Foreign Direct Investment in Central, Eastern and South Eastern Europe: An 'eclectic' approach to Greek investments

by

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Abstract

The fall of communism in Central, Eastern and Southern Eastern European countries (CESEC) has presented multinationals with new trade and investment opportunities. Since early 1990s the CESECs countries embarked on a transition process aimed at democratisation, achieving improved standards of living, setting up a functioning market economy and becoming full members of the EU or at least building closer political and economic relations with the organisation. Within this context, during the last decade Greece has emerged as one of the largest investors in the Central and Eastern and South Eastern European Countries. Greek firms making the most of their geographical proximity and capitalising on their cultural and commercial links with CESECs are heavily investing in those countries. This is the first paper to empirically evaluate the determinants of entry mode decisions of Greek firms participating in the Athens Stock Exchange. The main aim of the paper is to investigate foreign direct investment determinants using Dunning's eclectic paradigm. Our results offer strong support to the eclectic framework and suggest that it is the interrelation of ownership and locational advantages that can explain foreign investment activity.

Keywords: Eclectic Framework, Greece, Modes of Entry, Central Eastern and South Eastern Countries

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1. Introduction

The fall of communism and the opening up of markets in Central, Eastern and Southern Eastern European Countries (CESEC) has presented multinationals with immense trade and investment opportunities. The transition economies offered a wide range of advantages, including a large and unsaturated potential market in terms of population and Gross Domestic Product (GDP), a cheap and relatively skilled labour force and accessible and low-priced natural resources. Furthermore, improvements in the institutional framework, political stability and the prospects for European Union (EU) membership have acted as important catalysts for foreign direct investment (FDI) attraction in the 'Agenda 2000' transition countries.[1]

The remaining South Eastern European, primarily Balkan, or former Soviet Union countries have also targeted foreign investors for their potential positive impact on their economies. Large multinational enterprises (MNEs) have increasingly expanded into Central, South and Eastern Europe and names such as General Motors, Nestlé, British Petroleum, Orange and Marks and Spencer's are common place in the area. In a world characterized by ongoing globalisation where accelerated technological progress, new production, organizational and management systems and a constantly growing role of competition constitute the main features, it is imperative for countries and enterprises to be internationally competitive in order to survive and grow (World Investment Report, 2002).

Despite the significant fall of foreign direct investment (FDI) into the CESECs, from USD 31 bn. in 2002 to a low of USD 21 bn, the new EU members are likely to experience a 'second wave' of FDI from investors aiming to reap the advantages of these countries' changed location advantages (World Investment Report, 2004: 69, 79). This stylised fact makes the continuous investigation of foreign investors' behaviour in CESECs a necessity.

[1] We call the 'Agenda 2000' countries the ten Central and Eastern European countries which were part of the EU accession process in 1997 and whose progress towards EU membership was assessed by the European Commission through the 'Agenda 2000'. These include: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

This study covers this gap by primarily focusing on FDI located in that region and by bringing into the discussion the Balkan and former Soviet Union countries. It is important to understand that as the process of EU expansion covers these countries as well as the recently accessed countries the competition for FDI attraction will become intensive.

Since the early 1990s the CESECs countries embarked on a transition process that aimed at democratisation, achieving improved standards of living, setting up a functioning market economy and becoming full members of the EU or at least building closer political and economic relations with the organisation. Whilst the above hold for the region as a whole, the distribution of FDI is highly uneven among the countries due to their different transition progress. The vast majority of FDI has been received by the Czech Republic, Hungary and Poland, which were the first to begin liberalisation and the largest among the region. While Hungary, the Czech Republic and Estonia have had high inflows relative to GDP for some years, Poland and Latvia have been experiencing growing inward investment only recently (Holland and Pain, 1998). Bulgaria and Romania have received much lower levels of FDI due to their relatively poor progress in meeting the economic conditions for their accession to the EU (Bevan et al., 2001). Their share of total FDI in the region, though, the last couple of years has risen from 28% in 2002 to 45% in 2003 (World Investment Report, 2004:70). FDI in countries of the former Soviet Union has only took off in 1995 with Russia being by far the leading recipient before the economic crisis of summer 1998 which depressed investment temporarily (Meyer and Pind, 2004:205). South Eastern Europe has seen low investment for the most part of the nineties with a recent positive trend as a result of privatization deals. Although these do not match the size of previous deals in the Czech Republic, Hungary or Poland, during 2001-2003 the Republic of Moldova, the Former Yugoslav Republic of Macedonia (FYROM) and Serbia and Montenegro were the region's leaders regarding the ratio of FDI to gross fixed capital formation (World Investment Report, 2004:70). These significant differences can be attributed to the different transitional paths and the especially the significant differences in the institutional environment of the countries in the region. Political stability, democratisation, rule of law, bureaucratic quality and the existence of corruption and ethnic tensions can significantly influence an investor's decision to engage or not in investment activity. This comes as the second significant contribution of the paper. We include in our analysis of investors' behaviour, variables that capture the

above mentioned factors and thus offering a more holistic approach to FDI behaviour. As the institutional environment might be the most important factor affecting international investors' decisions, it is imperative to examine its effect on investment decisions.

Within this context, during the last decade Greece has emerged as one of the largest investors in the Central and Eastern and South Eastern European Countries (Demos et al., 2004). Firms located in Greece, either purely domestic firms or Greek subsidiaries of large multinational organisations, making the most of their geographical proximity and capitalising on their cultural and commercial links with CESECs are heavily investing in those countries (Iammarino and Pitelis, 2000). This transformed Greece from a peripheral European country to a regional centre, especially in its neighbouring South-eastern European countries. Greek firms grabbed the opportunities, mentioned above and expanded rapidly in the newly opened markets. Indicative are the cases of Albania, where Greece was the second largest investor after Italy at the end of 2001 (WIIW, 2005); Romania, where it was the second largest investor at the end of 2003 (WIIW, 2005); Bulgaria, with Greece on the third position (WIIW, 2005); FYROM, where it was the second investor following Hungary (WIIW, 2005) and finally Moldova where Greece holds the seventh place (WIIW, 2005). Data from the Hellenic Ministry of National Economy (1998) show that Greek investment in the Balkan region accounts for almost 12% of the total FDI.

As mentioned previously, the Greek investment in the region occurred through two channels. Firstly, purely domestic firms, ranging from small entrepreneurial to large traditional firms, seized the opportunities and engaged in foreign production by using their accumulated experience and expertise. Secondly, Greek subsidiaries of multinational enterprises started internationalising and upgrading their roles. Firms such as 3E, a Coca-Cola soft drinks subsidiary, Delta, partner of Danone, Intracom, a partner of Siemens working in telecommunications, Chipita, a PepsiCo food subsidiary and many others started investing abroad, thus becoming regional headquarters and upgrading their role in the multinational group. This strategic change appears to be verified by a prior study of Kyrkilis and Pantelidis (1994) where they argue that 'it is possible for foreign subsidiaries to readjust their market strategies along time and in accordance with changing conditions'.

