ES* FDIs. Secondly, high R&D intensity of the investing firm has increased the probability of undertaking *KS* FDIs. Finally, low inflation rate, a low level of risks and a high level of exchange rate fluctuations in the target country have increased the probability of undertaking *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 location strategies of 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 objectives 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-specific, location-specific 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, the sample size of the study was small, a bigger sample from Nordic firms could reveal more interesting results. Third, a lack of information about absolute and relative size of FDIs, transportation costs, labor unionization in the target country, free trade zones and competition related information could not be included. To add those variables would also be interesting for future research. Fourth, future research could also analyze the FDIs of specific industries and regions, which could be compared and contrasted with the firms in other industries as well. Such research could assist managers as well as governments in the important and difficult task of prioritizing relevant variables affecting the FDI choices by firms, and could therefore better focus their time and resources – which are often limited – on those variables, which are most likely to affect success in a given situation. Finally it is also hoped that the present study will help to bring the variables and motivations of location choices of firms into the mainstream

work on international business so that we do not need to question whether location has become the neglected factor in research multinational enterprises.

References

Almeida, P. (1996). Knowledge, sourcing by foreign multinationals: patent citation analysis in the U.S. semiconductor industry. *Strategic Management Journal* 17, 155-165.

Amemiya, T. (1981). Qualitative response models: A survey. *Journal of Economic Literature* 19:4, 14-24.

Agarwal, J. (1980). Determinants of foreign direct investment: a survey. *Weltwirtshaftliches Archiv* 16:4, 739-73.

Agarwal, J. & S. Ramaswami (1992). Choice of foreign market entry mode: Impact of ownership, location and internalization factors. *The Journal of International Business Studies* 23:1, 1-27.

Amemiya, T. (1981). Qualitative response models: A survey. *Journal of Economic Literature* 19:4, 1483-1536.

Anand, J. & B. Kogut (1997). Technological capabilities of countries, firm rivalry and foreign direct investment. *Journal of International Business Studies* 28:3, 445-465.

Austin, J. (1990). *Managing in Developing Countries : Strategic Analysis and Operating Techniques.* The Free Press, New York.

Bajo-Rubia, S. & S. Sosvilla-Rivero (1994). An economic analysis of foreign direct investment in Spain. *Southern Economic Journal* 61:1, 104-117.

Baldwin, R. & P. Krugman (1989). Persistent trade effects of large exchange rate shocks. *The Quarterly Journal of Economics* 104:4, 635-655.

Beamish P., A. Morrison, P. Rosenzweig and A. Inkpen (2000). *International Management*: *Taxes and Cases*. Boston: Irwin McGraw-Hill.

Bergholm, F. & L. Jagren (1985). *Det utlandsinvesterande företaget – en empirisk studie.* In G. Eliasson & F. Berghlom & E. Horwitz & L. Jagren (eds.), De svenska storföretagen – en studie av internationaliseringens konsekvenser för den svenska ekonomia, 71-159. Industriens Utredningsinstitut, Stockholm.

Bergsten, C., T. Horst & T. Moran (1978). *American multinationals and American interests.* Washington D.C:Brookings Institution.

Belderbos, R. & L. Sleuwaegen (1996). Japanese firms and decision to invest abroad: business groups and regional core network. *Review of economics and statistics* 78:2, 214-21.

Benito, G. (1995). *Studies in foreign direct investment and divestment behaviour of Norwegian manufacturing companies.* Norges Handelshoyskole. Norwegian School of Economics and Business Administration. (Dissertation).

Benito, G. & G. Girpsrud (1992). The expansion of foreign direct investments: Discrete rational location choices or a cultural learning process? *Journal of International Business Studies* 23:3, 461-476.

Borenstein, E., J. Gregorio & J. Lee (1995). *How does foreign direct investment affect economic growth?* National Burea of Economic Research. Working paper series #5057, Cambridge, MA 02138.

Boskin, M. & W. Gale (1986). *New results on the effects of tax policy on the international location of investment.* Working paper no. 1862. Cambridge: National Bureau of Economic Research.

