

Cover page

Title:

FDI entry modes and host country differences

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Abstract:

Foreign direct investment (FDI) flows have contributed to the productive and technological upgrading of many host economies, whereas the discussion about the entry modes of multinational companies (MNC) and developmental effects is far from being concluded. Our aim is to exam the relative importance of host country differences in the understanding of FDI configuration and their modes of entry, considering cross-border merger and acquisitions (M&A) explicitly. The paper explores the interplay between the effects of FDI in locations and to what extent the structural transformations in host countries could raise their capacities for the attraction of FDI via M&A. We hypothesise that, adopting a dynamic perspective, the behaviour of inward FDI and a country's level of development would describe a co-evolutionary process in which institutional stability and the consolidation of absorptive capacities become key driver mechanisms. The empirical analysis is built upon a sample of countries with dissimilar level of development using longitudinal data for the period 1998-2004. The findings confirm that the relative weigh of host countries characteristics may differ for cross-border M&A, being noticeable the diversity of the developing world and the potential of emerging economies, supporting the need to investigate new drivers for the attraction of FDI.

Key words:

Absorptive capacities; Development; Entry mode; FDI; *Greenfield*; M&A

JEL: F23, F29, O33, O50

1. Introduction

The behaviour of foreign direct investment (FDI) has broadly differed across countries according to their level of development. Although the traditional economic explanations were based on the differences in the allocation of production factors and their relative prices, FDI outflows and inflows have been mainly concentrated in the most developed countries while international inequalities have been persisting as a constant. In more recent times, there has been a certain shift in both, the direction of investments and the FDI entry modes. Particularly, developing countries are entering the global scene and cross-border mergers and acquisitions (M&A) have experienced a notable increase during the last decades, showing a more dynamic behaviour than *greenfield* start-ups (UNCTAD, 2005; 2007). Research in international business and management studies provided us precise explanations of FDI entry modes, certainly based in a deep comprehension of the internationalisation decisions in firms. However, there is not abundant empirical evidence from the point of view of national economies while some new fresh research on FDI and development could contribute to our understanding of inward FDI in the diverse societal and environmental contexts (Lall, 2002; Meyer, 2004; Pearce, 2006), being possible to derive new implications for both firms' managers and policy makers. The starting point of our analysis is based on findings arising from both economics and international business perspectives and the fact that MNC strategic behaviour affects the development of the global economy. Our research is at least partially grounded on the initial idea from a MNC-assisted development approach that takes into account international divergences among economies due to both supply and demand factors and the fact that firms can be seen as creators and traders of intangible assets (Ozawa, 1992; Lall, 2002).

In this paper we analyse FDI flows and their entry modes in a multi-country framework, trying to identify what are the main local features in host economies and whether differences exist alongside their level of development. Particularly, beyond the conventional factors claimed in the economics literature –i.e. market size or production factor costs-, other elements such as the stability of the institutional framework and the absorptive capacities of locations can be of concern for FDI attraction. We follow a perspective that assumes the central role of technology and innovation in the theories of FDI and MNC in order to explore the strength of the national systems of innovation in host countries for explaining the shift in FDI.

Then, we try to combine different streams of the literature; particularly, technology in MNC theories and entry modes. MNC are able to provide new production facilities, managerial practices and also technology transfer to host locations; although, there are a reverse flow to foreign subsidiaries since MNC strategies are also defined to tap into new knowledge in host locations as well (Cantwell, 1989; 1995; Barkema and Vermeulen, 1998; Frost, 2001; Piscitello, 2004; McCann and Mudambi, 2005; Singh, 2007; Mudambi, 2008). The combination of these two directions fits pretty well with the approach that we adopt in this paper, being possible to highlight the role of national systems of innovation in host economies for a better understanding of the nation-specific systematic differences between innovation practices. Particularly, the concept of national systems of innovation has become often used in last decades by both scholars and policy makers for international comparisons between national styles of management and innovation (Freeman, 1987; Lundvall, 1992; Mowery and Oxley, 1995; Cantwell and Molero, 2003). On the other hand, although FDI is taken at the aggregate level, this topic cannot be withdrawn from the management and

organizational aspects because ultimately foreign investments occur as a consequence of decisions taken at the firm level. Particularly, international business and management literature provide detailed explanations about the decision of firms to choose M&A as entry mode in foreign countries and the relevance of both cultural and institutional factors of host locations (Dunning, 2006; Kogut and Singh, 1988; Rozenzweig and Singh, 1991; Harzing, 1999; Davis et al., 2000).

We hypothesise that in a long term context, the dynamic relationship between national characteristics of host locations and FDI entry modes could be defined by a co-evolutionary process in which institutional stability and the consolidation of absorptive capacities emerge as main key driver mechanisms. To be more precise, while the path of incoming FDI may allow us to observe the MNC as a facilitator for the industrialization of developing economies, the progressive advance in the institutional setting of host countries could contribute to explain both a higher degree of incoming flows and the more diverse forms of inward FDI. Our contribution is oriented to extent the analysis of MNC in the foreign contexts by differentiating FDI entry modes and underpinning the non-static characteristics of host productive systems, these defined by the relationship between foreign firms, the vertical linkages and the consolidation of research and institutional setting according to the conceptual framework of national systems of innovation.

We would expect that the evolution of countries based on their development path, runs alongside a shift in international investment inflows and an increase in cross-border M&A. When considering cross-border M&A explicitly, international divergences are even more relevant and the specificity of the developing world is clearer. Then, we analyse FDI in generalⁱ and M&A in particular, using data for a broad sample of both developed and developing economies over a time span of seven years (1998-2004). The

use of panel data seems to be the most appropriate technique for carrying out this analysis. Aggregated information from UNCTAD and World Bank statistics are the major sources of accurate data at an international level. This paper includes, in the next section, a short review of the theoretical background that embraces our empirical question. In the third section, we develop our analytical propositions and hypothesis. In the fourth section we proceed with the FDI and M&A trends at an international level and the data description by groups of countries. In section fifth, we present the empirical analysis trying to detect what is the importance of host countries characteristics in the explanation of the worldwide evolution of FDI and, particularly, cross-border M&A flows; the final aim of the analytical section is to discuss to what extent institutional stability and the consolidation of national absorptive capabilities become relevant factors for a better understanding of FDI behaviour. The findings highlight some issues related to the international spread of M&A including the specific stage of developing economies. Finally, we present some conclusions in the last section that try to serve as guidance for the practice of management and policies and for new research proposals.