This is where this paper makes its third contribution. Using a holistic framework, that captures aspects of the institutional environment, empirically evaluates the determinants of

entry mode decisions of Greek firms participating in the Athens Stock Exchange (ASE) in a geographical area of great interest to MNEs. The rational behind explaining the behaviour of Greek firms does not come only from the obvious Greek presence in the region but mostly from the existing need in the international business literature to identify and explain the investment motivations of firms coming from small peripheral economies in their internationalisation process. Greece is an excellent example of how a small peripheral EU economy upgraded its role and became a significant regional outward investor.

The remainder of the paper is organised as follows. We first discuss the theoretical formulation and the supporting literature. Section 3 presents the data set and some basic statistics of our sample. We present the methodology in section 4 whilst our empirical analysis and results can be found in section 5. Finally, in section 6, we draw several conclusions and suggest areas for further investigation.

2. Theoretical formulation

In order to examine investors' behaviour, this paper builds on Dunning's (1977; 1988; 1993) eclectic paradigm. The justification for using this theoretical framework over any other international business framework comes from the paradigm's eclectic and holistic attributes. This framework allows the investigator to include in the analysis, not only firm level variables but also location specific variables that can encapsulate the institutional environment. The need to synthesize various aspects of the approaches of MNEs and FDI and the desire to find an appropriate framework for their empirical investigation led to the emergence of the original eclectic paradigm. For the last two decades, the eclectic paradigm has remained the most influential analytical framework for MNEs.

According to Dunning (1996), there are four types of foreign investors: resource seeking, market seeking, efficiency seeking and strategic asset or capability seeking. These motives are also defined by UNCTAD (1998:91) as economic determinants of FDI and are complemented by the host country's policy framework and capacity for business facilitation. Policy framework refers here to the degree of social and political stability, rules regarding entry and operations, fair competition between foreign and domestic investors, privatisation policy, international agreements on FDI an the host government's attitude toward foreign corporations (UNCTAD, 1998).

Dunning's (1977; 1988; 1993) eclectic paradigm, known mostly as Ownership-Location-Internalisation (OLI) paradigm, has emphasised that the returns to FDI, and hence FDI itself, can be explained by the competitive-ownership advantages of firms (O), indicating who is going to produce abroad 'and for that matter, other forms of international activity' (Dunning, 1993:142), by locational factors (L) 'influencing the where to produce' (Dunning, 1993:143) and by the internalisation factor (I) that 'addresses the question of why firms engage in FDI rather than license foreign firms to use their proprietary assets' (Dunning, 1993:145). The above propositions provide the framework for explaining the scope and geography of value added activities.

The first proposition incorporates within the ownership or competitive advantages (O) of firms seeking to engage in FDI variables such as property rights, intangible assets and specialised management capabilities, organizational and marketing systems, innovatory capabilities (Dunning, 1993:142). The second proposition includes within the specific locational characteristics (L) of alternative countries or regions the following: low input prices, productive and skilled labour force, well-developed infrastructures, investment attraction policies and country level innovatory competences (Dunning, 1993:143).

Previous studies on CESEC suggest that the key location-related FDI determinants are demand, cost factors and the risk of investment, in terms of both political and economic environment (Lucas, 1993; Singh and Jun, 1995; Holland and Pain, 1998; Bevan and Estrin, 2004). In particular, risk assessment has been especially important for the transition countries which have faced internal economic and political crises (Henisz, 2000). Indeed political instability discourages foreign investment (Lucas, 1990). Executives report that political instability is the most important factor they consider when internationalising, apart from market potential. A recent survey conducted by the World Bank (2005) also identifies 'economic and regulatory policy uncertainty' as a major obstacle for business, particularly in countries lagging behind in terms of economic and political reforms, although not exclusively. This shows the need to use more specific risk variables, including the expropriation risk suggested by Bevan and Estrin (2004:784) and which is included in the present study.

The third proposition of OLI has to do with the internalisation (I) advantages. It actually mirrors the extent to which enterprises consider to internalise activities rather than get involved in arm's length operations. Exploiting market failures is the main argument

behind this type of benefits. Lowering search and negotiation costs, controlling for market imperfections and compensating for the absence of future markets are a few internalisation incentive advantages (Dunning, 1993).

An emerging strand of research has dealt with the impact of institutions on FDI (Wheeler and Mody, 1992; Resmini, 2001; Disdier and Mayer, 2004) and on enterprise strategies, notably their entry modes (Oxley, 1999; Henisz, 2000; Meyer, 2001; Smarzynska, 2002). According to Kogut and Spicer (2002) and Stiglitz (1999) the establishment of new institutions is more important, for international investors, comparable to more conventional macroeconomic policy objectives. The quality of institutions influences the strategies of previously state-owned companies before and after privatisation (Peng, 2000; White and Linden, 2002), the creation of new firms (McDermott, 2002) and the strategies of foreign investors (Henisz, 2000). Empirical studies have included variables such as government policy (Gomes -Casseres, 1991), intellectual property protection (Oxley, 1999) or economic freedom (Brenton, Di Mauro and Lücke, 1999).

The paradigm asserts that it is the combination of ownership, locational and internationalisation factors and their exact configuration that defines which firms become MNEs, when they do so, where they locate their productive activities and how they involve in international production. Dunning (2000) himself characterized the eclectic paradigm 'as an envelop for complementary theories of MNC activity'. The configuration of the eclectic paradigm is though context specific. Despite its generality in explaining multinational activity, one has to clearly identify the geographical region under investigation, the industry and of course the firms examined. As Dunning (2001) puts it: 'In formulating operational hypotheses about the relationship between individual OLI variables and the level and pattern of international production, it is important to specify the context in which this relationship is being examined.' Thus, OLI advantages work as a 'tripod' in explaining multinational activity and act both as initiative and a mechanism of accomplishing an FDI project. This is graphically illustrated in Figure 1.

Insert Figure 1 here

A very recent and influential contribution belongs to Dunning (2004) himself, who discusses extensively the role of institutional infrastructure in upgrading the pull factors

determining the competitive advantages of countries and regions, examining the European transition economies. He then moves on to discuss two major empirical exercises with respect to the significance of institutional and policy related variables for these economies. Closely related to that is the work of Carstensen and Toubal (2004), where they integrate traditional with transition-specific variables in a dynamic panel model comprising of FDI flows from ten OECD countries to seven Central and Eastern European hosts.

This paper enriches an emerging research dealing with location determinants of FDI in transition economies (Lankes and Venables, 1996; Holland and Pain, 1998; Meyer and Pind, 1999; Resmini, 2000; Bevan, Estrin and Grabbe, 2001; Krkoska, 2001; Bevan and Estrin, 2004; Bevan, Estrin and Meyer, 2004) and complements it by looking at the interplay between location advantages, including variables that capture the institutional environment, and ownership advantages in determining the internalisation method of Greek companies.