Brewer, T. (1991). *Foreign direct investment in developing countries: patterns, policies and prospects.* Washington DC: World Bank PRE Working Paper No. 712, Jun.

Buckley, P. & M. Casson (1976). *The Future of the Multinational Enterprises*. London: Macmillan.

Buckley, P. & M. Casson (1985). *The Economic Theory of the Multinational Enterprise.* London: Macmillian.

Buckley, P. & J. Dunning (1976). The industrial structure of US direct investment in the UK. *Journal of International Business Studies* 7:2, 5-13.

Business World (1989). *March-Edition (0nline), Http: //www.bworld.com.ph.*

Butler, K. & D. Joaquin (1998). A note on political risk and required return on foreign direct investment. *Journal of International Business Studies* 29:3, 599-607.

Cable V. & B. Persaud (1987). *Developing with foreign investment.* London: Croom Helm.

Cantwell, J. (1989). *Technological innovations and the multinational corporations*, London: Basil, Blackwell.

Cantwell, J. (1995). The globalization of technology: what remains of the product cycle model? *Cambridge Journal of Economics* 19:1, 155-74.

Casson, M. (1987). *The firm and the market.* Oxford: Basil Blackwell.

Cassou, S., (1997). The link between tax rates and foreign direct investment. *Applied Economics* 29:10, 1295-1302.

Caves, R. (1971). Industrial corporations : the industrial economics of foreign investment. *Economica* 38, Febuary, 1-27.

Caves, R. (1989). *Exchange rate movement and foreign direct investment in the United States, in D.B. Audretsch and M.P. Claudon (eds.).* The internationalization of US markets. New York: New York University Press.

Cassou, S. (1997). The link between tax rates and foreign direct investment. *Applied Economics* 29:10, 1295-1302.

Chandprapalert, A. (2000). The determinant of US direct investment in Thailand: A survey on managerial perspectives. *Multinational Business Review* 8:2, 82-88.

Chang, S. (1995). International expansion strategy of Japanese firms: Capability building through sequential entry. *Academy of Management Journal* 32:2, 383-407.

Coase, R. (1973). The nature of the firm. *Economica* 4, November, 386-405.

Culem, C. (1988). The locational determinants of direct investment among industrialized countries. *European Economic Review* 32: 4, 885-904.

Cunningham, W. (1975). Localization of industry. *Economic Journal* 12, 501- 6.

Davidson, W. (1980). The location of foreign investment activity. *Journal of International Business Studies* 11:2, 9-23.

Dixit, A. (1989). Entry and exit decisions under uncertainty. *The Journal of Political Economy* 97:3, 620-639.

Dubin, M. (1975). *Foreign acquisition and the spread of the multinational firm.* D.B.A. thesis. Graduate School of Business Administration. Harvard Business School.

Dunning, J. (1980). Towards an eclectic theory of international production: some empirical tests. *Journal of International Business Studies* 26:3, 461- 491.

Dunning, J. (1988). The eclectic paradigm of international production: A restatement and some possible extensions. *Journal of International Business Studies* 19:1, 1-31.

Dunning, J. (1992). *Multinational enterprises and the globalization of innovatory capacity.* In Granstand, O. et al. (eds.). Technology management and international business: internationalization of R&D and Technology. Chichester:Wiley.

Dunning, J. (1993). *Multinational Enterprises and the Global Economy.* Addison–Welsey Publishing Company.

Dunning, J. (1993a). *Japanese and US manufacturing investment in Europe. Some comparisons and contrasts.* In Japanese Direct Investment in a Unifying Europe (Mason M., ed.). Oxford: Oxford University Press.

Dunning, J. (1995). Reappraising the eclectic paradigm in an age of alliance capitalism. *Journal of International Business Studies* 26:3, 461-491.

Dunning, J. (1996). *Explaining foreign direct investment in Japan: some theoretical insights.* In M. Yoshitomo and E. Graham (eds.) Foreign Direct Investment in Japan. 8 − 63. Cheltenham, UK: Edward Elgar.