2. Literature background

2.1. FDI, recipient economies and technology diffusion

In the evolution of international business research of the last decades we find that resource seeking, market seeking, efficiency seeking and knowledge seeking are among the different motives for FDI (Dunning, 2006). The relative importance of each of them and the evolution of FDI flows interact with the stage of economic development of countries (Narula, 1996; 2004). Resource-seeking has been traditionally associated to FDI in least developed countries (LDCs) while market seeking was predominant in

catching-up economies. Nonetheless, under the changing location patterns of the global economy, MNC in knowledge-intensive areas are increasingly relocating the more standardized parts of the value added activities in emerging markets economies as well (Mudambi, 2008). For these reasons, there exist good grounds on the results of MNC in terms of development progress in host countries: Apart from their effects on employment and value added creation, multinational companies can also be seen as creators and traders of intangible assets and their activities may contribute to the international generation and diffusion of knowledge (Ozawa, 1992; Archibugi and Michie, 1995). The effects of MNC can be then observable in the possibilities of technology transfer in host locations but also in the increase of competition due to the presence of foreign-owned firms, the raise of demonstrative effects that enhance new productive and technical practices in their vertical linkages as well as in the mobility of a highly skilled labour force. Nonetheless, it is certain that the empirical evidence of those positive external effects that MNC subsidiaries generate is still a controversial topic and the empirical evidence is mixed, existing notable differences among countries (Kokko, 1992; Blomström and Kokko, 1998; Perez, 1998; Aitken and Harrison, 1999). An extended body of empirical research has positively confirmed that the effects of FDI in host economies are smaller in LDC due to the existence of a threshold level for the generation of that kind of positive externalities; this would imply that countries need a certain level of education, technology, infrastructures and health to benefit as much from investment flows (OECD, 2002). In particular, the economics and innovation literature has remarked that FDI enhancing growth require a minimum threshold of human capital while technology transfer from MNCs to host economies may depend on the size of the gap between domestic and foreign units (Borensztein et al., 1998; Álvarez and Molero, 2005). The evidence of a multi-country model about the effects of

technological transfer from USA MNCs shows the existence of those conditional factors: Positive and significant effects were detected for developed countries but not for LDC, human capital levels playing a crucial role (Xu, 2000). Moreover, the nature of FDI and its effects depend on technological capacities, and the supplier capabilities of the host country, these defining a minimum level of capability threshold to benefit from technology diffusion from the MNC as it is shown in an analysis based on two countries in Latin America (Mortimore and Vegara, 2004).

At the world level, globalisation trend has not substantially modified the behaviour of FDI. However, it must be noted that there are some main changes that can be observed in relation to the greater variety of types of FDI operations, to the benefits that FDI generates and to the way in which there is interaction with local economies (Narula and Lall, 2004). As the investment development path hypothesis (Dunning and Narula, 1994, 1996; Lall, 1996) stated, it is possible to observe that countries evolve through different stages defining different patterns of FDI behaviour according to their development path. The potential external effects of inward FDI in developing economies requires even to considerer that some middle-income and low-income countries have already shown an important growth potential in the world economy and they are becoming attractive for foreign investors and active players as investors as well (Meyer, 2004; Wright et al., 2005; Cuervo-Cazurra, 2007). In this sense, an important distinction to be made is between the more backward countries -mainly located in Africa- and those with a large potential that are actively gaining ground in the international context; such as China, India, Malaysia or Indonesia among others. Overall, these differences would reinforce the idea that the study of FDI and the possibilities for international technology diffusion in developed countries and developing economies should be carried out separately.

From the point of view of firms, it is important to note the differences between asset-exploiting and asset-augmenting strategies (Narula and Dunning, 2000) and how these could affect the choice of location and even the entry modes in foreign contexts. MNC are increasingly becoming multi-centric firms exploiting the diversity of location (Barlett and Ghoshal, 2002) and behaving accordingly to the setting of a new geography of the value chain activities (Mudambi, 2008). One key role of subsidiaries could be the exploitation of competencies from over the firm' network, trying to create entirely new competencies (Rugman and Verbeke, 2001) and taking advantage of the assets available at the host countries, making especially appropriate to reconsider and broaden the traditional notion of competitive advantages (Porter, 1990). In this direction, the distinction between competence creating and competence exploiting mandates of subsidiaries is pretty appropriate (Cantwell and Mudambi, 2005) since these two types could look differently to the recipients economiesⁱⁱ.

The micro foundations are found on the firm's decisions on whether to centralise or decentralise key activities such as R&D through its subsidiaries, being reasonable to wonder about the existence of international technological flows from the parent to the subsidiary and *vice versa*, as well as about the main determinant factors of such a process (Petit and Sanna-Randaccio, 2000; Sanna-Randaccio, 2002). Indeed, a few formal essays underline some organisational implications for companies of benefiting from interaction with host productive systems when choosing to decentralise (Sanna-Randaccio and Veugelers, 2007). This process is intimately related to the features of the host national systems, taking into account that different industries require a variety of technical sources, such as universities, industries and government (Chung and Alcácer, 2002). Depending on the subsidiaries strategies and whether or not these imply complex

technological activities or knowledge sourcing, it will be higher the relevance of location characteristics, such as those related to the level of infrastructure, public research facilities, the educational system and science bases (Cantwell and Piscitello, 2002). Other considerations for the study of FDI entry modes and the advance of recipient countries are the differences that could arise when, instead of a static view, the time dimension is included since the evolution of firms' strategies in foreign countries changes over time, being likely that they become more integrated in the host system with local firms and institutions (Pearce, 1999). In this sense, differences can also be due to the cumulative character of FDI alongside the past presence of FDI in the local economies. This could provide additional incentives for new inward FDI (Mudambi, 1995) due to the fact that firms often prefer to invest in countries in which they are already active since their experience in locations increase the likelihood of their foreign investment activities (Davidson, 1980).

2.2. Entry modes and the host countries environments

In their decisions of entry modes, firms consider various local conditions in the host economy, including those related to domestic firms and factors at both industry and country levels. We focus here on the reasons of firms to choose cross border M&A instead of *greenfield* ventures. At the industry level, considering the distinction made by Porter (1986), there are global industries defined by international competition in such a way that a firm's competitive position in one country is affected by competition in other countries, and multidomestic industries in which competition in each country is independent of competition in other countries. Foreign firms in multidomestic industries are more dependent on local resources and have greater need to gain legitimacy in local market. For these reasons, cross-border M&A are more likely in multidomestic

industries (Harzing, 1999). The general idea would be that in this kind of industries, horizontal acquisitions are generally driven by the search for new markets, products and brands rather than cost cutting (Capron, 1999). Overall, M&A can favour the access to vertical linkages in the host economy because acquired affiliates are likely to have higher local content, given their pre-acquisition *embeddedness* in the host economy as locally owned firms (Belderbos et al., 2001).