In this paper, we define a set of specific factors included in the OLI paradigm. We use a subset of the several variables proposed by the eclectic framework but at the same time the most representatives for multinational firms' motives (Dunning, 1993). The application of the OLI framework will allow us to discern differences in the internalisation decisions of firms engaging in international investment activity. We then assume that OLI factors not only vary per individual investment but also the spectrum of OLI factors should lead to a non-negative, non-zero sum, which should maximise firm returns in order to engage in FDI. This is in the line with the notion that OLI advantages are resources able to generate income (Dunning, 1993:77). Although other forms of international expansion, such as trade, require the existence of L and to some extent O advantages it is clear that for a firm to get involved in FDI the combination of these advantages must lead to the maximisation of firm's profits compared to other alternative means of foreign market entry.

The main assumption of the study is that ownership advantages and political institutional factors, as part of the location advantages, represent catalysts for MNEs' decision to locate in the CESECs. We then simultaneously test in a combined framework the O and L advantages. We perform our analysis using an expanded time period thus capturing partially the changes in the O and L advantages of Greek firms and CESECs respectively. Within the locational advantages of the OLI framework, we use political institutional variables. This is consistent with the fact that although scholars concentrated initially on factor endowments,

especially labour costs and productivity (Bevan et al, 2004:45), recently multinationals have increasingly focused on 'created assets' (Narula and Dunning, 2000) including knowledge-based assets, infrastructure and institutions of the host economy. According to Mudambi and Navarra (2002:636), institutions are important determinants of FDI because they 'represent the major immobile factors in a globalised market … Legal, political and administrative systems tend to be internationally immobile framework whose costs determine the international attractiveness of a location. Institutions affect the capacity of firms to interact and therefore affect the relative transaction and co-ordination cost of production and innovation'.

2.1.a. Location Advantages - Institutional Variables

According to Brunetti, Kisunko and Weder (1997) differences in the predictability of the institutional framework may partially explain the differences in FDI across economies in transition. However, this is only partially confirmed by Pournarakis and Varsakelis (2004). They find that institutions alone do not contribute substantially to explaining the cross-country variation of FDI-inflows. Instead, they argue that FDI decisions require simultaneous improvements in markets, internationalisation and institutions.

Whilst all Central and Eastern European countries have dramatically changed their legal frameworks since 1990, this process varied greatly amongst countries and often the implementation of the law lagged behind (Peng, 2000). These countries being constrained by the need to meet the Copenhagen criteria in order to join the EU, have made relatively faster progress in improving their political institutions including tackling corruption, enforcing the rule of law, lessening the bureaucratic burden, avoiding ethnic tensions and eliminating expropriation risks. These are the variables used in this study and are described in Appendix 1. Nevertheless, this progress was highly differentiated (EBRD, 2001).

Poor institutions increase search, negotiation and enforcement costs, thus hindering the establishment of new business relationships and the initiation of new transactions (Antal Mokos, 1998; Meyer, 2001).

A survey by the World Bank (2005) indicates that firms still perceive corruption as an important obstacle in doing business in countries such as Romania and Bulgaria, despite them being invited to join the EU most probably in 2007. However, the literature on FDI and corruption usually finds inconclusive evidence on their relationship. Using Transparency

International's 'Corruption Perception Index', Pournarakis and Varsakelis (2004) find that countries that have a more equitable system of rule of law, lower corruption and more freedom in economic activity achieved much better performance than countries that are characterised by significant deficiencies. Hines (1995) failed to find a negative correlation between corruption and total FDI, Wheeler and Mody (1992) found inconclusive evidence about corruption and US FDI, whilst Wei (2000) found a negative relation but with a sample dominated by OECD countries.

Investors are also deterred by legal instability and bureaucratic and administrative barriers (OECD, 1994). A recent survey conducted by the World Bank (2005) identifies the low 'confidence in the judiciary system' as a major obstacle for business, particularly in countries lagging behind in terms of economic and political reforms, although not exclusively. FDI can also be discouraged by increased bureaucracy where investment permits, registration or screening are required or where sectoral restrictions and barriers exist (Alter and Wehrle, 1993). Under profit-maximisation assumption, high incentives and law barriers would increase the profitability of the firm, and high bureaucracy levels would have a negative impact on foreign investors (Wei, 2000). Using an FDI policy variable based on content analysis of several governmental provisions with respect to incoming FDI, Bandlej (2002) finds that foreign investors in Central and Eastern Europe are not attracted by financial incentives. She argues that this could be a result of the poor implementation of such provisions or of the possibility that further incentives are given on a case by case basis. These results indicate the need for a more appropriate measurement of the FDI related institutional framework as proposed in this study.

Although the World Bank Survey (2005) shows that 'business licensing and permits' are increasingly less of a concern for firms investing in Central and Eastern Europe, possibly as a result of trade and investment liberalisation undertaken here, 'the inconsistency of official's interpretations of regulations', a proxy for bureaucracy levels, remains a significant barrier to business. The present analysis builds on Adam and Filippaios (2006) who using the IRIS (2000) measure of the quality of the local bureaucracy, also used in the present study, find that higher levels of bureaucratic quality enhance FDI, especially in non-OECD countries as compared to OECD countries.

The collapse of communism created not only political and legal instability, but it sometimes unleashed civil disorder and war as a result of ethnic tensions. If investors seek to minimise the risk, then they would avoid locations with high ethic tensions. Although the World Bank Survey (2005) does not mention this variable as a perceived business deterrent by MNEs, it does include a related variable such as 'crime, theft and disorder' as a political barrier.

Finally, Bevan and Estrin (2004) suggest that the expropriation risk should be used as a risk related variable potentially more meaningful for foreign investors than the country sovereign risk. Furthermore, in a study of determinants of US FDI in 105 developing and developed countries for 1989-1997, Adam and Filippaios (2006) find that lower levels of expropriation enhance FDI, especially in non-OECD countries as compared to OECD countries. To a certain extent the institutional political variables used in this study mirror the variables in the World Bank Survey (2005) which were perceived by firms as potential business barriers, thus supporting our choice of location FDI determinants.

2.1.b. Location Advantages – Economic Variables

To complement the institutional variables used we also use a set of economic variables suggested by the international business literature in order to account for the different types of motives companies may pursue (Dunning, 1993). This list is not extensive and it is used only to capture the general aspects of the macroeconomic environment. The effect of a country's market size on investment decisions is the most widely tested hypothesis in previous studies of FDI determinants. There has been a direct relationship between the current size (Gross Domestic Product) of a country's national market and new investments by MNEs (Braunerhjelm and Svenson, 1996; Culem, 1988, Barrell and Pain, 1997; Wheeler and Mody, 1992). In addition to that direct relationship, an indirect supplement to the hypothesis is that larger host markets are more appealing to potential investors as economies of scale are more likely to be captured in local production (Krugman, 1979; Amiti, 1998), so that the option of supply through trade (other constraints on trade assumed constant) is more readily foregone.