Dunning, J. (1997). *Micro and Macro Organizational Aspects of MNE and MNE Activity.* In Toyne, Brian & Douglas Nigh, International Business: An Emerging Vision. Columbia, SC: University of South Carolina Press.

Dunning, J. (1998). Location and the Multinational Enterprise: A Neglected Factor? *Journal of International Business Studies* 29 :1: 45 − 66.

Dunning, J. (2000). The eclectic paradigm as an envelop for economic and business theories of MNE activity. *International Business Review* 9:2, 163-190.

Dicken, P. (1998) *Global Shift: The Internationalization of economic activity (3rd ed.)* New York: Guilford Publications.

Edwards, S. (1990). *Capital flows, foreign direct investment, and debt-equity swaps in developing countries*. NBER Working Paper No 3497. National Bureau of Economic Research, Cambridge, MA.

Ekström, J. (1998). *Foreign direct investment by large Swedish firms – the role of economic integration and exchange rates. doctoral dissertation*. The Institute of Economic Research. Lund University.

Enlight, M. (1998). Regional clusters and firm strategy. In Alfred D. Chandler, Peter Hagström, Öjän Sölvell, editors, *The dynamic firm: The role of technology, strategy, organization, and region.* New York: Oxford University Press: 315-342.

Ermisch, J. & W. Huff (1999). Hypergrowth in an East Asian NIC: public policy and capital accumulation in Singapore. *World Development* 27:1, 21.

Erramilli, M., S. Agarwal & S. Kim (1997). Are firm-specific advantages location specific too. *Journal of International Business Studies* 28:4,735-757.

Frobel, F., J. Heinrichs & O. Kreye (1980). *The new international division of labor*. Cambridge: Cambridge University Press.

Froot, K. & J. Stein (1991). Exchange rates and foreign direct investments: an imperfect capital market approach. *Quarterly Journal of Economics* 106:4, 191 − 217.

Frost, T. (2001). The geographic sources of foreign subsidiaries' innovations. *Strategic Management Journal* 22:2, 101-123.

Gerlowski, D., H. Fung, & D.Ford (1994). The location of foreign direct investment for the US real estate. *Land Economics* 70:3, 286-294.

Graham, E. & P. Krugman (1991). *Foreign direct investment in the United States* (2nd ed.) Washington, DC: Institute for International Economics.

Grosse, R. & L. Trevino (1996). Foreign Direct Investment in the United States: An analysis by country of origin. *Journal of International Business Studies* 27:1, 139-155.

Hartman, D. (1981). *Tax policy and foreign direct investment.* NBER working paper no. 689.

Hartman, D. (1984). Tax policy and foreign direct investment in the United States. *National Tax Journal* 37:4, 475-88.

Hennart, J & Y. Park (1994). Location, governance and strategic determinants of Japanese manufacturing investment in the United States. *Strategic Management Journal* 15:6, 419-36.

Hill C., P. Hwang, & C.W. Kim (1990). An Eclectic Theory of the Choice of International Entry Mode. *Strategic Management Journal* 11:2, 117-128.

Hines, J. (1996). Altered states: taxes and the location of foreign direct investment in America. *American Economic Review* 86:5, 1076 − 95.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related values.* Saga Publications, Beverly Hills.

Horst, T. (1972b). The industrial composition of US exports and subsidiary sales to the Canadian market. *American Economic Review* 62, 37-45.

Hymer, S. (1960/1976). *The international operations of national firms: A study of direct foreign investments.* Doctoral thesis, MIT Press, Cambridge, Mass.

Hyun J. & K. Whitemore (1989). *Japanese direct foreign investment: pattern and implications for developing countries.* Working Paper Industry Series 1. Washington: Industry and Energy Dept.

Itaki, M. (1991). A critical assessment of the eclectic theory of multinational enterprises. *Journal of International Business Studies* 22:3, 446-460.