Empirical evidence also provides support to the idea that MNC are more likely to choose acquisitions when the geographic scope of the subsidiary's mandate is broad and when the MNC has a greater multinational experience (Mudambi and Mudambi, 2002). In fact, those firms more diverse and with lower R&D intensity are more likely to buy technological capabilities abroad by acquisition. This propensity rises where local firms have well established distribution systems and a more deep knowledge of the local market (Harzing, 1999). Entry mode could be in turn affecting the extent of knowledge transfer since the investment size and the subsidiary's role vary with it, as it is confirmed in the evidence by Yang et al. (2008) about the determinants of conventional and reverse knowledge transfer in three transition economies in Central and Eastern Europe (CEE) where they found the existence of some significant country effects.

Some new contributions on the comparative analysis of performance between *greenfield* and acquisitions would include both the internal and external integration levels of subsidiaries, and national boundaries will implicitly constitute the lines of demarcation of the external environment of them (Slangen and Hennart, 2008). Most contributions in international business about the isomorphism of subsidiaries firms recall that national boundaries are critical features to define the organization environment, although they affect differently to the specific elements of the organizational structure and process (Davis et al., 2000; Rozenzweig and Singh, 1991). In this sense, local experience is a

helpful tool to learn the peculiar aspects of a local culture and acquisitions become more likely as a firm gains experience in a host country (Barkema and Vermeulen, 1998). The institutional theorists focus indeed on the role of external environment and how institutions affect organization decisions and behaviour in order to explain aspects related to the international strategies such as entry modes. The characteristics of the environment differ across nations and they are affected by, and also influenced by, foreign investments (Buckley and Casson, 1976). Although institutional business literature has mainly focused on legal and cultural aspects that would affect more directly to organisations (Scott, 1981; 1983), the set of elements integrating the external environment is larger and it includes technology, government regulations, culture and industrial structure (Davis et al., 2000; Rozenzweig and Singh, 1991).

The probability of acquisition is also positive correlated with the cultural and economic ties between the home and host countries, being M&A mainly concentrated in countries with similar cultural and business practices (Shimizu et al, 2004; Globerman and Shapiro, 2002). Empirical findings confirm that cultural proximity as well as low uncertainty are factors that increase the likelihood of entry via M&A (Kogut and Singh, 1988; Brouthers and Brouthers, 2000; 2003; Chang and Rosenweig, 2001). In fact, Kogut and Singh (1988) develop a theory about the influence that culture has in the choice of entry and they carry out an empirical test over 228 entries in the US, founding that MNE with high cultural distance to the subsidiary country may be more likely to choose greenfield ventures rather than to acquire existing units, results that have been also confirmed in more recent evidence (Xu and Shenkar, 2002).

Overall, the role of FDI is a crucial factor for international technology diffusion. It may also be a channel of access to international markets through the dynamics of trade and it may permit the extension of productive systems in which MNCs operate. But a greater

intra-firm interaction in relation to technical change and the greater mobility of MNCs do not reduce the likelihood of local capabilities in less developed countries. Particularly, because institutions and government still have a function in the attraction of FDI, as well as in the promotion of conditions for the generation of positive external effects. This literature review allows us to affirm that in order to explore the relationship between FDI entry modes and the features of host countries, a suitable framework is the one provided by the national systems of innovation approach. In a broad sense, this would include the combination of more traditional aspects of vertical linkages in the production systems –introducing learning by doing and learning by searching-, with some micro assumptions based on the chain-linked model of innovation (Kline and Rosenberg, 1986), the sources of innovation (Von Hippel, 1988) and the institutional dimension that would enhance interactive learning (Lundvall, et al., 2002). The concept of national systems of innovation generally refers to the influence and evolution of the activities of production and the institutional setting considering both informal institutions (such as trust) and formal arrangements (such as intellectual property rights or contract laws). It is then useful as a general approach to the differences between productive and research systems of countries, making possible to underline absorptive capacities and the learning capability of individuals and organizations that take part in the process of innovation. Due to the complexity of the concept, for empirical purposes a set of technological indicators are often used in order to make it operational.

3. Hypothesis' development

In this paper, we look at whether cross-border M&A as a mode of entry may denote a higher interest in the productive system of host economies, under the general assumptions that first, there must exist valuable acquisition targets in the host economy

and second, that this FDI type will imply a greater and faster interaction with domestic capabilities than *greenfield* investments. Therefore, the aim is to relate the level of development of countries with the type of FDI they receive, as shown in Figure 1. We hypothesize that the behaviour of inward FDI and a country's level of development could describe a co-evolutionary path which will be determined by the positive effects that previous FDI generated in laggard economies, favouring a process of catching-up which makes it more attractive for cross-border M&A. In other words, there is a non-static threshold effect on the level of development achieved by countries to participate in the shift of FDI entry modes, from which M&A will be gaining more ground. Thus, it can be expected that the relationship illustrated in Figure 1 is closely associated with a set of national factors and with the development levels achieved by countries. Cross-border M&A have accounted for a modest share of the overall FDI activity in developing countries, although firms from these countries are increasingly being involved in M&A (UNCTAD, 2005). For these reasons, it gains interest to explore what is the power of national conditions in the explanation of M&A operations and to detect differentiation aspects in host economies.

INSERT FIGURE 1 ABOUT HERE

The existence of worldwide differences in the behaviour of FDI can be observed through the level of development across countries. We use World Bank criteria for the classification of countries according to GDP per capita – income variable – in four different groups. Among them, we choose the group of the more developed countries in the world –integrating the high income level group – and developing countries which are divided into two different groups: upper-middle and lower-middle economiesⁱⁱⁱ.

With regard to the relationship previously hypothesized, Graph 1 shows the distribution of *greenfield* investments and cross-border M&A by groups of countries, taking natural logarithms of the two variables. It illustrates first, the positive relationship existing between the two kinds of internationalization flows and the income levels of countries and second, the greater heterogeneity of cross border M&A. We can see that there is still a notable gap on FDI inflows between the more advanced countries and developing economies. High-income economies present the highest levels of the two FDI entry modes, a more homogenous distribution of the two kinds of flows and there are only few differences between them. For the less developed economies (upper-middle and lower-middle income), it is noticeable that M&A present lower levels although the distribution of FDI is similar for the two groups of middle income countries. However, the heterogeneity of cross-border M&A is more pronounced for lower middle income countries, India and China integrating this group, aspect that underline the non-deterministic behavior of the relationship and the possible existence of co-evolutionary features.