Openness (OPEN) as defined by exports plus imports over total trade could be either substituting or complementing for FDI (Markusen 1984; Torstensson, 1998). This variable describes the competitiveness position of country in terms of international trade and exposure. One particular dimension of this variable needs to be stressed here. High level of

competitiveness accompanied with price advantages can support FDI strategies aiming at wider markets than the country itself. Concentration of production in the most efficient location but still targeting the whole region is the most pervasive depiction of this investment behaviour.

2.2 Ownership Advantages

The second set of factors we use represents the ownership advantages of the investing firms. Size is an obvious 'transaction cost minimising O advantage' (Dunning, 1993, Table 4.1:81) which however is transformed into an I advantage as it depicts the continuous internalization of previously external markets under common governance and management (Dunning, 1993:79). In various empirical studies, size tends to favour multinationality (Horst, 1972 a,b) and we thus expect a positive relationship with FDI. In a previous study, Buckley and Pearce (1979) emphasise the role of size, arguing that large firms tend to service foreign markets through FDI rather than trade. Numerous other studies have tested firm-level characteristics include that of Juhl (1979) and Grubaugh (1987) who also found that size favoured multinationality. On the other hand though, there are studies like the one by Hoesch (1998) revealing an opposite effect. In his study on German investment in Central Eastern Europe (CEE) he found that it is small, in employment terms, German firms that tend to penetrate through FDI in the CEE markets instead of other developed European markets.

R&D intensity raises the probability of a firm to expand internationally. Through FDI firms tend to accumulate new technologies when old technologies become outdated (Shan and Song, 1997). Ownership advantages emerge primarily via two channels for the firm. On the one hand it is the possession of proprietary assets and on the other the actual ability of the firm to acquire or coordinate assets (Cantwell, 1989; Teece, 1992; Dunning, 1993). We would expect a positive relationship between R&D intensity and FDI, but this relationship might be different for various internalisation methods.

Profitability also has an impact on firms' decision to invest. Profitable firms not only show a more efficient way of organising activities but also create the available resources for the future expansion (Cantwell and Sanna-Randaccio, 1993).

Multinationals usually are in a better position to raise capital, either domestically or internationally. This leads to financial assets advantages which reinforce multinationality (Dunning , 1993: 162).

Administration costs and distribution costs fall under the category of economies of common governance. Caves (1996) used variables capturing the organisation of the multinational group, providing support for firm related variables and their effect on investment decisions. The high administration costs can also capture a particular aspect of the resource based view of the firm (Penrose, 1956 and 1959) suggesting that the firm's expansion is directly linked with its managerial resources.

3. Data and sample description

Our sample consists of 177 manufacturing firms enlisted in the ASE, both under purely domestic ownership and subsidiaries of foreign MNEs. We decided not to include firms belonging to the Banking and other Financial intermediation sectors as their motives can be significantly different when investing abroad and the definition of foreign expansion is much more difficult to be given. In the period 1992 -1999, 33 of out of those 177 firms engaged in an investment or investments and thus were qualified for testing. This led to a total of 46 foreign investments decisions. The selection of firms that were enlisted in ASE is related with data availability issues. Those firms are obliged to announce every investment activity and thus it is easy to identify the investment's characteristics. That being said, the firms enlisted in ASE are the largest, in terms of turnover and size, and the most competitive in the Greek economy, thus forming the backbone of economic activity.

Figure 2 provides a mapping of the investment activity abroad, by presenting the absolute number of subsidiaries established in each country. Similar to the data presented in the introduction, that cover the total of Greek investment activity abroad, firms in our sample have a significant presence through foreign affiliates in Romania, Bulgaria and FYROM. The case of Romania deserves a special comment as from the total of 46 foreign investments, almost 30% are concentrated there.

Insert Figure 2 here

In order to provide further evidence on the internationalisation process of Greek firms abroad, Table 1 presents the time pattern of expansion for our sample by host country. There is a clear upward trend towards the late nineties and the chi-square confirms the existence of a statistically significant relationship between the period that an investment was undertaken and

the selection of the host country. Having acquired experience and knowledge of their neighbouring markets, Greek based investors injected capital more confidently in these economies in the mid-1990's. This is compatible with the theory of internationalisation (Johansson and Vahlne, 1997).

Insert Table 1 here

Similar are the conclusions drawn from table 2 that presents investments by host country and mode of entry. Acquisitions and joint ventures are the most commonly used entry modes. Greenfield investments are quite popular for foreign expansion and are also more equally spread within the country sample. Other types of strategic alliances as management control of operations are less favoured. The existence of a statistically significant relationship between the two qualitative variables confirms that the selection of country is not independent from the selection of entry mode and vice versa.

Insert Table 2 here

Finally, an interesting aspect of the internationalisation process is also presented in table 3. The technological intensity[2] of the mother company is related to the selection of the host country. Romania and Russia are the only two markets that manage to attract high technology investments, whilst as expected the Balkan markets are dominated by low technology and usually labour intensive investments.

Insert Table 3 here

4. Methodology

To get further insights on the factors that affect the decision making process of investing abroad we decided to proceed in two ways. Firstly, we wanted to explore the factors that affect foreign investments decisions. According to our theoretical formulation and the underlying eclectic paradigm, ownership and locational factors, alongside the market's internalisation benefits will determine whether and consequently how a firm will invest abroad.

[2] Chemicals and Pharmaceuticals & Cosmetics were classified as high technology sectors, whilst low technology sectors include Construction Materials, Flour Mills, Food & Drink, Metals, Packaging, Textiles and Various.

Our first step was to identify which factors increase the probability of a firm becoming an MNE. Our dependent variable is a dichotomous variable taking the value one (1) for the firm and the time period that there was a foreign investment and zero (0) otherwise. We used a binary logit regression[3] and we present our results in table 4. We gradually progressed in adding the locational variables to the model to prove our point that the ownership advantages of the firm on their own only partially explain the firms' decisions. As a second step we wanted to apply the same framework, i.e. the eclectic paradigm, to the mode of entry and explore whether the factors suggested by the eclectic paradigm can explain the decision to enter a market using different ownership structures. The three basic modes used in this paper are joint ventures, mergers and acquisitions and Greenfield investments. We did not include other managerial deals as their nature might be more complicated and not necessarily explained by the eclectic framework. Because the process is neither sequential nor the outcomes, i.e. the investment decisions are ordered, we used a similar estimation method to the one used by Cragg and Uhler (1970)[4]. The major concern with multinomial logit regression is the violation of the independence of irrelevance alternatives. For this reason the test suggested by Hausman and McFadden (1984) was used to test the consistency of our estimates. The performed test, presented in Appendix 2, failed to reject the null hypothesis that the coefficients differ systematically. Thus the hypothesis cannot be rejected and the use of multinomial logit generates consistent and efficient estimates.

5. Empirical analysis and results

Our empirical exercise is performed in two steps. The first step investigates the investment determinants for firms involved in international investments. The base group consists of firms without any investment activity. Table 4 presents the determinants for foreign investments.

