

# The FDI location decision: does liberalization matter?

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In this article, we address the question of whether market, trade and financial liberalization has an impact upon FDI location decisions. We use a sample of Italian firms which have made investments in seven Central and East European countries (i.e. Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia). The results confirm that market size and growth, the availability of labour, the quality of infrastructure, and agglomeration economies are all important determinants of FDI location. However, we also show that the choice of FDI location is positively influenced by the extent of trade, financial and (weakly) market liberalization, and negatively related to the openness to foreign banks. This study improves upon the previous studies in a number of aspects: it uses firm-level data from the very start of transition process in 1990; it includes various dimensions of liberalization, notably financial liberalization and openness to foreign banks, which have not previously been considered; and finally, it provides elasticity estimates that show the changes in the probability of FDI location in each country arising from further liberalization in each of the other countries in the region.

**Key words:** Location decisions, Economies in transition, Italian FDI

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## 1. Introduction

Since the early 1990s, many countries in Central and Eastern Europe (CEECs) have undergone substantial economic liberalization, and these developments have contributed to CEECs becoming popular destinations for foreign direct investment (FDI) by Western firms (Meyer, 1998; Kalotay, 2004) particularly those from the European Union (EU). These countries share similar economic and institutional legacies from their Communist pasts, and all are potential new markets and/or low-cost production locations. But liberalization is a multi-faceted process and involves, *inter alia*, market liberalization, trade liberalization and financial liberalization. The speed and extent of market, trade and financial liberalization have not been uniform across the CEECs, and their individual paths of transition to market economies have differed substantially. These observations raise the issue of whether market, trade and financial liberalization each have an impact upon inward FDI and, if so, which effects are the strongest.

This article addresses this issue by establishing the determinants of FDI location in seven CEECs<sup>1</sup> (i.e. Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia), all of which have been involved in the process of accession to the EU and which together account for most inward investment in the region. The statistical analysis is based upon a sample of firms from just one country (i.e. Italy), which means that we do not need to control for possible country-of-origin effects (Grosse and Trevino, 1996; Chadee *et al.*, 2003) due to geographical and/or cultural proximity to Eastern Europe. We cover the period from the very beginning of the transition process in 1990 up to 2003, which allows us to explore fully the effects that the different paths towards a market economy have had upon the FDI location decisions of Italian firms.

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<sup>1</sup> The three Baltic States (i.e. Latvia, Lithuania and Estonia), Malta and Cyprus are not included in the present analysis due to the lack of data.

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The article makes three important contributions. First, the findings add to the established literature by showing that market, trade and financial liberalization all have different effects upon the FDI location decision. Second, we derive estimates of the strength of these effects for each of the seven CEECs. These estimates may be used to derive appropriate policy implications for each country, though this is beyond the scope of this article. Third, the sample of Italian firms is particularly interesting because it consists primarily of small and medium-sized enterprises (SMEs) rather than large transnational corporations (TNCs). The role of SMEs in FDI flows has been increasingly acknowledged (Fujita, 1995a, 1995b; Urata and Kawai, 2000), but there are still relatively few empirical studies, compared to those that focus on large TNCs. Investments by transnational SMEs are much less visible, and official data often only count large investments. The analysis in this article thus fills this hole in the literature and provides insights into the FDI behaviour of SMEs.

The article is structured as follows. In section 2, we briefly discuss the main characteristics of inflows of FDI to the CEECs and outline the timetable of their accession to the EU. We then review the literature on the determinants of FDI location decisions and develop the hypotheses to be tested. Section 4 describes the sample of firms, presents details of the explanatory variables and provides a brief interpretation of the estimation technique. The penultimate section presents the empirical results and discusses their interpretation. The final section considers the policy implications and highlights the limitations of the analysis.

## **2. Background**

Since the early 1990s, the CEECs have witnessed a large increase in inflows of FDI, notwithstanding a high level of volatility in the annual figures. As a consequence, FDI in the CEECs has increased from less than 1% of the world total in 1990 to roughly 4% in 2005 (UNCTAD, 2006, pp. 299-302). Firms from Western Europe have accounted for the bulk of the

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investments in the region, with Germany being the most active investor in terms of value. However, such data on FDI values do not offer a complete picture of Italian investments in the area. Italian direct investments in the CEECs are generally small in value, but large in terms of numbers reflecting the fact that Italian industry structure is characterized by a high share of SMEs. For example, Italy was only the sixth most important investor country in Romania in terms of the value of FDI, but second in terms of the numbers of projects (with more than 2,000 firms involved). Notwithstanding the small average size of the Italian investments, the total value of FDI outflows from Italy during the 1990s increased at an average rate of 25% per year reaching more than 38 billion in 2003. According to one recent estimate (Istat, 2006), the share of these flows directed toward the CEECs increased to roughly 3% of the total in 2005 so that we can infer that the average flows of FDI from Italy to the CEECs have been roughly 1.15 billion.

This growth of FDI has taken place concomitantly with the process of the CEECs' accession to the EU. All the CEECs decided from an early stage that EU membership was essential in terms of their transition to liberal democratic market economies, and the EU had to decide how best to respond to these overtures. Initially, the EU negotiated a series of bilateral trade and cooperation agreements, and these were quickly superseded by a series of more wide-ranging Association Agreements. The first Association Agreements (with Poland and Hungary) came into force in February 1994, but the CEECs wanted more. In June 1993, the European Council meeting in Copenhagen defined a set of economic, political and administrative criteria (the "Copenhagen criteria") that set out in general terms the requirements to be satisfied for any CEEC to be granted access to the Union. These requirements included a sound and competitive market-based economy, stable democracy governed by the rule of law, the development of administrative and institutional standards comparable to those of western partners, and the capacity to cope with competitive pressures within the Union. More detailed measures were subsequently set out in a 1995 White Paper. The first evaluation of progress was made in 1997 in a document called *Agenda 2000*

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and accession negotiations began in the following year with Cyprus, the Czech Republic, Estonia, Hungary, Poland and Slovenia. Accession negotiations were to continue at a later date with Bulgaria, Malta, Latvia, Lithuania, Romania and Slovakia. In 2002, after close evaluation of developments in various candidate countries, the EU Commission extended the first group of applicants to include Latvia, Lithuania, Malta and Slovakia, and these ten countries joined the EU in May 2004 (Clausing and Dorobantu, 2005). Bulgaria and Romania have since signed accession treaties that came into force in January 2007, and accession negotiations are underway with other countries. The “Copenhagen criteria” set a tight and well-defined path that candidate countries had to follow in order to comply with the requirements for EU membership. This process of institutional upgrading transformed the investment environment in each country, and rendered them increasingly stable and appealing locations for inward FDI. It is within this context that we have analysed the development of Italian investments in the region.

### **3. Review of the literature and research hypotheses**

Research on the choice of FDI location has received a recent boost from the work of scholars such as Krugman (1991) and Porter (1994), who have argued that many of the factors that determine firm competitiveness are location-bound and that the choice of location for their activities is an important strategic decision for TNCs. These sentiments have also been echoed by Dunning (1998). These location-specific factors range from simple natural assets like raw materials and cheap labour to more complex assets, such as public support, and market or technological knowledge. Various authors (e.g. Birkinshaw and Hood, 2000; Rugman and Verbeke, 2001; Andresson *et al.*, 2002) have shown how international strategies are often formulated to selectively tap local knowledge and location-bound resources in order to improve firms’ overall competitive standings.

Several previous studies on the locational choices of TNCs have explored the role of aspects such as market size and market potential for market-seeking investments, and local knowledge

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and the availability of resources for strategic-asset and resource-seeking investments (Frost, 2005; Chang and Park, 2005). Most have focused on the FDI location decision into and within the United States, the EU or, more recently, China.<sup>2</sup> Rather less attention has been devoted to the CEECs, with several authors (e.g. Lankes and Venables, 1996; Meyer 1998) simply reporting aggregate data or using case study and survey methods, and relatively few econometric studies (Lansbury *et al.*, 1996; Holland and Pain, 1998; Resmini, 2000; Campos and Kinoshita, 2003; Bevan *et al.*, 2004; Bevan and Estrin, 2004; Grosse and Trevino, 2005). These studies have all used aggregate FDI flows or stocks in selected CEECs as the dependent variable, and have established that these are positively related to market size and market growth in the host economy, the availability of labour, the quality of infrastructure and agglomeration economies while negatively related to labour costs.<sup>3</sup>

As regards market size and growth, several studies (see, for example, Woodward *et al.*, 2000; Altomonte, 1998; Manea and Pearce, 2004) of FDI in the CEECs have stressed the role of market-seeking considerations. For example, Resmini (2000, p. 678) suggests that “in general, FDI in Central and Eastern

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<sup>2</sup> See, for example, Bartik (1985), Coughlin *et al.* (1991), Friedman *et al.* (1992), Friedman *et al.* (1996), Glickman and Woodward (1988), Head *et al.* (1995, 1999), Luger and Shetty (1985), Woodward (1992), Shaver (1998) and Shaver and Flyer (2000) on FDI in the United States; Crozet *et al.* (2004), Ford and Strange (1999), Yamawaki (1991), Scaperlanda and Balough (1983) on FDI in the EU; and Belderbos and Carree (2002), Chang and Park (2005), Cheng and Kwan (2000), Chadee *et al.* (2003), He (2003) and Head and Ries (1996) on FDI in China. This is a not an exhaustive list, and there are also some interesting studies of FDI location in other regions: see, for example, Woodward and Rolfe (1992) on FDI in the Caribbean Basin.