Ishaq, M. (1999). Foreign direct investment in Ukraine since transition. *Communist and Post-Communist Studies*. 32:1, 91-104.

Juhl, P. (1979). On the sectoral patterns of West German manufacturing investment in less developed countries: the impact of firm size, factor intensities and protection. *Weltwirtschaftliches Archiv*, 115,3.

Jun, J. (1989). *Tax policy and international direct investment.* National Bureau of Economic Research. NBER Working Paper Series No. 3048.

Knickerbocker, F. (1973). *Oligopolistic reaction and the multinational enterprise.* Cambridge, Harvard University Press.

Kogut, B. (1989). The stability of joint ventures: reciprocity and competitive rivalry. *Journal of Industrial Economics* 38:2, 183-199.

Kravis, I. & R. Lipsey (1982). The location of overseas production and production for exports by US multinational firms. *Journal of International Economics* 12, 201-223.

Kuemmerle, W. (1999). The drivers of foreign direct investment into research and development: an empirical investigation. *Journal of International Business Studies* 30:1, 1-24.

Kwon, Y. & L. Konopa (1993). Impact of host country market characteristics on the choice. *International Marketing Review* 10:2, 60-74.

Lall, S. & S. Mohammad (1983). Multinationals in Indian big business: Industrial characteristics of foreign investments in heavily regulated economy. *Journal of Development Economics 13:1, 143-157.*

Li, J. & S. Guisinger (1991). Comparative business failure of foreign-controlled firms in the United States. *Journal of International Business Studies* 22:209-224.

Li, J. & S. Guisinger (1992). The globalization of service multinationals in the "triad" regions: Japan, Western Europe and North America. *Journal of International Business Studies* 23:4, 675-696.

Lizonda, S. (1990). *Foreign direct investment*. IMF. Working Paper, Washington DC: IMF Japan.

London, B. & R. Ross (1995). The political sociology of foreign direct investment: global capitalism and capital mobility, 1965 – 1980. *International Journal of Comparative Sociology* 36:3, 98-119.

Luostarinen, R. (1970). *Foreign operations of the firm*. Helsinki. Helsinki School of Economics.

Luostarinen, R. (1979). *Internationalization of the firm*. Acta academiae Helsingiensis, Series A:30. Helsinki School of Economics (dissertation).

Lunn, J. (1980). Determinants of US direct investment in the EEC: Further evidence. *European Economic Review* 13, 93 – 101.

Maclayton, D., M.C. Smith & J. Hair (1980). Determinants of foreign market entry: A multivariate analysis of corporate behavior. *Management International Review* 20:3, 40.

Makino, S., C. Lau & R. Yeh (2002). Implications for location choice of foreign direct investment from newly industrialized economies. *Journal of International Business Studies* 33:3, 403-421.

Mikalak, W. (1992). Foreign direct investment and joint ventures in East-Central Europe: a geographical perspective. *Environment and Planning* 25 :11, 1573-82.

Moody, A. & T. Srinivasan (1991). *Trends and determinants of foreign direct investment: analysis of US investment abroad.* Washington DC: The World Bank, Industrial Development Division.

Mutinelli, M. & L. Piscitello (1997). Differences in the strategic orientation of Italian MNEs in Central and Eastern Europe. The influence of firm-specific factors. *International Business Review*, 6:2, 185 – 206.

Nigh, D. (1985). The effect of political events on U.S direct foreign investment: A pooled time series cross-sectional analysis. *Journal of International Business Studies* 16:1, 1-18.

OECD (1998). *Foreign direct investment and economic development - lesson from six emerging economies*.

Owen, R. (1982). *Inter - industry determinants of foreign direct investment.* In New Theories of Multinational Enterprise (Rugman A., ed.) London: Croom Helm.

Padmanabhan, P. & K. Cho (1999). Decision specific experiences in foreign ownership and establishment strategies: Evidences from Japanese firms. *Journal of International Business Studies* 30:1, 25 – 36.