Insert Table 4 here

As a first step we examined only the firm's ownership advantages as explanatory variables for investment decisions. Size and Research & Development intensity affect positively the decision of a firm to invest abroad. Large firms, committed to the creation of

[3] For a further explanation on the binary logit regression see Maddala (1983).
[4] For a further explanation on the multinomial logit regression see Maddala (1983).

new knowledge show a higher probability to invest internationally. On the other hand a high leverage ratio produces a negative effect in the investment decision, probably due to the already large exposure of firm to borrowing. The leverage ratio though is statistically significant only in model 3, our full model. Administration costs have a negative sign, statistically significant in model 1 only. High management costs reduce the probability to expand internationally. Finally, distribution channels as captured from distribution expenses over total sales affect positively the investment decision. The picture is different when we add the location variables in the model. The basic change comes from the explanatory power of the augmented model. Both measures of fit, the Wald Chi-square and the Log Pseudo Likelihood show a significant improvement. Again, the firm's size and R&D intensity seem to dominate the explanatory power of the ownership advantages. The existence of well organised, highly competent distribution channels for the firm acts as a facilitator for investments in foreign environments. Striking somehow are the results for the locational factors. Market size has a negative effect whilst openness to trade affects in a positive way FDI. A possible explanation comes from the efficiency seeking motive of Greek investors who invested in Central Eastern and South Eastern European countries in order to exploit the low labour costs and then re-export their products either back to Greece of to other countries. Greek firms do not invest in CESECs for exploitation of the local market but rather for local production and then re-exportation of the products to Greece or other European markets. Among the institutional variables, capturing the overall environment in the countries under examination, corruption has a negative effect, which means that the higher the corruption in the country the more probable for a firm to undertake FDI. This as it may seem strange in the first instance has an explanation if someone takes into consideration that OLI as we mentioned is context specific. Greek firms are used to operate in environment with high levels of corruption, thus they might prefer to operate in a similar environment. On the other hand Rule of Law, Bureaucratic Quality and Expropriation risk have all their hypothesised positive sign, though only expropriation risk is statistically significant. The negative sign for ethnic tensions although is not the one supported by our theoretical formulation, can be explained from the overall Greek investment activity. Greek firms invested heavily in Balkan countries with large ethnic tensions, as Yugoslavia (Serbia and Montenegro), FYROM and Albania. Greek firms are used to operate in environments with characteristics that would

deter any other international investor and thus the existence of ethnic tensions might have this positive effect.

Our second step is directly related with the internalisation method of expanding abroad. Table 5 presents the results for the different internalisation methods. The benchmark group is again firms that did not get involved in any investment activity.

Insert Table 5 here

The picture is different and now we can clearly see a mixture of ownership and location factors affecting the mode of entry. Size is again important only for M&As and Greenfield investments whilst leverage ratio has a positive and significant effect on JVs and M&As. This implies that firms with a higher ratio of foreign to own capital prefer entering new markets through creating partnerships and thus sharing the potential risks of expansion. Profitability on the other hand becomes important with a negative impact on JVs and M&As. More profitable firms have the necessary resources to invest on their own and this is mirrored in the positive sign for Greenfield, thus they avoid entering into partnerships. Finally, R&D intensity changes sign and becomes negative and significant for JVs and M&As. This again suggests that firms, value dissemination of information issues and transaction costs involved in those types of investments. When it comes to the location variables again there is a different pattern. Market size is negatively affecting M&A and Greenfield investments. This can be an indication of increased competition. Again in this specific context of the eclectic paradigm, large markets tend to be dominated be other European or US firms, thus making competition more difficult. Entering in those markets without a local partner or at least by sharing the risk might be non profitable. Rule of law is extremely important for the JVs. The well defined legal and regulatory framework facilitates sensitive investment decisions through JVs. Finally, expropriation risk is positive and significant in M&As suggesting that firms engaging in this kind of activity have something more to loose than just their resources.

6. Conclusions and further research

The main aim of the paper was to investigate Greek investments in CESECs using Dunning's eclectic paradigm. Our results offer strong support to the eclectic framework and suggest that it is the interrelation of ownership and locational advantages that can explain foreign investment activity. Using a sample of Greek firms, enlisted in the Athens Stock

Exchange, we investigated the ownership and location determinants of the internalisation and internationalisation process. Greece is one of the leading investors in Central, Eastern and South Eastern European Countries, thus understanding the process that determines Greek investments in the region is of crucial importance for policy makers. On the other hand our results showed that it is primarily locational specific advantages that determine the firm's investment decision and the ownership advantages that primarily determine the mode of entry or the internalisation method. The analysis of the institutional environment has a significant contribution in explaining foreign investment activity.

This paper is a first attempt to explain the Greek experience when investing abroad. Further insights could be given first of all with an extended time sample. Another interesting aspect would be to determine the different factors that affect investments in various sectors. Finally the augmentation of the sample with Greek investments world-wide could give us a clear answer whether the investments undertaken in the Central, Eastern and South Eastern Countries had something unique or they are just part of the process that led Greece becoming an outward investor.

8. References

Adam, A. and Filippaios, F. (2006) Foreign *Direct Investment and Civil Liberties: A New Perspective*, European Journal of Political Economy, in press.

Alter, R. and Wehrle, F. (1993) 'Foreign direct investment in Central and Eastern Europe: An assessment of the current situation', *Intereconomics*, May/June.

Amiti, M. (1998) 'New trade theories and industrial location in the EU: a survey of evidence, *Oxford Review of Economic Policy*, 14, pp. 45-53.

Antal- Mokos, Z. (1998) *Privatisation, Politics and Economic Performance in Hungary* (Cambridge: Cambridge University Press).

Barrel, R. and Pain, N. (1997) 'Foreign direct investment, technological change and economic growth within Europe'. *Economic Journal*, 107, pp. 243-265.

Bevan, A. A. and Estrin, S. (2000) 'The determinants of FDI in transition economies'. *CEPR Discussion Paper No. 2638.*

Bevan, A.A., Estrin, S. and Grabbe, H. (2001) 'The impact of EU Accession Prospects on FDI Inflows to Central and Eastern Europe'. *Policy Paper No. 6.*

Bevan, A. and Estrin, S. (2004) 'The determinants of foreign direct investment into European transition economies'. *Journal of Comparative Economics*, 32, pp. 775-787.

Bevan, A., Estrin, S. and Meyer, K. (2004) 'Foreign investment location and institutional development in transition economies'. *International Business Review*, 13, pp. 43-64.

Braunerhjelm, P. and Svensson, R. (1996) 'Host country characteristics and agglomeration in foreign direct investment', *Applied Economics*, 28, pp. 833-840.

Brenton, P., di Mauro, F. and Lücke, M. (1999) 'Economic integration and FDI: An empirical analysis of foreign investment in the EU and Central and Eastern Europe', *Empirica*, 26 (2) pp.95-121.

Brunetti, A. Kisunko, G. and Weder, B. (1997) *Institutions in transition: Reliability of rules and economic performance in former socialist countries*, Working Paper No.1809 (Washington D.C.: World Bank).