<sup>3</sup> Other research (Resmini, 2000; Campos and Kinoshita, 2003; Bevan *et al.*, 2004; Bevan and Estrin, 2004) has also established that proximity between home and host countries is an important determinant of bilateral FDI flows. The shorter the distance between the countries, the greater is the attraction of the host country. Closer countries not only involve smaller transportation costs, but are also potentially closer in terms of “psychic” distance thus facilitating international investments. However, the sample of firms in this study are drawn from just one country (i.e. Italy), so it was not necessary to control for this proximity effect.

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Europe is targeted to the local market”. But Lankes and Venables (1996) point out that all the CEECs have become integrated, though to differing extents, with the EU as many West European firms invest in order to provide inputs for their domestic operations. Labour costs are particularly important for export-oriented investments in upstream manufacturing activities, though lower wages are only attractive insofar as they are not offset by lower productivity (Campos and Kinoshita, 2003). Bevan and Estrin (2004) find that labour costs are negatively associated with FDI, and similar results are reported by Resmini (2000). But lower average wages also mean lower average purchasing power and, to the extent that Italian firms have invested in the CEECs for market-seeking motives, they may well have been attracted by high average wage levels. Furthermore, high levels of remuneration are generally correlated to higher levels of skill. These two offsetting effects mean that many studies have failed to detect a statistically significant effect of labour costs on the choice of location (see, for example, Lansbury *et al.*, 1996; Holland and Pain, 1998; Basile *et al.*, 2003).

Another important factor that has been shown to have an impact on FDI location is agglomeration economies which arise from the concentration and co-location of related economic activities (Nachum, 2000; Sun *et al.*, 2002). The basic rationale is that greater numbers of foreign firms in a particular location generate positive externalities in terms of the availability of skilled workers, specialized services, intermediate products and shared knowledge. Several previous studies on FDI in the CEECs confirm this positive relationship (Resmini, 2000; Campos and Kinoshita, 2003; Cieslik, 2004). There is plenty of anecdotal evidence that the quality of infrastructure is an important determinant of FDI location decision. Unfortunately, it is also a variable that is notoriously difficult to operationalize. Mariotti and Piscitello (1995) and Chang and Park (2005) both use the extent of the transportation network as a proxy variable, while Campos and Kinoshita (2003) used the *per capita* number of telephone lines as a measure of the state of communications infrastructure and found a positive impact upon FDI location.

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Recent research on new institutional economics has highlighted the potential effects of institutional variables on flows of FDI in general, and on entry mode choice and international performance in particular (Henisz, 2000; Delios and Beamish, 1999; Meyer, 2001). Others have focused on the impact of institutional factors on location. For instance, both Grosse and Trevino (2005) and Brada *et al.* (2003) have shown that levels of political risk in CEEC host economies are negatively correlated with inflows of foreign investment, as investors perceive a less favourable investment climate and higher transaction costs.

Several researchers have addressed the effects of liberalization on FDI in various regions of the world, though most have concentrated on the impact of privatization of previously State-owned firms and/or trade liberalization. For instance, Trevino *et al.* (2002) found a positive relationship between privatization and FDI in Latin America, and suggest that this is because privatization policies are seen by foreign investors as an indication of a country's positive attitude towards private firms. Various studies have investigated the link between trade openness and FDI, but with mixed results. Wheeler and Mody (1992) found that Brazil and Mexico attracted large inflows in the 1980s despite low levels of trade openness, but several more recent studies (Sin and Leung, 2001; Sun, Tong and Yu, 2002) seem to confirm a positive relationship between external trade liberalization and foreign capital inflows.

There have been few studies of the effects of financial liberalization on FDI, and most empirical analyses have focused on the effects of capital controls. Asiedu and Lien (2004) provide a review and report that older studies had mixed results, but that more recent studies seem to suggest an inverse relationship between capital controls and FDI.

With specific reference to the CEECs, Bevan *et al.* (2004) found that various institutional developments impacted on the flows of investments, the most important of which were privatization and private sector development, banking industry



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reform (though not necessarily the non-banking financial industry), the liberalization of foreign exchange, and the development of the legal system. Brenton *et al.* (1999) reported that external trade liberalization had an impact upon foreign capital inflows. Previous work by the authors has shown that both lower levels of administered prices and higher levels of trade openness are positively related to FDI location (Strange and Majocchi, 2007).

This study builds upon this stream of literature. As noted in the introduction, the process of economic liberalization is multi-faceted and involves, *inter alia*, market liberalization, trade liberalization and financial liberalization. All seven CEECs have undergone massive structural and institutional changes since the beginning of the 1990s, though the extent of these changes has not been uniform. We hypothesize that the relative speed of these changes has had an impact upon the distribution of FDI among the seven countries.

As Bevan *et al.* (2004) stress, the creation of markets has been the main objective in the transition of the formerly centrally-planned economies of the CEECs, and a crucial element has been the liberalization of prices for goods and services. Domestic price liberalization should promote competition and reduce bureaucratic interference, weaken the power of incumbent firms, and create new business opportunities for efficient firms. We would thus expect foreign firms to favour countries where the government does not interfere unduly in the workings of the market, where market forces thus guide the allocation of resources, and where, *ceteris paribus*, there is a “level playing field” so that they are not subject to discrimination. Furthermore, we would expect such considerations to be all the more important for firms whose principal motivation for FDI is market-seeking. Service firms are likely to be primarily concerned with the domestic market, while it is likely that a substantial part of Italian manufacturing FDI in Eastern Europe is associated with the production of goods for export to the EU and elsewhere. Our first pair of hypotheses are thus:

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**Hypothesis 1a:** *Foreign firms are more likely to locate in countries where the extent of market liberalization is high.*

**Hypothesis 1b:** *Foreign service firms are likely to be more strongly influenced in their location choices by market liberalization than foreign manufacturing firms.*

If the creation of domestic markets has been an important objective for the CEECs, so, too, has been improved access to international markets, as is evident from the brief account of the countries' negotiations on EU accession. These developments will clearly interest foreign firms, and we would expect investors to favour countries which are already substantially engaged in trade with the rest of the world, as not only does this suggest a certain intent by the host country government, but it should also be associated with more efficient import/export channels. Furthermore, it has been shown that countries that are more open to trade are likely to have better property rights protection (Ayyagari *et al.*, 2005), better macroeconomic policies and be less prone to corruption (Bonaglia *et al.*, 2001; Gokcekus and Knorich, 2006). Weak property rights are a considerable disincentive to FDI (Oxley, 1999; Smarzynska, 2002), whilst corruption is analogous to a tax as it raises the costs of doing business and has been negatively linked to FDI flows (Grosse and Trevino, 2005). We would therefore expect countries that are more open to international trade to be more attractive to foreign investors and, following the same logic as above, that this to be the case *a fortiori* for manufacturing firms. Our second pair of hypotheses are thus:

**Hypothesis 2a:** *Foreign firms are more likely to locate in countries where the extent of trade liberalization is high.*

**Hypothesis 2b:** *Foreign manufacturing firms are likely to be more strongly influenced in their location choices by trade liberalization than foreign service firms.*

The process of financial liberalization involves, *inter alia*, liberalization of the domestic financial industry and the removal of discrimination between foreign and domestic providers of financial services. The liberalization of the domestic financial

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industry requires the elimination of controls on credit allocation and on deposit/lending rates, and more generally a diminution in the role of the State in favour of allowing the market to allocate resources. In principle, this should lead to the entry of new domestic providers of financial services, with the resultant increase in competition giving rise to higher economic growth rates, enhanced product variety and improved efficiency. A more efficient system allows the deployment of funds towards those firms that are able to generate the highest returns on their activities. Thus, it is likely that greater financial liberalization will be associated with the entry and growth of profitable businesses, and the improved provision of goods and services both to final customers and to other businesses in the host economy (Demirgüç-Kunt and Maksimovic, 1998; Rajan and Zingales, 1998; Beck *et al.*, 2000; Wurgler, 2000; Bekaert *et al.*, 2005). Beck *et al.* (2005) report that financial development stimulates the growth of small firms more than large firms. These developments enhance the attractiveness of a particular host country to a foreign investor both directly and indirectly through the possibility of more and cheaper supplies of intermediate goods and services. Furthermore, manufacturing firms in general are more reliant than service firms on supplies of intermediate goods and services. Thus, the indirect benefits accruing from the greater selection of potential suppliers and the cheaper supplies of intermediate goods and services should be more substantial for manufacturing firms. Our third pair of hypotheses are thus:

***Hypothesis 3a:*** *Foreign firms are more likely to locate in countries where the extent of financial liberalization is high.*

***Hypothesis 3b:*** *Foreign manufacturing firms are likely to be more strongly influenced in their location choices by financial liberalization than foreign service firms.*

As regards the removal of discrimination between foreign and domestic banks, there are several conflicting effects. On the one hand, the entry of foreign banks may well lead to enhanced competition, the introduction of new financial instruments, improved access to international capital markets,

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better compliance with international standards, and greater stability (Meltzer, 2000). If this is indeed the case, then we would expect a greater presence of foreign banks to have a positive impact on FDI location. On the other hand, Stiglitz (1993) suggested that domestic banks might incur extra costs and domestic firms receive less access to funds as a result of foreign bank entry. Weller (2000a, 2000b) notes that transnational banks have been particularly active in Eastern Europe through the 1990s, but that the fast growth in their loans does not reflect substantial inflows of capital. He points out that transnational banks tend to expand their global operations to follow large TNC clients to whom they provide a range of services. Transnational banks introduce some funds from overseas but also raise funds in the host country, with the result that domestic banks lower their credit exposure and become less (rather than more) efficient.<sup>4</sup> Weller (2000a) emphasizes that greater competition and less access to capital raise the chance of domestic bank failure, but that this risk may be mitigated by favouring loans to less risky clients. He suggests that loans to large TNCs or to large domestic corporations are less risky than loans to SMEs or to start-up companies. Claessens *et al.* (2001) found that foreign bank entry had a destabilizing effect on financial systems in developing countries. And, Lensink and Hermes (2004) showed that the effects of foreign bank entry depended upon the level of development of the banking industry in the host economy, and typically pushed up costs and margins in the short-term in developing countries. Our sample consists primarily of SMEs rather than large TNCs, and these SMEs are likely to want to raise credit for their working capital needs through the host country banking system so as to limit their foreign exchange exposure. Thus, given the CEEC context of our study, our fourth hypothesis is:

***Hypothesis 4:*** *Foreign SMEs are less likely to locate in transition economies where the financial industry is relatively open to foreign banks.*

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<sup>4</sup> Focarelli and Pozzolo (2000) found that foreign banks were more represented in countries where the domestic banking industry was less efficient.

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## 4. Data and methodology

This section is divided into five sub-sections. In the first sub-section, we explain how the dataset of 272 foreign affiliates of Italian TNCs in Eastern Europe was constructed and outline some of its main characteristics. The second and third sub-sections detail respectively the dependent variable and the explanatory variables included in the regression model. The fourth sub-section provides a brief description of the conditional logit model and its interpretation. And, the fifth and final sub-section provides some descriptive statistics on the explanatory variables for the seven CEECs.

### 4.1 Data sources and sample characteristics

Each of the 272 observations in the sample corresponds to an affiliate of an Italian firm in one of the seven CEECs considered in the study. The observations are drawn from a larger database, constructed specifically for this study, which contains data on 969 Italian firms<sup>5</sup> with investments in at least one of the seven CEECs. Basic information on the investments was gathered from several different sources, such as the Amadeus database, the local branches of the Italian Institute for the Promotion of External Trade (ICE), and the seven Italian-CEEC Chambers of Commerce. Each of the 969 firms were contacted first by mail, and then by e-mail and/or telephone and asked to participate in a survey on Italian investments in the area, but only 288 firms (29.5% response rate) replied. These firms were asked a number of questions, though the only ones relevant to the present article were the industry and year of establishment of the CEEC affiliates. Sixteen of these firms had undertaken their investments before 1990 and were dropped from the sample, so the final sample consisted of 272 affiliates which had been established between 1990 and 2003. The geographical distribution of these investments is shown in table 1.

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<sup>5</sup> An invitation letter to participate in the research project was sent to 1552 Italian firms which were believed to have investments in the CEEC countries. 583 letters were returned undelivered, so only the remaining 969 were considered active firms.

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**Table 1. The sample distribution of firms in the seven countries**

Country	Number of firms in sample	Percentage of total number of firms in sample (per cent)	Average Italian FDI stock, 1990-2003 (billions of dollars)	Percentage of total Italian FDI stock (per cent)
Bulgaria	29	11	1 398.9	2.5
Czech Republic	13	5	13 356.2	23.9
Hungary	16	6	15 478.3	27.7
Poland	144	53	17 754.7	31.8
Romania	8	3	3 375.4	6.0
Slovakia	26	9	2 444.6	4.4
Slovenia	36	13	1 997.0	3.6
Total	272	100	55 805.4	100.0

*Source:* UNCTAD, *World Investment Report* (various years).

Over half are located in Poland, and a further quarter in Slovenia and Bulgaria combined. These figures on the numbers of investments may be compared with the data on the total value of the Italian FDI stock; it appears as though Poland may be over-represented and Hungary and the Czech Republic under-represented in the sample. However, we are not comparing like with like. Data regarding the size of the investing firms are unfortunately incomplete, but only 27 of the 272 firms were publicly listed either in Italy or in the host economy, so we can assume that the sample consists primarily of small and medium-sized firms. The sample thus corresponds well to the traditional structure of the Italian economy (Savona and Schiattarella, 2004), but does not include any really large-scale investments. Further efforts are needed to ascertain the representativeness of the sample; in the meantime, the results should be interpreted with caution. Almost two-thirds of the firms in the sample (172 firms) were classified as manufacturing, whilst the remaining 100 were active in the services sector.

#### **4.2 The dependent variable**

The dependent variable in the conditional logit model is the choice among the seven alternative locations for the 272

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East European affiliates. Most of the previous econometric studies of FDI location in Eastern Europe have used aggregate inter-country FDI flows or stocks as the dependent variable. In this study, we focus on the individual FDI projects for three main reasons. First and foremost, location choices are strategic decisions made by firms, and it is thus preferable to look at the determinants of these individual decisions rather than the resultant flows of FDI. Furthermore, inter-country FDI flows are not only influenced by the factors which affect firms' FDI decisions, but also other macro factors which are likely to be irrelevant at the micro level. Thus a variable such as GDP in the home country might have an impact upon aggregate FDI flows (Bevan *et al.*, 2004), but it is not clear why it should affect the firm's choice of host country. Second, FDI data correspond to flows of funds across national boundaries, some of which may relate to new investments and some to past investments. It is, thus, quite possible for there to be a recorded FDI flow in a particular year, but for there to have been no new FDI project. Furthermore, FDI projects may take place with little or no aggregate FDI flow, either if the capital is raised in the host economy or if there are concomitant disinvestments. Third, the lagged value of the FDI stock is often used as a measure of agglomeration economies in the host economy and included as an explanatory variable. If FDI flows/stocks are the dependent variable, then OLS estimation may potentially generate inconsistent estimates (Campos and Kinoshita, 2003, p. 13).

### **4.3 The explanatory variables**

Several of the previous studies (see, for example, Bevan *et al.*, 2004; Bevan and Estrin, 2004; Grosse and Trevino, 2005) have used various EBRD index numbers to capture the various dimensions of transition. Unfortunately, these index numbers are only available for the CEECs from 1994 onwards while our data on Italian investments extended back to 1990; so we were obliged to look for alternative measures. We initially included two measures related to the extent of market liberalization. One is the percentage of prices that were administratively controlled (ADM), rather than being set by market forces. The other is government expenditure as a percentage of GDP (GCON). Both

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coefficients are expected to be negative. The proxy for trade liberalization (OTRA) is the ratio of total exports and imports to GDP (Resmini, 2000). The extent of financial liberalization (FLIB) is captured by the proportion of total credit provided by the domestic banking industry to private investors (Fries and Taci, 2002). Both these coefficients are expected to be positive. And, the openness of the financial system (OFIN) is measured by the proportion of foreign banks to total banks operating in each country (Claessens *et al.*, 2001); a negative coefficient is expected.

Several other variables were included in the model to control for the effects that had been established in the previous literature. To capture the effects of market size and potential, we included two variables. The first is population (POP), which measures the current size of the market. The second is the GDP growth rate (GROW), which relates to the future potential of the market. We would expect foreign investors to be attracted not only to larger markets but also to more dynamic markets. Hence, we would expect the coefficients of both variables to have positive signs.