INSERT GRAPH 1 ABOUT HERE

Then, through the empirical analysis, we try to test whether FDI entry modes differ according to host countries characteristics. Particularly, FDI inflows are affected by some structural characteristics of the host economies. Some of them can be considered as more conventional determinants of FDI, such as the market size and its dynamism, the characteristics of the labour market –in terms of labour costs and labour qualifications-, and the openness level of countries to foreign trade. On the other hand, the institutional context affects FDI inflows as well. Particularly, the presence of foreign

firms, the institutional stability and the consolidation of the productive and entrepreneur systems are indicators of a more modern and technologically active country and this could enhance incoming FDI; it can be expected that these latter factors could be even more important in the case of M&A.

According to the literature, the factors affecting both *greenfield* and cross-border M&A as types of FDI entry modes could differ according to the host economies. Our objective is to assess the relationship between FDI and national systems of innovation through the combination of two different components. One refers to FDI flows, that is to say, it does not discriminate by the qualitative nature of the investment flows. The second is more related to the involvement of foreign capital which is measured by the annual volume of cross-border M&A, assuming that these investments generate higher degree of interaction in host economies (Xu, 2000). Particularly, *greenfield* ventures requires most of the times the development of intermediate relationships with national partners for both the access to suppliers as well as the establishment of distribution channels. However, M&A have the advantage of accessing directly to the previously established vertical linkages of the local firms that are targets for acquisition. In fact, acquired affiliates present a higher local content as previous empirical evidence has demonstrated (Belderbos et al., 2001) and from the analysis of Japanese firms Belderbos (2003) shows that there are marked differences in the R&D intensities of foreign manufacturing affiliates that depend on their entry mode; acquired affiliates have substantially and significantly higher R&D intensities than wholly owned new ventures. Moreover, some empirical evidence built over the internationalisation of Swedish MNC show that acquired affiliates are more likely to do R&D and, to a larger extent, M&A have been motivated by asset seeking strategies than *greenfield* operations during the 90's (Bertrand et al., 2007).

Then, we proceed with the development of the following hypothesis. Then, we will test all of them specifically for M&A in Section 5 in order to know whether the results could differ by FDI entry modes:

- *Hypothesis 1 (H1): The greater the market size and the market dynamism, the more active the FDI inflows*
- *Hypothesis 2 (H2): The more open to trade a country is, the higher the FDI inflows*
- *Hypothesis 3 (H3): The better the labour market conditions, the greater the FDI inflows*
- *Hypothesis 4 (H4): The higher the presence of previous FDI, the bigger the interest of new foreign investors*
- *Hypothesis 5 (H5): The greater the effort in R&D of a country, the higher the FDI inflows*
- *Hypothesis 6 (H6): The more stable is the institutional setting of a country, the more likely the reception of FDI flows*

4. Data Description

4.1. FDI trends

Since the 1980s, FDI flows have notably contributed to globalisation forces, affecting both the behaviour and growth of international production and markets – foreign capital stock achieved around 20 per cent of world GDP –. Nowadays, the strength of direct investment is greater for cross-border M&A than for *greenfield* operations since an overwhelming percentage of FDI currently takes place through the former type of investments (UNCTAD, 2003; 2007). As recent data from UNCTAD reveal there has been a rebound in FDI after three years of declining. Although the evolution of the

different entry modes of FDI followed similar trends during the 1990s, according to the UNCTAD FDI Statistics there was a spectacular rise in the number of deals and the value of M&A in the second half of the decade (Graph 2).

Insert Graph 2

The world distribution of FID is not uniform and on the contrary, this is a field in which inequalities still persist. Nonetheless, flows to developing countries and the transition economies attained their highest levels ever and the rise of FDI from developing and transition economies and the growth of South-South FDI are important recent trends (UNCTAD; 2007). Looking at the distribution of FDI inflows by world regions, the share of developing countries reached 38 per cent of world FDI flows in 2004, which is the highest for this group of countries since 1997. It is remarkable that after the USA, the UK and France, China is among the main receptor economies of FDI. Additionally, among the top 100 MNCs, some of them are based in developing countries and total FDI outflows from these groups of economies reached 16% of world FDI outflows (UNCTAD, 2005; 2007).

The rationale at micro level is that MNC to maximise their competitive advantages are trying to combine the comparative advantages of geographic location with their own resources and competencies. For this reason, firms are leveraging knowledge from dispersed foreign subsidiaries at a global scale (Piscitello, 2004; McCann and Mudambi, 2005). Appealing to their high value-added activities, firms from advanced countries relocate the more standardised activities of the value chain in emerging economies, defining the potential for the generation of spillovers. On the other hand, in response to different incentives, firms from emerging market economies such as Mexico, India,

China and Brazil are trying to catch-up locating their R&D and marketing operations in advanced market economies (Cuervo-Cazurra, 2007; Mudambi, 2008).

Amongst recent features of M&A, cross-border transactions are increasingly important; although it is probable that during the period observed, the price of the assets were up, there has been an increase not only in value but also in the number of deals, achieving a maximum share of 35 per cent in 1999 and 2000. When the regional distribution of M&A is considered, macroeconomic and political factors may offer additional explanations of the process of business internationalisation through M&A. The leading players in the rapid growth of cross-border M&A between 1990 and 2002 were developed countries. Developing countries, however, underwent a considerable increase in the volume of assets involved in M&A. The contribution of the Triad – formed by the USA, the EU and Japan – to world volume was more than 80 per cent in these years. Nonetheless, the share of the Japanese economy was relatively small up to 1999, mainly due to a recession resulting from the monetary crisis of 1997-98 and the features of its business culture (Belderbos et al., 2001, Kang and Johansson, 2000).

With regard to developing countries, Asian and Latin American cases are particularly significant – both regions contribute over 90 per cent to the total volume of this group of countries. On the one hand, Latin America is the main recipient economy, in which the leading players have been Brazil and Argentina. In these countries, privatisations have played a crucial role as a way through which American and European firms – particularly Spanish – can get into these economies. In terms of CEE economies, their participation is relatively small although some countries, such as Poland, the Czech Republic and Croatia, are becoming increasingly attractive for FDI on the basis of their technological capabilities, high education levels and R&D potential (Yang et al., 2008).