Buckley, P. and Pearce, R. (1979) 'Overseas productions and exporting by the world's largest enterprises: a study in sourcing policy', *Journal of International Business Studies*, 10, pp. 1-20.

Cantwell J., Sanna-Randaccio S. (1993). 'Multinationality and firm growth'. *Welwirtschaftliches Archiv*, 129 (2).

Cantwell, J. (1989) *Technological Innovations and the Multinational Corporation* (London: Basil Blackwell).

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

Cragg, J.G., and R.S. Uhler (1970) 'The Demand for Automobiles', *Canadian Journal of Economics* 3, 3 (August), pp. 386-406.

Culem, C. (1988) 'The locational determinants of direct investments among industrialised countries', *European Economic Review*, 21, 885-904

Demos, A., Filippaios, F., and Papanastassiou, M. (2004) 'An event study analysis of outward foreign direct investment: the case of Greece', *International Journal of the Economic of Business*, 11(3), pp.329-348.

Disdier, A.-C. and Mayer, T. (2004) 'How different is Eastern Europe? Structure and determinants of location choices by French firms in Eastern and Western Europe'. *Journal of Comparative Economics*, 32 (2), pp. 280-297.

Dunning, J.H. (1977) 'Trade, location and economic activity and the multinational enterprise: a search for an eclectic approach', in Ohlin, B., Hesselborn, P. and Wijkman, P eds, *The International Allocation of Economic Activity* (London: MacMillan).

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

Dunning, J.H. (1988), *Explaining International Production (*London: George Allen and Unwin).
Dunning, J.H (1993) *Multinational Enterprises and the Global Economy* (New York: Addison Wesley).
Dunning, J.H. (1996) *Multinational Enterprises and the Global Economy* (Harlow: Addison-Wesley Publishers Ltd).
Dunning, J.H. (2000) 'The eclectic paradigm as an envelope for economic and business theories of MNE activity', *International Business Review*, 9(2): 163-91.
Dunning J.H. (2001) 'The eclectic (OLI) paradigm of international production: Past, present and future, *International Journal of the Economics of Business*, 8(2), 173-190
Dunning, J.H. (2004) *Institutional Reform, FDI and European Transition Economies,* University of Reading Business School Discussion Paper Series (14).
EBRD (2001) *Transition Report* (London: European Bank for Reconstruction and Development).
Gomes -Casseres, B. (1991) 'Firm ownership preferences and host government restrictions. An integral approach', *Journal of International Business Studies,* 21, pp.1-22.
Grubaugh, S.J. (1987) 'Determinants of direct foreign investment', *Review of Economics and Statistics*, 69, pp. 149-152.
Hausman, J. and McFadden D. (1984) 'Specification tests for the multinomial LOGIT model', *Econometrica,* 52 (5), pp. 1219-1240.
Hellenic Centre for Investment (2005) e-newsletter: http://www.elke.gr/newsletter/newsletter.asp?nid=333&cat=335&id=367&lang=1
Henisz, W.J. (2000) 'The institutional environment for multinational investment', *Journal of Law, Economics and Organisation,* 16, 2, pp.334-364.
Heston, A., Summers R., and Aten B. (2000) Penn World Table Version 5.6, Center for International Comparisons at the University of Pennsylvania (CICUP)
Hines, J. (1995) Forbidden payment: Foreign bribery and American business after 1977, *NBER Working Papers, 5266,* National Bureau of Economic Research, Inc.
Hoesch, D. (1998) *Foreign direct investment in Central and Eastern Europe: Do mainly small firms invest?,* Discussion Paper No. 50 (Munich: IFO Institute for Economic Research).
Holland, D. and N. Pain (1998) *The Diffusions of Innovations in Central and Eastern Europe: A Study of the Determinants and Impact of FDI*, NIESR Discussion Paper No. 137 (London: National Institute of Economic Research).
Horst, T. (1972a) 'Firm and industry determinants of the decision to invest abroad: an empirical study', *Review of Economics and Statistics*, 54, pp. 258-266.
Horst, T. (1972b) 'The industrial composition of US exports and subsidiary sales to the Canadian market', *American Economic Review*, 62, 37-45
Iammarino, S. and Pitelis, C. (2000) 'Foreign direct investment and 'less favoured regions': Greek FDI in Bulgaria and Romania', *Global Business Review*, 1(2), pp.155-170.
IRIS (2005) *International country risk* (*IRIS centre*: University of Maryland).
Johansson, J.K., and Vahlne, J.E. (1997) 'The internationalisation process of the firm: a model of knowledge development and increasing foreign market commitment', *Journal of International Business Studies*, Vol. 8 No.1, pp.23-32.
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', *Welwirtschaftliches Archiv,* 115(3)
Kogut, B. and Spicer, A. (2002) 'Capital market development and mass privatisation are logical contradictions: Lessons from Russia and Czech Republic, *Industrial and Corporate Change,* 11 (1), pp.1-37.
Krkoska, L. (2001), *Foreign Direct Investment Financing of Capital Formation in Central and Eastern Europe*, EBRD Working Paper No. 67.
Krugman, P. (1979) 'Increasing Returns, Monopolistic Competition, and International Trade', *Journal of International Economics*, 9(4), pp.469-79.

Kyrkilis D., and Pantelidis, P. (1994) 'Market orientation of foreign direct investment in Greek manufacturing, *Economia Internazionale,* XLVII (2-3), May – August.

Lankes, H.P. and A.J. Venables (1996), FDI in economic transition: the changing patterns of investments, *Economics of Transition,* 4 (2)

Lucas, R. (1990) 'Why doesn't capital flow from rich to poor countries?, *American Economic Review,* Papers and Proceedings, 80, pp.92-96.

Lucas, R. (1993), 'On the determinants of direct foreign investment: evidence from East and Southeast Asia, *World Development,* 21(3), pp. 391-406.

Maddala G S. (1983) *Limited dependent and qualitative variables in econometrics* (Cambridge: Cambridge University Press).

Markusen, J. R. (1984) 'Multinationals, multi-plant economies, and the gains from trade', *Journal of International Economics*, 16, pp.205-226.

McDermott, G. (2002) *Embedded Politics: Industrial Networks and Institutional Change in Post-Communism* (Ann Arbor: University of Michigan Press).

Meyer, K. E. and Pind, C. (1999) 'The Slow Growth of Foreign Direct Investment in the Soviet Union Successor States', *Economics of Transition,* 7 (1), pp. 201-214.

Meyer, K.E. (1998) *Direct Investment in Economies in Transition* (Cheltenham: Edward Elgar).

Meyer, K.E. (2001) 'Institutions, transaction costs and entry mode choice', *Journal of International Business Studies,* 31 (2), pp. 257-267.

Ministry of National Economy (1998) *Report on Greek Investments in the Balkans* , mimeo, Athens.

Mudambi, R. and Navarra. P. (2002) 'Institutions and international business: a theoretical overview', *International Business Review,* 11, pp. 635-646.