We include GDP per capita (PCGDP) as an explanatory variable to capture the combined impact of labour costs and purchasing power: we would expect this variable to have a positive coefficient if the firms in the sample primarily have market-seeking motives, and a negative coefficient if low labour costs are an important motivation. As regards the availability of labour, we include two variables. The first is the rate of unemployment (UNEM), with the expectation that a high rate should attract FDI not just because more labour is available but also because of the depressing effect of the excess supply of labour on wages at the margin. The second is a human capital variable (HUM), measured by the proportion of the labour force with tertiary education. We would expect this to have a positive effect.

Another factor that is generally considered as important in attracting FDI is the quality of infrastructure. Given the span



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of time covered by our sample and the relative scarcity of information on infrastructure in the early 1990s in the CEECs, we have to rely on a very simple measure, viz the number of telephone lines (fixed and mobile) per 100 inhabitants (TEL). This variable has been used in other similar studies (e.g. Campos and Kinoshita, 2003) and is a reasonable proxy for the state of communications infrastructure. We would expect this variable to have a positive impact upon FDI location. However, we do not presently have data on a suitable proxy for transportation infrastructure that cover the period of our analysis.

Agglomeration economies have been shown in numerous studies to have a positive impact upon FDI. This argument is particularly strong when dealing with SMEs, and Italian SMEs in particular, given their well-known tendency to locate in clusters. Country-specific knowledge tends to be passed from firm to firm, and Italian firms often pursue a follow-my-leader strategy (Meyer and Skak, 2002). More FDI generally leads to better infrastructure, better trained workers, a finer division of labour, the provision of more specialized support services and, in general, lower production costs. Following Wheeler and Mody (1992), we use the natural logarithm of the cumulative FDI stock (LFDI) in each country to proxy agglomeration economies and expect this to have a positive impact on location choice.

Detailed definitions of all the explanatory variables are provided in table 2. Following the practice in previous studies, the data for all the location-specific attributes relate to the year before the relevant affiliate was established: thus, for example, we use data for 1989 for FDI projects established in 1990, and data for 2002 for FDI projects established in 2003.

#### **4.4 The conditional logit model**

The dependent variable in the regression model is a discrete choice between the seven alternative locations in Eastern Europe (i.e. Bulgaria, the Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia). As all the explanatory variables are location-specific attributes, the appropriate estimation technique is conditional logit. Each Italian investor

**Table 2. The explanatory variables**

Variable	Definition	Source
POP	Population (million)	EBRD
PCGDP	GDP per capita at current prices (thousands of dollars)	World Bank
GROW	Annual GDP growth rate at constant prices (per cent)	EBRD
UNEM	Unemployment rate (per cent)	EBRD
TEL	Number of telephone lines (fixed and mobile) per 100 inhabitants	EBRD
HUM	Percentage of labour force with tertiary education	World Bank
LFDI	The natural log of the cumulative stock of inward FDI (millions of dollars)	UNCTAD
GCON	Government expenditure as a percentage of GDP (per cent)	World Bank
ADM	The percentage of prices administratively controlled (per cent)	EBRD
OTRA	Total exports and imports as a percentage of GDP (per cent)	World Bank
FLIB	Credit to the private sector as a proportion of total domestic credit provided by the banking industry	World Bank
OFIN	The number of foreign banks as a percentage of the total number of banks (per cent)	EBRD

*Source:* UNCTAD, *World Investment Report*; EBRD, *Transition Report*; World Bank, *World Development Indicators*.

is thus faced with a choice of  $J = 7$  alternative locations, and will choose to locate its affiliate  $i$  in country  $j$  so as to maximize the expected future profits from its investment. More formally, affiliate  $i$  will be located in country  $j$  if and only if:

$$R_{ij} > R_{ik} \text{ for all } k \neq j, \quad (k = 1, 2, \dots, J)$$

where  $R_{ij}$  = expected profit earned by affiliate  $i$  if it is located in country  $j$ .

Let  $Y_i$  be a random variable that indicates the location chosen for affiliate  $i$ . Then the probability of choosing a specific country  $j$  depends upon the attributes of that country relative to the attributes of the other seven countries in the choice set. If  $\mathbf{X}_j$  is a vector of location-specific attributes for country  $j$  and  $\beta$  is a vector of parameters to be estimated, then, following McFadden (1974), the probability of locating in country  $j$  (assuming that the disturbance terms are independently distributed and follow a Weibull distribution) is:

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$$\text{Prob}(Y_i = J) = \frac{e^{\beta X_j}}{\sum_{k=1}^7 e^{\beta X_k}}$$

Estimates of  $\beta$  may be obtained through maximum likelihood estimation. If the explanatory variables have been entered linearly, then a small change  $\Delta x$  in variable  $x$  leads to a change in the probability  $P$  that a firm will choose a particular location,  $\Delta P = \beta_x \cdot P \cdot (1 - P) \cdot \Delta x$ , where  $\beta_x$  is the coefficient associated with variable  $x$ . The effect of  $\Delta x$  thus depends upon the initial probability of choosing location  $j$ , which in turn depends upon each attribute set (Greene, 2000, p. 863). The coefficient  $\beta_x$  is thus not the marginal effect, though it will have the same sign. In the empirical analysis below, we report estimates of elasticities: i.e. the percentage changes in the probability of firm location in a particular host country as a result of 1% changes in the various measures of liberalisation.

The overall significance of the estimated equations may be assessed by a likelihood ratio test. The test statistic  $\lambda$  follows a *chi*-squared distribution with degrees of freedom equal to the number of restrictions imposed by the null hypothesis:

$$\lambda = 2 [ L(m) - L(0) ] ,$$

where  $L(m)$  is the log-likelihood of the chosen model, and  $L(0)$  is the log-likelihood of a constrained model where all the slope coefficients are set equal to zero. Model fit may be assessed by calculating the pseudo- $R^2$  as follows:

$$\text{pseudo-}R^2 = 1 - \frac{L(m)}{L(0)} .$$

It should be noted that the pseudo- $R^2$  is not analogous to the  $R^2$  in linear regression though there is an empirical relationship between the two, and a pseudo- $R^2$  of 0.2 represents an  $R^2$  of approximately 0.4 (Hensher *et al.*, 2005, p. 338).

#### 4.5 The characteristics of the alternative locations

Table 3 provides some basic descriptive statistics for the explanatory variables in each of the seven countries. More specifically, the table reports the values of the explanatory variables in the years 1990 and 2002.

**Table 3. Descriptive statistics for the explanatory variables, 1990 and 2002**

Country	Year	POP	PCGDP	GROW	UNEM	TEL	HUM	LFDI	GCON	ADM	OTRA	FLIB	OFIN
Bulgaria	1990	9.0	0.950	- 9.1	1.50	24.2	17.6	2.05	64.30	70.0	91	6.8	0.0
	2002	8.0	1.984	4.9	17.80	37.5	23.3	3.56	37.20	21.3	113	61.6	76.5
Czech Rep	1990	10.3	2.700	- 0.4	0.80	15.8	9.6	3.13	60.10	28.0	25	86.1	0.0
	2002	10.2	6.742	1.5	8.80	37.8	11.6	4.58	46.60	12.4	125	52.0	70.3
Hungary	1990	10.4	3.300	- 3.5	2.50	9.6	13.4	2.81	57.00	16.0	63	43.9	34.4
	2002	9.9	6.581	3.5	5.80	36.1	16.5	4.55	44.00	18.9	130	59.3	71.1
Poland	1990	38.2	2.100	- 11.6	6.10	8.6	13	2.13	32.70	11.0	49	31.2	0.0
	2002	38.6	4.924	1.4	17.76	29.5	12.9	4.68	44.10	1.0	63	49.7	76.3
Romania	1992	23.2	1.300	- 5.0	3.00	10.5	7.6	0.60	39.00	85.0	39	36.6	0.0
	2003	22.4	2.091	5.0	9.97	18.4	9.1	3.95	32.70	20.4	77	58.3	77.4
Slovakia	1990	5.3	2.280	- 0.4	1.50	13.5	41.4	1.94	60.10	22.0	103	53.4	0.0
	2002	5.4	4.403	4.6	18.53	26.1	11.5	3.89	48.40	21.1	151	49.8	83.3
Slovenia	1990	2.0	6.400	- 4.7	4.70	22.0	15.1	2.79	49.60	24.0	116	77.9	2.5
	2002	2.0	11.026	3.3	11.26	40.7	16.6	3.61	42.60	14.0	114	87.4	27.3

*Source:* EBRD, World Bank, UNCTAD, various years.