4.2. Descriptive by country groups

We start for making calculations of some basic statistics for FDI and M&A as well as for the features in host countries that could affect them; this would allow us to observe differences and similarities by country groups. Particularly, we take into account some of the most conventional factors such as market size and its dynamism (GDP and GDP growth), labour market aspects such as wages and human qualifications (secondary education enrolment) and the openness level of countries (the weigh of foreign trade in the GDP). We also consider others factors more related to the features of national systems such as the path of foreign capital presence (FDI stock), the institutional setting and the absorptive capacities. The latter, adopted from the micro concept formulated by Cohen and Levinthal (1990), is understood as the possibilities of organizations to benefit from those innovations carried out externally to the firms and it would define a second phase of learning. At an aggregated level (Narula et al., 2002), national absorptive capacities can be measured through national R&D expenditures and although it is an imperfect measurement of them, this indicator would reveal the activities and the efforts that an economy carries out to create and also to assimilate new knowledge^{iv}. On the other hand, although imperfect the institutional framework can be measured by the *Government Matters Indicator* that has been built under the auspices of the World Bank^v.

The statistics are reported for both developed countries – integrated in the high income level group – and developing countries which are divided into upper-middle and lower-middle economies – in Table I. We can see that developing countries are not a homogeneous group of economies and, on the contrary, the diversity among them is observable; the heterogeneity between groups is more noticeable in some variables than in others and also intra-group differences arise for some countries with similar income

levels. It can be noted that developing countries (lower and upper middle income) present similar mean values in inward FDI flows whereas the other group shows a notable higher value –Table I. The higher dispersion in this indicator corresponds to the group of least developed economies. On the other hand, regarding the profile describing the variable M&A, it is remarkable that the most developed countries are less heterogeneous whereas the highest value of the coefficient of variation in cross-border M&A corresponds to lower-middle income countries, demonstrating the notably diversity in the behaviour of these operations in the least developed economies considered. The descriptive statistics also shows that accumulation of foreign capital, measured by the FDI stock in host economies, show large inter-group differences. Likewise, there is still a significant difference in the level of salaries in developed economies compared to the developing world – notably higher in the former group when we observe the relative internal market size of the different groups of countries. The opposite is shown in the dynamism of the market, revealing largest mean values for the countries with least level of development, although the dispersion of the variable distribution is larger for them.

INSERT TABLE I ABOUT HERE

The differences between developed and developing countries are even more marked with the qualitative local factors of FDI attraction, such as educational level and R&D intensity–Table I. Two important factors defining the existing gap between high income countries and the others are the indicators of human capital and absorptive capacities (Álvarez and Magaña, 2007). However, in aspects such as the openness level of both high and upper-middle income countries, the averages for these two groups are very

similar, even greater for the latter group with a greater dispersion in the former. With institutional stability, it is not surprising that the statistics obtained also reveal the existence of a large gap between developed and developing worlds. The mean values for countries integrated in the group of lower-middle income show the lowest stability and regulatory framework, and even become negative. In short, these statistics show the extreme heterogeneity of the developing world, here represented by 43 countries, as well as the potential and the weaknesses that countries belonging to the group of middle-income countries have for catching-up in the economic globalisation process (Durlauf and Johnson, 1995; Álvarez and Magaña, 2007; Castellaci, 2008).

5. The empirical analysis

5.1. The empirical model

The empirical model tries to explain *greenfield* investment flows and cross-border M&A as a function of a set of features in host countries: size and growth of the internal market (GDP and ΔGDP), level of openness (OP), labour costs (W) as well as human capital level (HK), cumulative nature of foreign capital ($FDIstock$), R&D intensity (RD) and institutional framework (GMI)^{vi}. All these variables are introduced into the estimations taking logarithm transformations, with the exception of the last.^{vii} In a first model estimation, our dependent variable is *greenfield* investment (FDI) while in the second it will be cross-border M&A (MA). Each will be regressed against the set of factors previously mentioned.

Equation (1) is adopted for estimation of both FDI and M&A, separately. Moreover, time and country dummies are also included to consider those macro impacts not explicitly controlled in the model. The variables and their definitions are listed in Table II.

$$\log y_{it} = \alpha_1 \log GDP_{it} + \alpha_2 \log \Delta GDP_{it} + \alpha_3 \log OP_{it} + \alpha_4 \log W_{it} + \alpha_5 \log HK_{it} + \alpha_6 \log FDIstock_{it} + \alpha_7 \log RD_{it} + \alpha_8 \log GMI_{it} + \eta_{dt} + \nu_{dt} + \varepsilon_{it} \quad \text{Eq (1)}$$

 INSERT TABLE II ABOUT HERE

For a dynamic approach to understanding the relative importance that local features have in each FDI mode of entry, the estimation method and the availability of panel data are crucial; the time dimension is an element to be observed from the estimations of both FDI and M&A variables in order to test our working hypothesis. The model will be estimated following a dynamic approach where the inherent endogenous structure of the model is taken into account: the dependent variable, present and lagged, may be correlated with the independent variables (determinants); that is, past results may determine the FDI type of entry now. A common way of dealing with the problem is to test to what extent the national factors affect FDI results, as well as to eliminate non-observable effects. The generalised method of moments (GMM) uses the first differencing transformation to wipe out non-observable individual effects and all possible lags of regressors as instruments to eliminate possible correlations with the individual effect (Arellano and Bond, 1991). An extension of the GMM estimator considers both the original instruments in levels for equations in first differences and instruments in first differences for equations in levels (Arellano and Bover, 1995; Blundell and Bond, 1998). In this estimation procedure, which is called system-GMM, predetermined variables in levels are instrumented with lags of their own first differences. The system-GMM estimation procedure is the one adopted in estimating our equations because of its superior performance and its inherent advantages over the first differenced GMM estimator since it exploits all moment conditions available.

5.2. Discussion of results

The estimation results of the dynamic panel allow us to confirm that *greenfield* FDI present a positive relationship with the size and dynamism of the internal market (*H1 confirmed*), the previous presence of foreign capital in the economy (*H4 confirmed*), and the institutional features of host countries (*H6 confirmed*), whereas labour costs act in a negative direction and human capital is not significant (*H3 only partially confirmed*) – column 1 of Table III. The openness degree (*H2*) and factors revealing the qualification of national systems such as R&D intensity (*H5*) do not seem to have a powerful explanatory capacity. Nonetheless, results in the second column of Table III manifest the persistence of world inequalities and differentiated results arise when controlling by the national level of income per capita. Absorptive capacities become significant, although only at 90% level of confidence, for those countries with a lower level of development since the interacted variable (R&D*lower-middle income) behaves differently and better than the higher income group.