Papanastassiou, M. & R. Pearce (1990). *Host-country characteristics and sourcing behavior of UK manufacturing industry.* University of Reading, Department of Economics, Paper Series B, 7: 140.

Penrose, E.. (1959). *The theory of the growth of the firm*. Basil Blackwell, Oxford.

Pearce, R. (1989). The internationalization of sales by leading enterprises: some firms, industry and country determinants. *University of Reading Discussion papers in International Investment and Business Studies*, Series B, No. 135.

Petrochilas G. (1989). Foreign direct investment and the development process. Aldershot: Avebury.

Porter, M. (1990). *The competitive advantages of nations*. New York: Free Press.

Rolfe, R. & R. White (1992). The influence of tax incentives in determining the location of foreign direct investment in developing countries. *Journal of the American Taxation Association* 13:2, 39-57.

Root, F. (1990). *International trade and investment.* Sixth edition. Chicago: South Western Publishing.

Root, F. & A. Ahmed (1979). Empirical determinants of manufacturing foreign direct investment in developing countries. *Economic Development and Cultural Change* 27:4, 751-67.

Sabi, M. (1988). An application of the theory of foreign direct investment to multinational banking in LDCs. *Journal of International Business Studies* 19:3, 433-48.

Sayak, S. (2000). *Inflation and foreign direct investment*: *Theory and evidence*. Paper presented at Royal Economic Society's 2000 Annual Conference at the University of St. Andrews, United Kingdom.

Scaperlanda, A., R. Balough & J. Lunn (1983). Determinants of US direct investment in the EEC Revisisted. *European Economic Review* 21:3, 381-90.

Schneider, F. & B. Frey (1985). Economic and political determinants of foreign direct investment. *World Development* 13:161-75.

Schoenberger, E. (1988). The ambiguous future of professional and technical workers in manufacturing: some hypotheses. *Acta Sociologica* 31:3, 241 – 248.

Serapio, M. (1997). *Internationalization of industrial R&D: theoretical perspectives and empirical evidences.* Unpublished paper.

Serapio, M. & D. Dalton (1999). Globalization of industrial R&D: an examination of foreign direct investment in R&D in the United States. *Research Policy* 28:3, 303-316.

Shah, A. & J. Slemrod (1990). *Tax sensitivity of foreign direct investment: an empirical assessment.* Washington, DC: The World Bank PRE Working Paper, June 1990.

Shan, W. & J. Song (1997). Foreign direct investment and the sourcing of technological advantage: evidence from the biotech industry. *Journal of International Business Studies* 28:2, 267-284.

Sharma, V. (2002). Entry into Latin American BEMs: High or low resource commitment modes? *International Journal of Commerce & Management* 12:1, 41-67.

Slemrod, J. (1990). *Tax effects on foreign direct investment in the United States: Evidence from cross-country comparisons*. In A.Razin and J. Slemrods (eds.). Taxation in the Global Economy. University of Chicago Press: Chicago. 79-117.

Summary, R. & L. Summary (1995). The political economy of United States foreign direct investment in developing countries: an empirical analysis. *Quarterly Journal of Business and Economics* 34:3, 80 – 93.

Swendenborg, B. (1979). *The multinational operations of Swedish firms: An analysis of determinants and effects.* Stockholm:Industriens Utredningsinstitut.

Tallman, S. (1992). A strategic management perspective on host country structure of multinational enterprises. *Journal of Management* 18:3, 455-471.

Teece, D. (1992). Foreign investment and the technological development in silicon valley. *California Management Review,* 34:2, 88-106.

Torrisi, C. (1985). The determinants of direct foreign investment in a small LDC. *Journal of Economic Development* July, 1-6.

U.S. Department of Commerce (1988b). *Burea of Economic Analysis. Benchmark Survey.* Washington DC.

Vernon, R. (1966). International investment and international trade in the product cycle. *Quarterly Journal of Economics* 80, 190-207.

Vernon, R. (1979). The product cycle hypothesis in the new international environment. *Oxford Bulletin of Economics and Statistics* 41, 255-67.