*Note:* See Table 2 for details of units and sources.

The data show quite clearly the paths undertaken by the seven countries in the process of transition. All the countries, with different degrees of speed and success, have experienced substantial increases in *per capita* income, though there have also been accompanying increases in the rates of unemployment. The GDP growth rates were all negative in the years immediately after the fall of the Communist regimes, but have all been positive in recent years. Moreover, all the countries have pursued processes of market, trade and financial liberalization that have led to decreases in the roles of their governments in their domestic economies and higher levels of integration into the world economy. All seven countries show substantial increases

in their ratios of trade to GDP and their openness of their financial systems to foreign banks, and marked reductions in both the proportion of administered prices (except for Hungary) and government expenditure as a percentage of GDP (except for Poland). Financial liberalization has also progressed in most countries, with the exception of the Czech Republic and Slovakia. It should also be noted that population (POP) has remained relatively constant in all seven countries.

The correlation matrix, together with average values and standard deviations of the explanatory variables, are provided in table 4.

**Table 4. The correlation matrix of the explanatory variables**

Variable	Mean	s.d.	POP	PCGDP	GROW	UNEM	TEL	HUM	LFDI	GCON	ADM	OTRA	FLIB	OFIN
POP	13.95	11.67	1.00											
PCGDP	3.499	2.286	-.3897	1.00										
GROW	-0.774	6.10	.0173	.3641	1.00									
UNEM	9.38	4.86	.0226	.1407	.2204	1.00								
TEL	21.91	9.01	-.4904	.5293	.4041	.3494	1.00							
HUM	17.34	10.15	-.3533	-.0894	.0595	.2716	.0973	1.00						
LFDI	7.16	1.93	.0557	.4217	.4507	.3224	.4769	-.1475	1.00					
GCON	45.72	8.73	-.4499	.0533	-.1382	-.3200	-.0999	.2688	-.0557	1.00				
ADM	21.19	15.12	-.1551	-.2713	-.1954	-.3519	-.0791	-.0583	-.6648	.1371	1.00			
OTRA	85.37	32.53	-.6841	.4403	.2677	.2562	.7017	.4970	.2117	.0735	-.0872	1.00		
FLIB	0.522	0.233	-.3519	.5893	.1953	-.0561	.3421	.0362	.3245	-.0568	-.2374	.2576	1.00	
OFIN	0.255	0.230	-.00312	.1418	.4349	.1942	.4375	-.0238	.7716	-.0896	-.4409	.2900	.1909	1.00

*Source:* authors' analysis.

Two correlations are quite high exceeding 0.7: the first is the correlation between communications infrastructure (TEL) and trade liberalization (OTRA), and the second is the one between agglomeration economies (LFDI) and the openness of the financial system (OFIN). To test for the severity of the multicollinearity, we calculated variance inflation factors (VIF) for each of these four variables by running OLS regressions with each as a function of all the other explanatory variables (Greene, 2003). The respective VIFs were 3.70 (TEL), 3.33 (OTRA), 4.17 (LFDI) and 4.17 (OFIN). The common rule of thumb is that the multicollinearity is severe if the VIF > 5, but all values were smaller than this value.

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## 5. Discussion

This discussion section is divided into three parts. In the first part, we estimate the model for the full sample of 272 affiliates using all twelve explanatory variables which have been hypothesized to have an influence on firms' FDI location decisions. Two of the twelve variables are discarded on the grounds of a lack of statistical significance, which leaves a "base" model with ten explanatory variables. In the second part of the section, we estimate this base model separately for the manufacturing affiliates and for the service affiliates, and compare the two sets of regression coefficients. Finally, in the third section, we derive estimates, for each of the seven countries, of both the direct and the cross-elasticity effects of changes in the liberalization variables. This enables us to assess the potential impact on the probability of further inward FDI in each country, not only of further liberalization within that country, but also of further liberalization in the other six countries.

### 5.1 Estimation of the base model

The coefficient estimates from the conditional logit model using the full sample of 272 affiliates are presented in table 5. Three different versions of the model are presented, each of which is highly significant when assessed by the chi-squared statistics. As noted above, the coefficients do not measure the marginal effects, but they do have the same sign.

The first model (1) reports the coefficient estimates when all twelve explanatory variables are included. The signs of two of the variables (HUM and GCON) are as expected, but are statistically insignificant. GCON is one of the two proxies for market liberalization and therefore its omission, and the retention of the other proxy (ADM), should not cause any problems of omitted variable bias. The human capital variable (HUM) has a very low t-statistic and is not highly correlated with any other variable; so its omission is also justified. The model (2) constitutes our base model. The chi-squared statistic is highly significant, and the pseudo- $R^2$  has an acceptable value of 0.236.

**Table 5. The conditional logit model: coefficient estimates**

Explanatory variables	Model (1)	Model (2)	Model (3)	Model (4) <i>Manufacturing</i>	Model (5) <i>Service</i>
<b>Control variables</b>					
POP	0.0864*** (0.0149)	0.0872*** (0.0124)	0.0598*** (0.0076)	0.0829*** (0.0156)	0.0880*** (0.0219)
PCGDP	-0.116* (0.065)	-0.124** (0.059)	0.033 (0.041)	-0.063 (0.074)	-0.239** (0.107)
GROW	0.0406* (0.0232)	0.0423* (0.0226)	0.0397** (0.0226)	0.0392 (0.0274)	0.0590 (0.0428)
UNEM	0.104*** (0.029)	0.107*** (0.027)	0.127*** (0.027)	0.089*** (0.034)	0.153*** (0.050)
TEL	0.0557** (0.0256)	0.0529** (0.0222)	0.0485*** (0.0175)	0.0167 (0.0294)	0.1026*** (0.0373)
HUM	0.0047 (0.014)				
LFDI	0.227* (0.122)	0.212** (0.978)	0.137** (0.065)	0.172 (0.127)	0.347** (0.170)
<b>Liberalization variables</b>					
GCON	-0.0035 (0.0144)				
ADM	-0.011 (0.0093)	-0.0123 (0.0088)		-0.0100 (0.0114)	-0.0206 (0.0152)
OTRA	1.725*** (0.605)	1.845*** (0.471)		2.074*** (0.594)	1.538* (0.839)
FLIB	1.346** (0.547)	1.394*** (0.511)		1.559** (0.688)	0.661 (0.871)
OFIN	-1.535 (0.987)	-1.594* (0.950)		-1.877 (1.261)	-1.820 (1.577)
sample size	272	272	272	172	100
log-likelihood	-404.65	-404.70	-419.22	-261.32	-137.43
chi-squared	249.28***	249.17***	220.13***	146.76***	114.33***
pseudo-R <sup>2</sup>	0.236	0.236	0.208	0.219	0.294

*Source:* authors' analysis.

*Notes:* (1) The full sample consists of 272 firms; the number of alternative locations is seven.

(2) Standard errors are in brackets. The symbol \* denotes that the coefficient is significant at the 10% level, \*\* that the coefficient is significant at the 5% level and \*\*\* at the 1% level.

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All the estimated coefficients have the expected signs, and all except one are significant at the 10% level or better.

The results confirm the established findings that market size and potential, the availability of labour, the quality of infrastructure, and agglomeration economies all have positive effects upon the FDI location decision. The coefficient of PCGDP is negative and statistically significant suggesting that, at least for the Italian firms in the sample, low labour costs are more important in the FDI location choice than high levels of purchasing power. A word of caution is required. We should note that the population figures for each of the countries do not change markedly between 1990 and 2002 – see table 3. The coefficient of the POP variable may thus be picking up, not only the effects of relative market size, but also the average influence of various unspecified effects that vary between locations.

The results are also encouraging with respect to the effects of economic liberalization. The coefficient of the market liberalization variable (ADM) is negative as expected, because greater liberalization implies a smaller proportion of prices that are administratively controlled. However, the p-value of the coefficient is just over 10%. There is thus some, albeit weak, support for hypothesis 1a. Interestingly, Bevan *et al.* (2004) also found that the liberalization of domestic prices had a positive, but statistically insignificant, effect on FDI inflows. The coefficient of the trade liberalization variable (OTRA) is positive, as expected, and highly statistically significant lending strong support to hypothesis 2a. Similarly, the coefficient of the financial liberalization variable (FLIB) is also positive and highly statistically significant, lending strong support to hypothesis 3a. Finally, the significant negative sign for the OFIN variable appears to confirm that the entry of transnational banks actually leads to a reduction in the level of credit provided by domestic banks. This supports the view of Weller (2000b) who notes that prime examples of this connection between transnational banks and less credit “can be found in the economies of Central and Eastern Europe. In these areas MNBs have quickly gained significant market shares, while the credit supply, especially to smaller companies, has been stagnant or



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declining” (Weller, 2000b, p. 4). As our sample is primarily made up of SMEs, and their affiliates are likely to want to raise capital locally to finance their working capital requirements, any potential problems with the availability of credit would not be welcome. Our results suggest that such concerns are taken into account by SMEs in making their FDI location decisions. Hypothesis 4 is thus supported.