INSERT TABLE III ABOUT HERE

Regarding cross-border M&A, the dynamism of the domestic market is significant – although only at 90% of confidence- while the internal market size, labour costs and the level of human capital in host systems do not seem to play a significant role for cross-border M&A (that is to say: *H1 partially rejected and H3 rejected*). The panel estimation also shows that past FDI presence and the institutional framework are significant factors positively related to this entry mode (*both H4 and H6, confirmed*) and absorptive capacities gain ground in the explanation of this entry mode (*H5 confirmed*) -third column of Table III-. Moreover, when the development level of

countries is considered (last column of Table III), our findings reveal that R&D intensity allow us to reinforce our argument based on the power that national systems of innovation has to explain those FDI flows with a higher level of commitment with host economies. This is revealed by the positive and significant R&D coefficient that tends to distinguish the behaviour of M&A, existing also a coincidence between the presence of foreign capital in the economy and institutional factors such as political stability and regulatory quality of host countries.

Moreover, these results would confirm that although internationalisation decisions via cross-border M&A deal with the difficult integration of different business cultures (acquiring and acquired firms), investing companies find an easier way of accessing to the intermediate linkages of the foreign system for productive, technological and commercial purposes, since these linkages were already built by the acquired unit and more advanced national system of innovation would enhance user-producer relationships that would favour competitiveness and innovation as well (Lundvall et al, 2002; Álvarez et al., 2009). These positive aspects are not so immediate in the case of *greenfield* ventures because there is not a direct relationship previously established between the investors and the national entrepreneur and institutional fabric. On the other hand, M&A seem to be related negatively with the degree of openness of host economies while no effect was found for FDI inflows. Although we have not explicitly measured this aspect as a determinant of FDI entry in host economies, previous evidence built by Belderbos et al., (2001) show that the tariff jumping motivation for Japanese manufacturing investments appears the most likely explanation for the difference in comparison with European and US multinationals. This reason seems to be behind the strong reliance on *greenfield* investments to expand the Japanese manufacturing operations abroad while the EU and US multinational firms show a

greater preference for acquisitions. Giving aside the possible home-country effect of the investing company, our cross-country analysis come to confirm that a more protective foreign trade regulation in host economies would become an important factor in the direction of cross-border M&A.

These findings would satisfactory confirm our hypothesis and we argue that there are significant elements of differentiation in understanding the path of the main entry FDI modes in the last decade. They also indicate the existence of a combination of both economic and institutional factors of host economies in the explanation of the worldwide foreign investment flows. Meanwhile, foreign capital presence and government indicator are significant determinants for the two forms of entry although more evident in M&A while absorptive capacity is a feature more related to the attraction capacity of acquiring firms, getting a more permanent establishment and positioning in productive systems. The significance of the R&D variable should not be understood only as an indicator of a higher capacity of knowledge generation in countries but also as the expression of a more advanced productive and technological system, more appealing for the foreign investors that choose M&A as the preferable entry mode. Particularly, it can be thought that a more R&D intense system should reveal i.e. greater university-firms relationships and the institutional setting is more articulated and favourable for technology and production activities. These aspects are clearly connected with the interest of those firms that would decide to penetrate foreign markets by acquiring already existing firms.

From the exploration of the differences that are observable in the behaviour of cross-border M&A according to the income level of countries, our findings confirm the evidence of world heterogeneity. This aspect is noticeable even when leaving aside the least developed countries, integrated by low income economies and considering the

intra group differences in developing economies, these integrated by middle-income countries. The results of our analysis are confirmatory of the importance that the different levels of commitment has for the two choices of FDI entry and how this aspect relates diverse level of development. Cross-border M&A seems to be an option for companies investing abroad that are more closely determined by the regulatory and institutional framework of the host countries, conceding higher importance of qualitative aspects, such as the R&D-intensity of the recipient economies. This is true for the complete sample of countries integrated in our empirical analysis but specially revealing for developing economies. In fact, a significance of R&D intensities was obtained in the estimation of the general model and it was reinforced when controlling for the level of development of countries, notably significant in the case of upper-middle income economies. This group integrates some Asian countries, many European transition economies (Central and Eastern Europe) as well as most of the Latin American countries. The shift toward higher economic and political stability as well as their growth opportunities derived into a higher potential of growing markets. Some of these economies have committed important amount of resources and specific policies to activate their productive and education systems. The group of emerging market economies has been successful to upgrade their national capabilities becoming more attractive for foreign investors too (Hobday, 1995). Moreover, companies from emerging economies are changing their international strategies and becoming more integrated in international flows as well (Brouthers et al., 2005; Singh, 2007). The combination of all these aspects allows us to argue that an evolutionary path may be described by the behaviour of foreign investments, the development level of countries and the increasing trends of cross-border M&A. The potential for positive effects in host economies would enrich their options for catching up and for integrating the more

advance and dynamic international markets. Then, institutional stability and the importance of innovative environment could be noticeable for policy makers in charge of FDI attraction while some new and further research is required on differences found in the developing world that could provide new insights for the managers of international companies.

6. Conclusions

It is broadly agreed that FDI entry modes are affected by international business strategies (as set out in the OLI theory) in which ownership and internalisation advantages combine with the features of host locations, altogether defining the determinant factors of FDI. It is also possible to observe that the business globalisation process still shares aspects of national embeddedness as the institutionalism approach underlines. The increasing role of some emerging and developing economies invites indeed to carry out new empirical research that combine management with more national and macro perspectives. This study presents an integrative framework of FDI entry modes and development, providing some new fresh empirical evidence for a broad sample of countries that includes developed and developing economies under the optic of the national systems of innovation conceptual framework. The findings are illustrative of the different behaviour of FDI in the heterogenous group of developing countries in which emerging markets economies are contained. The results of this empirical analysis are at least suggestive for broadening the scope of the research on the behaviour of multinational firms and their choice of entry in relation to the level of commitment in host productive economies and their potential impacts.

The existence of world inequalities is highlighted here as an issue which needs to be further considered in economic research into the behaviour of FDI, the local

determinants for its attraction and their impact on host economies. In fact, although international investments are still highly concentrated, developing economies are gaining some ground for FDI flows and their path may differ from developed countries. Nevertheless, the evidence presented here on FDI modes of entry opens up new questions about the role of national capabilities, both in attracting FDI and understanding global learning processes. Our findings allow us to confirm the existence of differences in the factors at country level affecting the particular entry mode of cross-border M&A.

The empirical results of this piece of research confirm that structural factors explain better the behaviour of *greenfield* investments, whereas the factors of more consolidated national systems of innovation are more closely related to cross-border M&A trends. In both cases, the relevance of host institutional frameworks is noteworthy. Nonetheless, the differences allow us to observe the interplay between FDI flows, entry modes and the level of economic development. Particularly, the factors explaining M&A flows are more related to the qualitative institutional setting of host countries since absorptive capacities could be more appealing for the investments of foreign companies interested into sharing the productive and technological activities as well as the interactions and linkages already established in catching up systems.