Narula, R. and Dunning, J. H. (2000) 'Industrial development, globalisation and multinational enterprises: New realities for developing countries', *Oxford Development Studies,* 28 (2), pp.141-167.

OECD (1994) *Assessing investment opportunities in economies in transition* (Paris: Organisation for Economic Co-operation and Development).

Oxley, J.E. (1999) 'Institutional environment and the mechanisms of governance: The impact of intellectual property protection on the structure of inter-firm alliance', *Journal of Economic Behaviour and Organisation,* 38 (3), pp. 283-310.

Peng, M. W. (2000) *Business strategies in transition economies* (Thousand Oaks, CA: Sage).

Penrose, ET. (1956) 'Foreign investment and the growth of the firm', *Economic Journal* 66:220-235.

Penrose, ET. (1959). *The Theory of the Growth of the Firm*. (Oxford: Oxford University Press).

Pournarakis, M., and Varsakelis, N.C. (2004) 'Institutions, Internationalization and FDI: the case of economies in transition', *Transnational Corporations,* 13, pp. 77-94.

Resmini, L. (2000) 'The determinants of foreign direct investment in the CEECs: New evidence from sectoral patterns, *The Economics of Transition,* 8 (3), pp.665-689.

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

Singh, H. and Jun, K.W. (1995), Some *New Evidence on Determinants of FDI in Developing Countries,* Policy Research Working Paper No. 1531 (Washington: World Bank).

Smarzynska, B. K. (2002) *Composition of Foreign Direct Investment and Protection of International Property Rights: Evidence from Transition Economies,* Policy research Working Paper No. 1786 (Washington: World Bank).

Stiglitz, J. (1999) 'Wither reform? Ten years of transition', *Keynote address at the Annual Bank Conference on Development Economics, (*Washington: World Bank).

Teece, D.J. (1986) 'Transaction Cost Economics and the Multinational Enterprise', *Journal of Economic Behaviour and Organisation*, 7, pp. 21-45.

Torstensson, J. (1998) 'Country size and comparative advantage: An empirical study', *Weltwirtschaftliches Archiv*, 134, pp.590-612.

UNCTAD (1998), *World Investment Report 1998: FDI Trends and Determinants* (Geneva: United Nations Publication).

UNCTAD (2002) *World Investment Report: Transnational Corporations and Export Competitiveness* (Geneva: United Nations Conference on Trade and Development).

UNCTAD (2004) *World Investment Report: The Shift towards services* (Geneva: United Nations Conference on Trade and Development).

Wei, S.- J. (2000) 'How taxing is corruption on international investors?', *Review of Economics and Statistics*, 8, pp.1-11.

Wheeler, D. and Mody, A. (1992) 'Institutional investment location decisions, the case of US firms', *Journal of International Economics,* 33, pp.57-76.

White, S. and Linden, G. (2002) 'Organisational and industrial response to market liberalization: The interaction of pace, incentive and capacity to change', *Organization Studies,* 23 (6), pp.917-948.

WIIW (2005) Database on Foreign Direct Investment in Central, East and Southeast Europe: Opportunities for Acquisition and Outsourcing, in Hunya G., and Schwarzhappel, M. (eds), May 2005.

World Bank (2005) *Investment Climate Surveys* [online] http://rru.worldbank.org/InvestmentClimate/ [Accessed on 10th September 2005].

Tables, figures and appendices

Figure 1. The tripod of eclectic paradigm

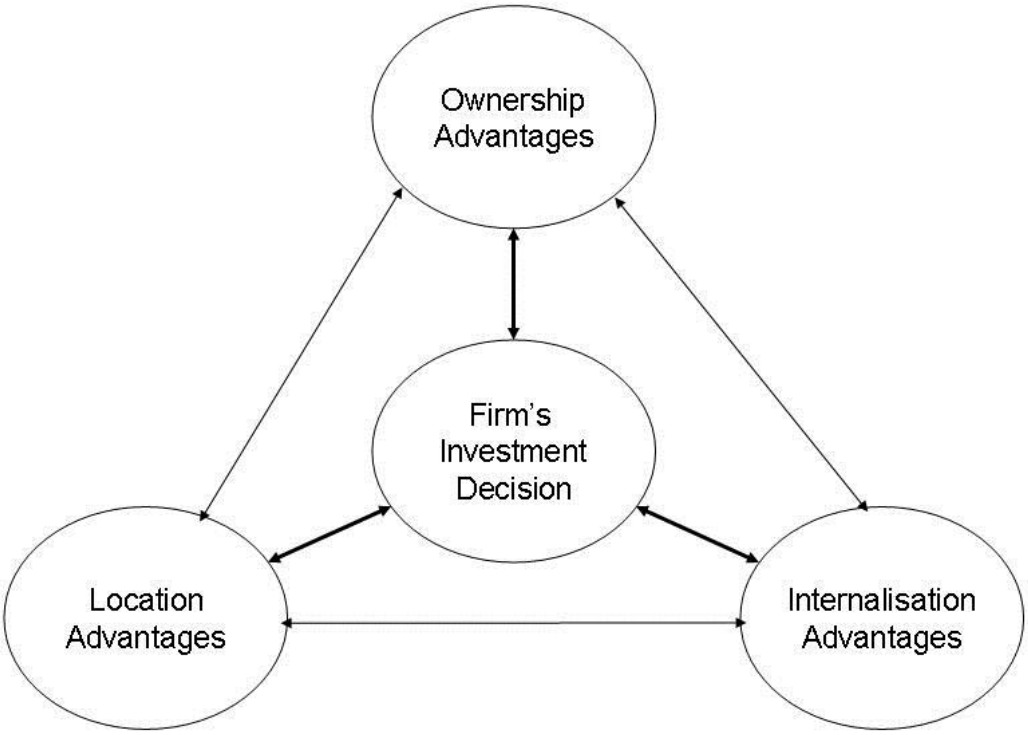

Figure 2. Mapping Greek Investments abroad

Table 1. Investments by host country and year of investment (% of Total)

	1994	1995	1996	1997	1998	1999	Grand Total
Albania	2.2			2.2		2.2	6.5
Bulgaria	2.2	2.2	2.2	2.2	13.0		21.7
FYROM			6.5		4.3	2.2	13.0
Georgia Republic					2.2		2.2
Hungary						2.2	2.2
Moldova	4.3	2.2					6.5
Poland		2.2		2.2			4.3
Romania		6.5	2.2	2.2	10.9	10.9	32.6
Russia			2.2				2.2
Ukraine					2.2		2.2
Serbia & Montenegro		2.2		4.3			6.5
Grand Total	8.7	15.2	13.0	13.0	32.6	17.4	100.0
							Chi-square 67.45**

*** significant at 1%, ** significant at 5%,* significant at 10%

Table 2. Investments by host country and type of investment (% of Total)