In summary, we have demonstrated that market, trade, and financial liberalization all have impacts upon the location decisions of foreign investors, as does the openness of the financial system to foreign banks. The combined significance of these four variables may be assessed by removing them, as in model (3). This gives rise to a very significant loss of explanatory power ( $\lambda = 29.04$ ,  $p < 0.01$ ). The coefficients of the included variables retain their signs and statistical significance, with the exception of the coefficient of PCGDP which becomes positive and insignificant. This suggests that this coefficient may be picking up the net effects of the omitted variables.

## **5.2 Comparison of manufacturing and service firms**

The full sample consisted of 172 manufacturing and 100 service firms. As has been hypothesized above, it is reasonable to assume that there might be differences between these two groups of firms in terms of the sensitivity of location choice to changes in the explanatory variables. We thus ran two further regressions – see table 5 - using the base model: one with the manufacturing firms (model 4) and the other with the service firms (model 5).

Both regression models were highly statistically significant, with a healthy pseudo- $R^2$  of 0.294 for the regression on the services sector firms, and the corresponding coefficients in both regressions had the same signs. Five of the control variables were statistically significant in the regression for service firms, whereas only POP and UNEM were significant for the manufacturing firms. Furthermore, the absolute sizes of the coefficients for all six control variables were larger for the services sector firms than for the manufacturing firms, implying

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that the former were rather more sensitive to changes in these location attributes.

As regards the liberalization variables, the (absolute) value of the coefficient of the market liberalization variable (ADM) was larger for the service firms, though not significantly so; thus there is only weak support for hypothesis 1b. And, the values of the coefficients of both the trade (OTRA) and financial liberalization (FLIB) variables were larger for the manufacturing firms, though again the differences were not statistically significant; so there is only weak support for hypotheses 2b and 3b. Further investigation of these hypotheses will require a larger sample of firms.

### **5.3 The expected impacts of liberalization**

Perhaps the most interesting results to emerge from the analysis are the estimated elasticities reported in tables 6-9. These elasticities show the change in the probability of FDI location in a particular host economy arising from a change in one of the liberalization variables. Estimates are provided for the manufacturing and service firms separately. The diagonal elements in these tables show the estimated direct elasticities of changes for each country in each of the four liberalization variables in that country, and are highlighted in bold type. The off-diagonal elements in the tables show the cross-elasticities – the effects of greater liberalization in one country on the probabilities of FDI location in the other six countries. Large (absolute) values indicate strong effects. Thus, in table 7(a) for example, a 1% increase in the trade liberalization variable (OTRA) for Bulgaria would lead to an estimated 1.8% increase in the probability of manufacturing firms investing in Bulgaria, whilst a similar 1% increase in the trade liberalization variable for Poland would only lead to an estimated 0.5% increase in the probability of manufacturing firms investing in Poland.

Table 6 shows the effects of market liberalization on the probabilities of manufacturing firm and service firm FDI location in each of the seven countries.

**Table 6. The impact of market liberalization on FDI location by (a) manufacturing firms, and (b) service firms**

Change in ADM in country	Estimated elasticities with respect to the probability of firm location						
	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia	Slovenia
(a)							
Bulgaria	<b>- 0.272</b>	+ 0.023	+ 0.020	+ 0.021	+ 0.021	+ 0.021	+ 0.022
Czech Rep.	+ 0.012	<b>- 0.173</b>	+ 0.013	+ 0.013	+ 0.014	+ 0.014	+ 0.014
Hungary	+ 0.007	+ 0.007	<b>- 0.134</b>	+ 0.006	+ 0.006	+ 0.007	+ 0.006
Poland	+ 0.051	+ 0.051	+ 0.050	<b>- 0.052</b>	+ 0.054	+ 0.051	+ 0.053
Romania	+ 0.013	+ 0.016	+ 0.013	+ 0.014	<b>- 0.248</b>	+ 0.014	+ 0.017
Slovakia	+ 0.022	+ 0.023	+ 0.022	+ 0.022	+ 0.021	<b>- 0.177</b>	+ 0.022
Slovenia	+ 0.030	+ 0.031	+ 0.030	+ 0.032	+ 0.029	+ 0.031	<b>- 0.179</b>
(b)							
Bulgaria	<b>- 0.498</b>	+ 0.105	+ 0.075	+ 0.085	+ 0.084	+ 0.087	+ 0.111
Czech Rep.	+ 0.023	<b>- 0.366</b>	+ 0.024	+ 0.023	+ 0.023	+ 0.029	+ 0.039
Hungary	+ 0.016	+ 0.018	<b>- 0.307</b>	+ 0.016	+ 0.017	+ 0.019	+ 0.014
Poland	+ 0.108	+ 0.097	+ 0.104	<b>- 0.085</b>	+ 0.114	+ 0.101	+ 0.114
Romania	+ 0.011	+ 0.015	+ 0.009	+ 0.011	<b>- 0.484</b>	+ 0.011	+ 0.016
Slovakia	+ 0.029	+ 0.034	+ 0.031	+ 0.029	+ 0.030	<b>- 0.360</b>	+ 0.031
Slovenia	+ 0.033	+ 0.044	+ 0.029	+ 0.033	+ 0.030	+ 0.034	<b>- 0.389</b>

*Source:* authors' analysis.

*Note:* The figures in each row of the table show the effects of market liberalization in the country in the first column on FDI location in all seven CEECs.

The figures along both leading diagonals are negative, as high values of the ADM variable correspond to low degrees of liberalization, whilst the off-diagonal elements are all positive. The following points are of interest. First, the direct elasticities are largest for Bulgaria and Romania, and smallest for Poland, suggesting that market liberalization has a potentially greater effect in heavily regulated economies than in economies where market forces already hold sway to a large extent. Second, the direct elasticities are larger for the service firms than for the manufacturing firms in all seven countries, suggesting that service firms are more susceptible to domestic market liberalization as manufacturing firms are more concerned with export markets. The differences are most pronounced in Bulgaria and Romania, and least evident in Poland. Third, the cross elasticities are largest with respect to liberalization in Poland

than with respect to the other countries. When Poland chooses to liberalize, this has a marked effect on the other CEECs, but market liberalization efforts in the other countries do not have such a wide impact. In contrast, the cross elasticities are smallest with respect to liberalization in Hungary.

Table 7 shows the effects of trade liberalization on the probabilities of manufacturing firm and service firm FDI location in each of the seven countries.

**Table 7. The impact of trade liberalization on FDI location by (a) manufacturing firms and (b) service firms**

Change in OTRA							
in country	Estimated elasticities with respect to the probability of firm location						
(a)	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia	Slovenia
Bulgaria	<b>+ 1.847</b>	- 0.144	- 0.157	- 0.142	- 0.142	- 0.149	- 0.138
Czech Rep.	- 0.133	<b>+ 1.650</b>	- 0.132	- 0.124	- 0.144	- 0.135	- 0.110
Hungary	- 0.096	- 0.087	<b>+ 1.792</b>	- 0.082	- 0.084	- 0.091	- 0.075
Poland	- 0.500	- 0.480	- 0.510	<b>+ 0.496</b>	- 0.503	- 0.494	- 0.488
Romania	- 0.065	- 0.069	- 0.064	- 0.066	<b>+ 1.084</b>	- 0.063	- 0.058
Slovakia	- 0.281	- 0.288	- 0.285	- 0.263	- 0.266	<b>+ 2.173</b>	- 0.264
Slovenia	- 0.336	- 0.344	- 0.336	- 0.344	- 0.322	- 0.349	<b>+ 1.965</b>
(b)							
Bulgaria	<b>+ 1.243</b>	- 0.209	- 0.227	- 0.224	- 0.216	- 0.222	- 0.209
Czech Rep.	- 0.075	<b>+ 1.121</b>	- 0.095	- 0.076	- 0.084	- 0.091	- 0.061
Hungary	- 0.084	- 0.091	<b>+ 1.553</b>	- 0.083	- 0.089	- 0.098	- 0.063
Poland	- 0.425	- 0.418	- 0.452	<b>+ 0.342</b>	- 0.447	- 0.439	- 0.395
Romania	- 0.020	- 0.019	- 0.022	- 0.022	<b>+ 0.852</b>	- 0.021	- 0.017
Slovakia	- 0.142	- 0.161	- 0.162	- 0.142	- 0.147	<b>+ 1.732</b>	- 0.133
Slovenia	- 0.131	- 0.169	- 0.118	- 0.131	- 0.120	- 0.135	<b>+ 1.552</b>

*Source:* authors' analysis.