Finally, it must be said that although international differences persist between both more developed and developing countries, there is a noticeable heterogeneity that characterises the developing world in which catching-up and laggard economies co-exist but with differentiated profiles. This aspect may have specific consequences for the point of view of company managers, policy makers at both national and regional levels as well as for the definition of policies on the international community trying to

enhance the development processes in the more laggard countries. Overall, this is an issue which still deserves further research.

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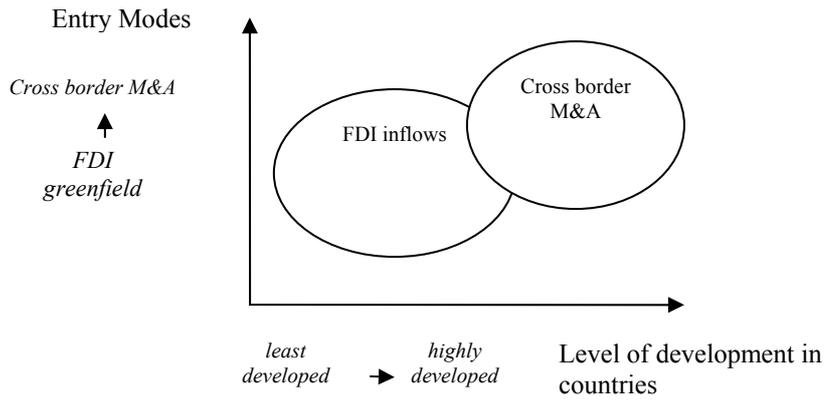
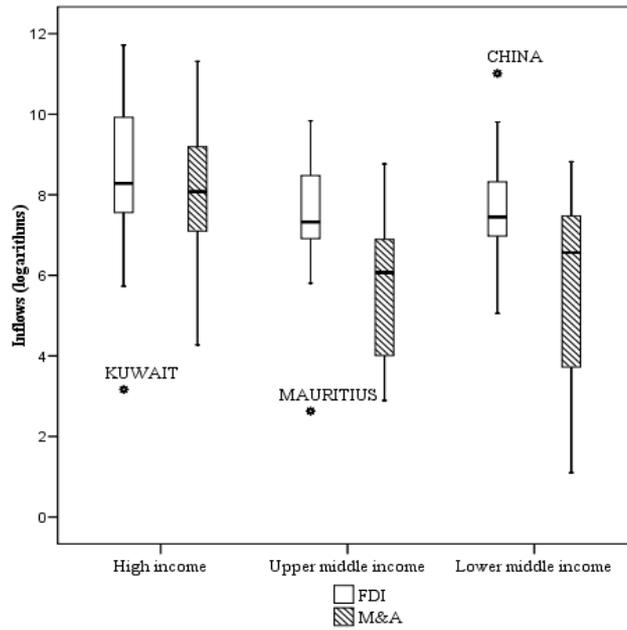
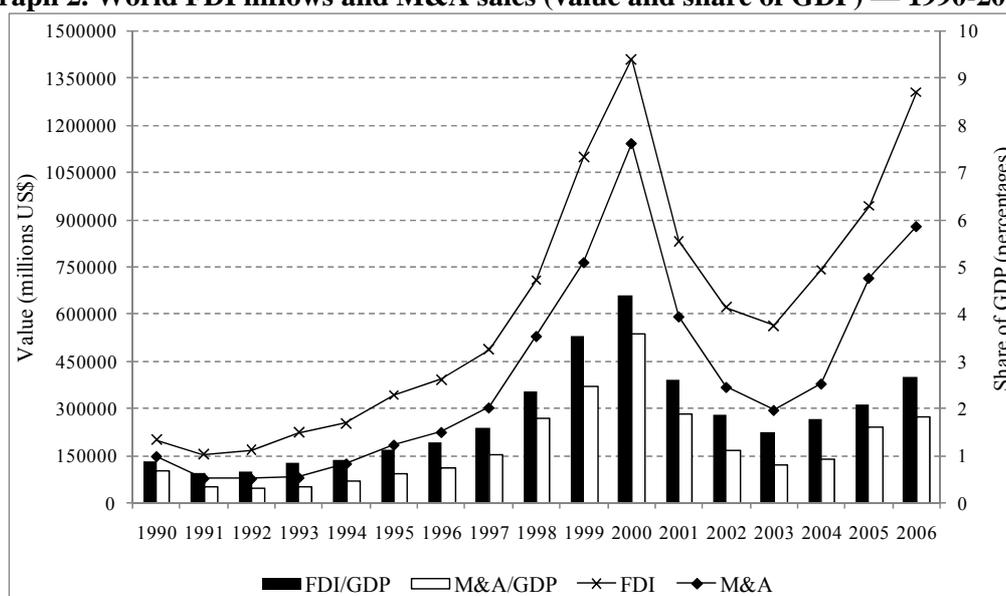


Figure 1. Development level and type of FDI

Graph 1. Distribution of FDI and M&A, by groups of countries, 2004



Graph 2. World FDI inflows and M&A sales (value and share of GDP) — 1990-2006



Source: UNCTAD, FDI Statistics

Table I. Descriptive Statistics^(*), 1998-2004

	High Income		Upper-Middle Income		Lower-Middle Income	
	Mean	Std. Dev/Mean	Mean	Std. Dev/Mean	Mean	Std. Dev/Mean
FDI (millions US\$)	19,345.62	2.05	3,285.51	1.42	4,219.01	2.55
M&A (millions US\$)	17,967.12	2.43	1,517.28	1.90	1,269.65	2.78
GDP (millions US\$ constant 2000)	828,853.96	2.32	100,736.53	1.38	132,592.05	2.27
GDP Growth (%)	3.01	0.84	3.67	1.19	4.38	0.87
Openness (%)	94.54	0.68	98.21	0.47	72.95	0.42
Wages (US\$ PPP)	33,084.67	1.72	7,326.82	1.40	8,412.25	1.50
Human Capital (school enrolment in secondary education, %)	109.82	0.19	84.39	0.15	76.91	0.21
FDI Stock (millions US\$ PPP)	159,698.07	1.58	27,238.53	1.26	22,384.70	2.07
R&D/GDP (%)	1.92	0.55	0.59	0.53	0.44	0.75
Governance Matters	1.32	0.33	0.35	1.49	-0.39	0.37

(*) The list of countries as well as the country groups can be found in the Appendix -Table IA-. The definition of variables can be found in Table II.