Wallance, C. (1990). *Foreign direct investment in third world: U.S corporations and government policy. In Cynthia Day Wallance, editor, Foreign direct investments in the 1990s: A new climate in the third world,* 148-202. Boston: Martinus Nijhoff.

Wei, I. (2000). USDIA and foreign debt corruption act. *Quarterly Journal of Economics.* 27:41-50.

Wheeler, D &A. Moody (1992). International investment location decisions. The case of US firms. *Journal of International Economics* 33:1, 57-76.

Williamson, O. (1975). *Markets and Hierarchies: Analysis and Antitrust Implications.* New York: The Free Press.

Williamson, O. (1979). Transaction cost economics. The governance of contractual relations. *Journal of Law and Economics* 22, 223-61.

World Bank (1995). *World Development Report.* Oxford University Press.

Wolf, B. (1977). Industrial diversification and internationalization: some empirical evidence. *Journal of Industrial Economics* 26, 177-91.

Yamawaki, H. (1991). Location decisions of Japanese multinational firms in European Manufacturing Industries. In *European Competitiveness,* ed. K.S. Hughes, pp. 11-28. Cambridge: Cambridge University Press.

Yamada, T. & T. Yamada (1996). Country integration and Japanese foreign direct investment in the EC. *Contemporary Economics Policy* 14:1, 48-58.

Appendix 1: Operationalization of the measures

Table 6. Dependent variables 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.
KS	Knowledge seeking FDIs are coded as dummy variable equal to one, if the investment is knowledge seeking and zero otherwise. KS, are classified as the FDI prompted to invest abroad to acquire particular and specific resources at a lower real cost than could be obtained in their home country.
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 7. Independent variables of the study

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.
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.
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.
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.
WAGRAT	**Wage rate** is measured by the average wage rates in manufacturing sector during 1980s and 1990s. The figures from the Asian countries have been taken from the statistics provided by the World Development Indicators 2001. The expected sign is positive.
TAX	**Tax rate** is measured by income tax rates during year of investment. The figure from Asian countries will be taken from the statistics provided by the World Development Indicators 2001. The expected sign is negative.

INFLA	**Inflation rate** is measured by inflation rates during year of investment. The figure from Asian countries will be taken from the statistics provided by the World Development Indicators 2001. The expected sign is negative.
CRISK	**Country risks** are 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.
EXC	**Exchange rates** are measured by exchange rates fluctuations in the year preceding the investment. The figure from Asian countries will be taken from the statistics provided by the World Development Indicators 2001. The expected sign is negative.

Table 8. Correlation matrix of location variables

	R&D	SIZE	INTEXP	CULTDIS	MARSIZ	WAGRAT	TAX	INFLA	CRISK	EXC
R&D	1.000									
SIZE	-0.221	1.000								
EXP	-0.124	0.459	1.000							
CULTDIS	0.100	0.025	-0.039	1.000						
MSIZE	0.091	0.109	0.033	0.263	1.000					
WAGRAT	-0.046	-0.050	-0.077	0.256	0.417	1.000				
TAX	-0.130	-0.157	0.021	0.217	-0.261	0.318	1.000			
INFLA	0.266	-0.065	0.031	-0.240	-0.200	-0.313	0.052	1.000		
CRISK	0.117	-0.150	-0.047	0.337	0.222	0.431	0.091	-0.292	1.000	
EXC	0.133	-0.001	0.044	-0.143	-0.019	0.060	0.031	0.418	-0.186	1.000

Table 9. Descriptive Statistics of location

	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
CULTDIS	135	1,52	5,01	3,0973	,9141
MSIZE	135	13,6	4836,0	449,765	645,712
WAGRAT	135	472	31687	3292,01	5213,04
TAX	125	0	75	30,18	17,88
INFLA	135	-6,0	15,0	4,659	4,871
CRISK	135	39,0	98,4	72,510	11,680
EXC	132	,00	49,58	7,5060	12,4142