*Note:* The figures in each row of the table show the effects of trade liberalization in the country in the first column on FDI location in all seven CEECs.

The figures along both leading diagonals are positive, as high values of the OTRA variable correspond to high degrees of liberalization, whilst the off-diagonal elements are all negative. The following points are of interest. First, the direct elasticities are largest for Slovakia, which is the most open of

the seven countries (see table 3), and smallest for Poland which has the largest domestic market. Second, the direct elasticities are larger for the manufacturing firms than for the service firms in all seven countries, as would be expected as manufacturing firms are typically more engaged in international trade than service firms. Third, the cross elasticities are again larger with respect to trade liberalization in Poland than with respect to the other countries. In contrast, the cross elasticities are smallest with respect to liberalization in Romania.

Table 8 shows the effects of financial liberalization on the probabilities of manufacturing firm and service firm FDI location in each of the seven countries.

**Table 8. The Impact of Financial Liberalization on FDI location by (a) manufacturing firms and (b) service firms**

Change in FLIB							
in country	Estimated elasticities with respect to the probability of firm location						
(a)	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia	Slovenia
Bulgaria	<b>+ 0.469</b>	- 0.041	- 0.049	- 0.035	- 0.038	- 0.042	- 0.029
Czech Rep.	- 0.082	<b>+ 1.106</b>	- 0.082	- 0.083	- 0.090	- 0.088	- 0.086
Hungary	- 0.028	- 0.025	<b>+ 0.546</b>	- 0.025	- 0.024	- 0.027	- 0.024
Poland	- 0.316	- 0.306	- 0.316	<b>+ 0.305</b>	- 0.317	- 0.305	- 0.287
Romania	- 0.038	- 0.041	- 0.038	- 0.038	<b>+ 0.635</b>	- 0.037	- 0.034
Slovakia	- 0.100	- 0.100	- 0.103	- 0.094	- 0.094	<b>+ 0.774</b>	- 0.094
Slovenia	- 0.180	- 0.177	- 0.181	- 0.184	- 0.170	- 0.184	<b>+ 1.046</b>
(b)							
Bulgaria	<b>+ 0.214</b>	- 0.038	- 0.053	- 0.038	- 0.042	- 0.045	- 0.024
Czech Rep.	- 0.029	<b>+ 0.456</b>	- 0.033	- 0.030	- 0.030	- 0.036	- 0.043
Hungary	- 0.014	- 0.015	<b>+ 0.256</b>	- 0.014	- 0.014	- 0.016	- 0.011
Poland	- 0.150	- 0.145	- 0.166	<b>+ 0.120</b>	- 0.164	- 0.157	- 0.131
Romania	- 0.007	- 0.007	- 0.007	- 0.007	<b>+ 0.292</b>	- 0.007	- 0.006
Slovakia	- 0.029	- 0.034	- 0.034	- 0.029	- 0.030	<b>+ 0.355</b>	- 0.028
Slovenia	- 0.039	- 0.050	- 0.036	- 0.039	- 0.036	- 0.041	<b>+ 0.466</b>

*Source:* authors' analysis.

*Note:* The figures in each row of the table show the effects of financial liberalization in the country in the first column on FDI location in all seven CEECs.

The figures along both leading diagonals are positive, as high values of the FLIB variable correspond to high degrees of

liberalization, whilst the off-diagonal elements are all negative. The following points are of interest. First, the direct elasticities are largest for the Czech Republic and Slovenia, both of which are highly liberalized (see table 3), and lowest for Poland. Second, the direct elasticities are considerably larger for the manufacturing firms than for the service firms in all seven countries, suggesting that the availability of efficient domestic suppliers is particularly important for the former. Third, the cross elasticities are again larger with respect to financial liberalization in Poland than with respect to the other countries, and are smallest with respect to liberalization in Romania.

Table 9 shows the effects of greater openness to foreign banking on the probabilities of manufacturing firm and service firm FDI location in each of the seven countries.

**Table 9. The impact of greater openness to foreign banking on FDI location by (a) manufacturing firms and (b) service firms**

Change in OFIN in country	Estimated elasticities with respect to the probability of firm location						
	Bulgaria	Czech Rep.	Hungary	Poland	Romania	Slovakia	Slovenia
(a)							
Bulgaria	<b>- 0.314</b>	+ 0.028	+ 0.038	+ 0.023	+ 0.025	+ 0.030	+ 0.018
Czech R.	+ 0.049	<b>- 0.564</b>	+ 0.050	+ 0.043	+ 0.049	+ 0.046	+ 0.035
Hungary	+ 0.048	+ 0.044	<b>- 0.883</b>	+ 0.040	+ 0.042	+ 0.045	+ 0.036
Poland	+ 0.205	+ 0.194	+ 0.208	<b>- 0.179</b>	+ 0.200	+ 0.185	+ 0.137
Romania	+ 0.026	+ 0.027	+ 0.027	+ 0.022	<b>- 0.380</b>	+ 0.024	+ 0.017
Slovakia	+ 0.056	+ 0.054	+ 0.057	+ 0.046	+ 0.053	<b>- 0.380</b>	+ 0.037
Slovenia	+ 0.023	+ 0.025	+ 0.023	+ 0.022	+ 0.024	+ 0.023	<b>- 0.130</b>
(b)							
Bulgaria	<b>- 0.403</b>	+ 0.079	+ 0.101	+ 0.071	+ 0.078	+ 0.089	+ 0.037
Czech R.	+ 0.039	<b>- 0.568</b>	+ 0.053	+ 0.039	+ 0.044	+ 0.047	+ 0.022
Hungary	+ 0.053	+ 0.057	<b>- 0.986</b>	+ 0.053	+ 0.057	+ 0.062	+ 0.041
Poland	+ 0.266	+ 0.261	+ 0.330	<b>- 0.209</b>	+ 0.305	+ 0.300	+ 0.150
Romania	+ 0.013	+ 0.013	+ 0.017	+ 0.014	<b>- 0.553</b>	+ 0.015	+ 0.008
Slovakia	+ 0.041	+ 0.043	+ 0.053	+ 0.041	+ 0.047	<b>- 0.487</b>	+ 0.023
Slovenia	+ 0.011	+ 0.010	+ 0.011	+ 0.011	+ 0.012	+ 0.011	<b>- 0.123</b>

*Source:* authors' analysis.

*Note:* The figures in each row of the table show the effects of greater openness in the country in the first column on FDI location in all seven CEECs.

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High values of the OFIN variable correspond to high degrees of openness. The figures along both leading diagonals are negative, whilst the off-diagonal elements are all positive, reflecting the comments made about the regression coefficients. The following points are of interest. First, the direct elasticities are largest for Hungary, and lowest for Slovenia. Second, the direct elasticities are larger for the service firms than for the manufacturing firms in six countries though often not by much, but the reverse is true in Slovenia. Third, the cross elasticities of greater openness in other economies are particularly small in Slovenia.

## 6. Conclusions

We stated in the introduction that this article aimed to contribute to the literature in three ways. First, our findings contribute towards a better understanding of the factors behind the growing flows of FDI to the CEECs. The econometric results confirm the conclusions of the previous studies in literature that market size and growth, the availability of labour, the quality of infrastructure, and agglomeration economies are all important determinants of FDI location. However, our results also explore the impact of different liberalization policies upon FDI location. There have been few studies of the effects of liberalization policies, and these generally focused on trade or capital account liberalization, or the effects of privatization policies. In transition countries, however, there is much wider scope for liberalization. We show that the choice of FDI location is positively influenced by the extent of trade, financial and (weakly) market liberalization, and negatively related to the openness to foreign banks. Our findings on trade liberalization in the CEECs confirm those of Bevan *et al.* (2004), but our other results show effects that have not previously been identified. Moreover, we believe that this study improves upon the previous studies of FDI in the CEECs in two other ways. On the one hand, it uses firm-level data rather than modelling the determinants of inter-country flows of FDI. On the other hand, our analysis uses data from the very start of the transition process in 1990.

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The second contribution is that our methodology may be used to derive appropriate policy implications for each of the seven CEEC countries, though detailed analysis is beyond the scope of this article. Our empirical results suggest that liberalization in the CEECs has affected the choice of FDI location in the past, and the estimated elasticities suggest that there are important effects at the margin. To the extent that the governments in these countries perceive inward FDI as bringing benefits to their economies, then the elasticities in tables 6-9 provide guidance as to which forms of liberalization are most effective in attracting FDI.