	Acquisition	Greenfield Investment	Joint Venture	Management	Grand Total
Albania		4.35	2.17		6.52
Bulgaria	15.22	2.17	4.35		21.74
FYROM	6.52	2.17	4.35		13.04
Georgia Republic				2.17	2.17
Hungary		2.17			2.17
Moldova		2.17	4.35		6.52
Poland		4.35			4.35
Romania	21.74	6.52	4.35		32.61
Russia		2.17			2.17
Ukraine			2.17		2.17
Serbia & Montenegro	2.17	2.17	2.17		6.52
Grand Total	45.65	28.26	23.91	2.17	100.00
					Chi-Square 71.77***

*** significant at 1%, ** significant at 5%,* significant at 10%

Table 3. Investments by host country and technological intensity of sector of participation of the mother company (% of Total)

	Low Technology	High Technology	Grand Total
Albania	6.52		6.52
Bulgaria	21.74		21.74
FYROM	13.04		13.04
Georgia Republic	2.17		2.17
Hungary	2.17		2.17
Moldova	6.52		6.52
Poland	4.35		4.35
Romania	26.09	6.52	32.61
Russia		2.17	2.17
Ukraine	2.17		2.17
Serbia & Montenegro	6.52		6.52
Grand Total	91.30	8.70	100.00
			Chi-Square 15.77*

*** significant at 1%, ** significant at 5%,* significant at 10%

Table 4. Foreign Investment Determinants
Comparison Group = No investment
Binary Logit estimation with robust standard errors

		Model 1	Model 2	Model 3
	Variable			
Firm Variables	Size	0.168***	0.714**	0.893
		(0.01)	(0.36)	(0.57)
	Leverage	-0.025	-0.002	-0.115**
		(0.02)	(0.08)	(0.05)
	Profitability	-0.040	-0.002	0.002
		(0.03)	(0.01)	(0.01)
	R&DIntensity	16.125	13.907	16.924***
		(12.44)	(9.71)	(5.74)
	AdministrationCosts	-0.273***	-0.238	-0.422
		(0.04)	(0.02)	(0.02)
	DistributionChannels	2.400**	4.227***	6.614***
		(1.06)	(1.11)	(1.54)
Location Economic Variables	MarketSize		-0.373***	-0.428**
			(0.07)	(0.18)
	Openness		0.343***	0.339**
			(0.10)	(0.15)
Location Institutional Variables	Corruption			-5.660**
				(2.73)
	RuleofLaw			1.379
				(2.63)
	BureaucraticQuality			0.870
				(1.38)
	EthnicTensions			-0.646
				(2.13)
	ExpropriationRisk			2.131*
				(1.14)
Number of obs		1254	1251	1251
Wald Chi-Square		454.18	159.76	255.44
Log Pseudo Likelihood		-183.45	-38.64	-15.71

Robust standard errors in parenthesis
*** significant at 1%
** significant at 5%
* significant at 10%

Table 5. Comparison of Mode of Entry for Foreign Operations
Comparison Group = No investment
Multinomial Logit estimation with robust standard errors

		Joint Ventures	M&A	Greenfield
	Variable			
Firm Variables	Size	0.044	2.773***	2.441***
		(0.88)	(1.14)	(0.60)
	Leverage	0.185**	0.506***	-0.639
		(0.09)	(0.19)	(0.50)
	Profitability	-0.391**	-1.321*	0.037
		(0.19)	(0.68)	(0.03)
	R&DIntensity	-5.596*	-1.191**	9.794
		(3.25)	(0.38)	(7.65)
	AdministrationCosts	-2.11	-5.86	-1.72**
		(3.58)	(20.93)	(0.70)
	DistributionChannels	-3.075	-0.064	1.485
		(10.60)	(6.40)	(8.74)
Location Economic Variables	MarketSize	-0.522	-1.545**	-0.945**
		(0.47)	(0.66)	(0.48)
	Openness	0.905**	0.88*	0.832*
		(0.46)	(0.45)	(0.46)
Location Institutional Variables	Corruption	-19.609	-17.968	-20.742*
		(12.73)	(12.74)	(12.96)
	RuleofLaw	21.349**	15.645	18.105
		(12.71)	(11.85)	(12.15)
	BureaucraticQuality	-5.211	-7.046*	-3.643
		(3.62)	(3.75)	(3.34)
	EthnicTensions	-14.258**	-14.588**	-10.62*
		(6.96)	(6.75)	(6.36)
	ExpropriationRisk	8.253	15.335*	7.303
		(6.45)	(7.86)	(6.30)
Number of obs		1198		
Pseudo R-square		0.9855		
Wald Chi-Square		560.07		
Log Pseudo Likelihood		-24.098		

Robust standard errors in parenthesis
*** significant at 1%
** significant at 5%
* significant at 10%

Appendix1. Variable Description

		Description	**Source**
Firm Variables	Size	Logarithm of Total Assets	Annual Reports of Firms enlisted in Athens Stock Exchange (1991 – 1999) and Authors' Calculations
	Leverage	Short and Long Term Debt over Own Capital	As above
	Profitability	Profits over Total Sales	As above
	R&DIntensity	Research and Development Expenses over Total Sales	As above
	AdministrationCosts	White Collar Salaries over Total Sales	As above
	DistributionChannels	Distribution Costs over Total sales	As above
Location Economic Variables	MarketSize	Real GDP in constant dollars (expressed in international prices, base 1985.)	World Table (Mark 5.6)
	Openness	(Exports + Imports)/Nominal GDP	World Table (Mark 5.6)
Location Institutional Variables	Corruption	Lower scores indicate "high government officials are likely to demand special payments" and that "illegal payments are generally expected throughout lower levels of government" in the form of "bribes connected with import and export licenses, exchange controls, tax assessment, police protection, or loans." Values 0-6	IRIS-3 File of International Country Risk Guide (ICRG) Data
	RuleofLaw	This variable "reflects the degree to which the citizens of a country are willing to accept the established institutions to make and implement laws and adjudicate disputes." Higher scores indicate: "sound political institutions, a strong court system, and provisions for an orderly succession of power." Lower scores indicate: "a tradition of depending on physical force or illegal means to settle claims." Upon changes in government new leaders "may be less likely to accept the obligations of the previous regime." Values 0-6	As above
	BureaucraticQuality	High scores indicate "an established mechanism for recruitment and training," "autonomy from political pressure," and "strength and expertise to govern without drastic changes in policy or interruptions in government services" when governments change. Values 0-10	As above
	EthnicTensions	This variable "measures the degree of tension within a country attributable to racial, nationality, or language divisions. Lower ratings are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings are given to countries where tensions are minimal, even though such differences may still exist." Values 0-10	As above
	ExpropriationRisk	This variables evaluates the risk "outright confiscation and forced nationalization" of property. Lower ratings "are given to countries where expropriation of private foreign investment is a likely event." Values 0-10	As above

Appendix 2. Independence of Irrelevance Alternatives

	Observations	Chi-Square	Degrees of Freedom
Foreign investments			
No investment	43	0.12	20
Joint Venture	1187	4.88	17
Merger& Acquisition	1178	3.43	22
Greenfield investment	1186	1.36	9