Table II. Summary of variables

<i>Variable</i>	<i>Definition</i>	<i>Source</i>
FDI	Foreign Direct Investment (net inflows, \$US) measured in natural logarithms	UNCTAD, FDI database
MA	Mergers and Acquisitions (inflows, \$US) measured in natural logarithms	UNCTAD, FDI database
GDP	Gross Domestic Product (US\$ constant 2000) measured in natural logarithms	World Bank, WDI 2005
ΔGDP	Annual growth rate of GDP measured in natural logarithms	World Bank, WDI 2005
OP	Openness: Exports and imports of goods and services (%GDP) measured in natural logarithms	World Bank, WDI 2005
W	Compensation of employees (\$US, PPP) measured in natural logarithms	World Bank, WDI 2005
HK	Human Capital: School enrolment in secondary education (%Total) measured in natural logarithms	World Bank, WDI 2005
FDIstock	Stock of FDI (\$US, PPP) measured in natural logarithms	World Bank, WDI 2005
RD	Research and Development expenditures (%GDP) measured in natural logarithms	World Bank, WDI 2005
GMI	Governance matters indicator	World Bank

Table III. GMM estimations

	<i>FDI</i>		<i>MA</i>	
	(1)	(2)	(1)	(2)
GDP	0.296** (0.117)	0.304** (0.121)	0.249 (0.242)	0.341 (0.252)
ΔGDP	0.042** (0.018)	0.041** (0.018)	0.076* (0.043)	0.064* (0.037)
OP	-0.240 (0.169)	-0.255 (0.175)	-1.294*** (0.342)	-1.333*** (0.378)
W	-0.252** (0.127)	-0.278** (0.134)	-0.186 (0.259)	-0.328 (0.241)
HK	-0.264 (0.272)	-0.184 (0.307)	0.237 (0.523)	0.516 (0.398)
FDIstock	0.800*** (0.068)	0.814*** (0.073)	0.833*** (0.143)	0.851*** (0.165)
RD	0.171 (0.118)		0.601*** (0.220)	
GMI	0.214* (0.122)	0.192 (0.124)	0.664** (0.277)	0.617** (0.275)
RD*High		0.108 (0.245)		-0.031 (0.356)
RD*UpperMiddle		0.178 (0.208)		1.088*** (0.400)
RD*LowerMiddle		0.243* (0.139)		1.080** (0.459)
Hansen test Chi ²	48.21	48.38	53.80	53.92
Arellano-Bond test for AR(1)	-2.79***	-2.80***	-1.94**	-1.95**
Arellano-Bond test for AR(2)	0.35	0.34	-0.81	-0.87
Number of observations	404	404	364	364
Number of individuals	72	72	71	71

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

Robust standard errors in parentheses.

All variables are in logarithms except the Governance Matters Indicator.

APPENDIX

Table IA. Countries included in the analysis grouped by their level of GDP per capita

HIGH	UPPER-MIDDLE	LOWER-MIDDLE
Australia	Argentina	Armenia
Austria	Chile	Azerbaijan
Belgium	Costa Rica	Belarus
Canada	Croatia	Bolivia
Cyprus	Czech Republic	Brazil
Denmark	Estonia	Bulgaria
Finland	Hungary	China
France	Latvia	Colombia
Germany	Lithuania	Ecuador
Greece	Malaysia	Egypt
Hong Kong	Mauritius	El Salvador
Iceland	Mexico	Georgia
Ireland	Panama	Honduras
Israel	Poland	Kazakhstan
Italy	Russia	Macedonia
Japan	Slovak Republic	Morocco
Korea, South	Trinidad and Tobago	Paraguay
Kuwait	Turkey	Peru
Luxembourg	Uruguay	Romania
Malta	Venezuela	Thailand
New Zealand		Tunisia
Norway		Ukraine
Portugal		India (Low income)
Singapore		
Slovenia		
Spain		
Sweden		
Switzerland		
United Kingdom		
United States		

Table IIA. Rank correlations: FDI, M&A and national factors (1998-2004)

	Total Sample		High Income		Upper-Middle Income		Lower-Middle Income	
	FDI	MA	FDI	MA	FDI	MA	FDI	MA
FDI	1	0.754**	1	0.706**	1	0.740**	1	0.637**
MA	0.754**	1	0.706**	1	0.740**	1	0.637**	1
FDIStock	0.887**	0.695**	0.877**	0.670**	0.805**	0.593**	0.871**	0.547**
GDP	0.783**	0.642**	0.723**	0.690**	0.790**	0.609**	0.822**	0.525**
ΔGDP	-0.048	-0.095*	0.015	0.009	-0.088	-0.095	0.127	0.007
OP	-0.231**	-0.229**	-0.193**	-0.396**	-0.281**	-0.233**	-0.439**	-0.344**
W	0.728**	0.626**	0.664**	0.580**	0.777**	0.564**	0.599**	0.419**
HK	0.364**	0.388**	0.272**	0.260**	0.029	0.102	0.081	0.068
RD	0.563**	0.533**	0.434**	0.455**	0.370**	0.303**	0.429**	0.237**
GMI	0.439**	0.450**	0.355**	0.250**	-0.237**	-0.142	0.350**	0.352**

** Correlation is significant at the 0.01 level

* Correlation is significant at the 0.05 level

ⁱ Although the available information for FDI inflows used in this study includes other forms of foreign direct investments, we will use throughout this paper the term “*greenfield*” or “*greenfield investment*” to refer to it and to make a clear distinction with regard to cross-border M&A.

ⁱⁱ Similarly, effects differ between foreign subsidiaries that could be defined by *home base exploiting* strategies and *home base augmenting*, in which the bulk of the activity is oriented to increasing the technological basis through the incorporation of other created assets available in advanced foreign countries (Kuemmerle, 1999).

ⁱⁱⁱ We added India to the lower-middle group (its present group of pertinence) because of its economic magnitude although this country was belonging to the low-income group for the years of reference in our analysis. However, we discarded the group of low-income countries for several reasons of data availability and for the low dynamic impact of FDI in these economies. The list of countries as well as the country groups can be found in the Appendix -Table 1A-.

^{iv} It must be said that the introduction of some other knowledge output indicators such as patents would be very useful –as some reviewers of IBRF-2009 have suggested. However, data on these indicators for the set of countries included in the sample were not available and then, we could not include patents or other output variables in our analysis.

^vThe “Governance Matters Indicator”, developed by Kaufmann et al (2007), is the average of six different indicators: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption. For each one and for each country, 352 indicators were collected from different sources: international organisms, rating agencies and others.

^{vi} Correlations among variables can be found in Table 2A of the Appendix.

^{vii} The *Government Indicator* is the average of a set of indicators on voice and accountability, political stability, government effectiveness, regulatory quality, rule of law and control of corruption.