Thus market, trade and financial liberalization all have a positive impact upon the probability of FDI location. Trade liberalization appears to be particularly effective in all countries, particularly in attracting manufacturing firms, but much less so in Poland than elsewhere. For countries keen to attract FDI, appropriate measures should involve not only an improvement in export/import channels and the elimination of controls on credit allocation and deposit/lending rates, but also stronger protection of intellectual property rights and less corruption. Domestic price liberalization, whilst also important, should have a lower priority, as our findings suggest it does not have a significant impact upon FDI location. The estimated cross-price elasticities also confirm that the CEEC governments need to be mindful of the policies that their neighbours are pursuing, in that the Italian firms clearly view some countries as potential substitute locations for each other. However, it should be stressed that other considerations, apart from FDI promotion, should be taken into account in deciding upon appropriate liberalization policies.

The third contribution is the focus on the FDI location decisions of a sample largely consisting of SMEs. It appears that such SMEs respond in similar ways to larger firms in that they are attracted *ceteris paribus* to economies with greater market size etc., and also to economies with greater degrees of market, trade and financial liberalization. However, it does appear that openness to foreign banks has had a negative impact upon SME location, perhaps because of crowding-out effects in



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the domestic credit markets. There may well be a case for stricter controls on the policies and activities of the foreign banks, if not on their presence *per se*.

As with all econometric work, there are limitations and scope for further research. The main limitations are threefold. First, liberalization is a complex phenomenon and this complexity cannot be fully captured by a handful of quantitative measures. Second, the empirical results reflect the experience of firms over the period 1990-2003, and there is no guarantee that the same relationships will hold true in the future. Third, the empirical results are derived from a sample of SMEs from one host country (Italy). Further research is thus merited. First, it would be useful to confirm whether the findings hold true for firms from other home economies, apart from Italy, and for a sample of larger firms. Perhaps the results in this article only apply to SMEs, which make up the greater part of the sample, and larger firms may have different considerations. In particular, it would be interesting to establish whether greater openness to foreign banks also had a negative impact upon the FDI location of larger firms. Second, it is likely that other firm-specific characteristics (apart from size) may have an impact on the choice of FDI location, and the significance of such characteristics could be established. Perhaps firms from certain industries prefer particular countries and are more sensitive to particular attributes (e.g. trade liberalization), whilst firms in other industries favour alternative locations and are more sensitive to different attributes (e.g. financial liberalization). A first step was comparing the results of manufacturing and service firms, but the analysis could be taken further by contrasting, for example, labour-intensive and capital-intensive firms, and introducing additional explanatory variables such as international experience and ownership structure. Third, the effects of EU accession could be investigated. ■

## References

- Altomonte, C. (1998). "FDI in the CEECs and the theory of real options: an empirical assessment", *LICOS Discussion Paper*, 76, Katholieke Universiteit Leuven.

- 
- Andresson, U., M. Forsgren and U. Holm (2002). "The strategic impact of external networks: subsidiary performance and competence development in the multinational corporation", *Strategic Management Journal*, 23(11), pp. 979-996.
- Asiedu, E. and D. Lien (2004). "Capital controls and foreign direct investment", *World Development*, 32(3), pp. 479-490
- Ayyagari, M., V. Maksimovic and A. Demirgüç-Kunt (2005). "How well do institutional theories explain firms' perceptions of property rights?". Paper presented at the AIB Annual Conference, Quebec City.
- Bartik, T.J. (1985). "Business location decisions in the United States: estimates of the effects of unionization, taxes and other characteristics of states", *Journal of Business and Economic Statistics*, 3(1), pp. 14-22.
- Basile, R., D. Castellani and A. Zanfei (2003). "Location choices of multinational firms in Europe: the role of national boundaries and EU policy", Università di Urbino, *Faculty of Economics Working Paper*, no.183.
- Beck, T., R. Levine and N. Loayza (2000). "Finance and the sources of growth", *Journal of Financial Economics*, 58(1-2), pp. 261-300.
- Beck, T., A. Demirgüç-Kunt, L. Laeven and R. Levine (2005). "Finance, firm size and growth" *World Bank Policy Research Working Paper*, no.3485.
- Bekaert, G., C.R. Harvey and C. Lundblad (2005). "Does financial liberalization spur growth?", *Journal of Financial Economics*, 77(1), pp. 3-55.
- Birkinshaw, J. and N. Hood (2000). "Characteristics of foreign subsidiaries in industry clusters", *Journal of International Business Studies*, 31(1), pp. 141-154.
- Belderbos, R.A. and M. Carree (2002). "The location of Japanese investments in China: agglomeration effects, keiretsu, and firm heterogeneity", *Journal of the Japanese and International Economies*, 16(2), pp. 194-211.
- Bevan, A.A., S. Estrin and K. Meyer (2004). "Foreign investment location and institutional development in transition economies", *International Business Review*, 13(1), pp. 43-64.
- Bevan, A.A. and S. Estrin (2004). "The determinants of foreign direct investment into European transition economies", *Journal of Comparative Economics*, 32(4), pp. 775-787.

- 
- Bonaglia, F., J.B. de Macedo and M. Bussolo (2001). "How globalisation improves governance", *OECD Technical Papers*, vol. 181.
- Brada, J.C., A.M. Kutan and M.Y. Taner (2003). "The effects of transition and political instability on foreign direct investment: Central Europe and the Balkans", *ZEI Working Paper*, B 28.
- Brenton, P., F. Di Mauro and M. Lücke (1999). "Economic integration and FDI: an empirical analysis of foreign investment in the EU and in Central and Eastern Europe", *Empirica*, 26(2), pp. 95-121
- Campos, N. and Y. Kinoshita (2003). "Why does FDI go where it goes? New evidence from the transitional economies", *IMF Working Paper*, WP/03/228.
- Chadee, D., F. Qiu and E.L. Rose (2003). "FDI location at the subnational level: a study of EJVs in China", *Journal of Business Research*, 56, pp. 835-845.
- Chang, S-J. and S. Park (2005). "Types of firms generating network externalities and MNCs co-location decisions", *Strategic Management Journal*, 26(7), pp. 595-615.
- Cheng, L.K. and Y.K. Kwan (2000). "What are the determinants of the location of foreign direct investment? The Chinese experience", *Journal of International Economics*, 51(2), pp. 379-400.
- Cieslik, A. (2005). "The location of foreign firms and national border effects: the case of Poland", *Journal of Economic and Social Geography*, 96, pp. 287-297.
- Claessens, S., A. Demirgüç-Kunt and H. Huizinga (2001). "How does foreign entry affect domestic banking markets?", *Journal of Banking and Finance*, 25(5), pp. 891-911.
- Clausing, K.A. and C.L. Dorobantu (2005). "Re-entering Europe: does European Union candidacy boost foreign direct investment?", *The Economics of Transition*, 13(1), pp. 77-103.
- Coughlin, C.C., J.V. Terza and V. Arromdee (1991). "State characteristics and the location of foreign direct investment within the United States", *Review of Economics and Statistics*, 73(4), pp. 675-683.
- Crozet, M., T. Mayer and J.L. Mucchielli (2004). "How do firms agglomerate? A study of FDI in France" *Regional Science and Urban Economics*, 34(1), pp. 27-54.
- Delios, A. and P. Beamish (1999). "Geographic scope, product diversification, and the corporate performance of Japanese firms", *Strategic Management Journal*, 20(8), pp. 711-727.

- 
- Demirgüç-Kunt, A. and V. Maksimovic (1998). "Law, finance and firm growth", *Journal of Finance*, 53, pp. 2107-2137.
- Disdier, A-C. and T. Mayer (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. 280-296.
- Dunning, J.H. (1998). "Location and the multinational enterprise: a neglected factor?", *Journal of International Business Studies*, 29(1), pp. 45-66.
- Durnev, A., K. Li, R. Morck and B. Yeung (2004). "Capital markets and capital allocation: implications for economies in transition", *Economics of Transition*, 12(4), pp. 593-634.
- Focarelli, D. and A. F. Pozzolo (2001). "The patterns of cross-border bank mergers and shareholdings in OECD countries", *Journal of Banking and Finance*, 25, pp. 2305-2337.
- Ford, S. and R. Strange (1999). "Where do Japanese manufacturing firms invest within Europe, and why?", *Transnational Corporations*, 8(1), pp. 117-142.
- Friedman, J., D.A. Gerlowski and J. Silberman (1992). "What attracts foreign multinational corporations? Evidence from branch plant location in the United States", *Journal of Regional Science*, 32(4), pp. 403-418.
- Friedman, J., H.-G. Fung, D.A. Gerlowski and J. Silberman (1996). "A note on 'State characteristics and the location of foreign direct investment within the United States'". *The Review of Economics and Statistics*, 78(2), pp. 367-368.
- Fries, S. A. Taci (2002). "Banking reform and development in transition economies", *EBRD Working Paper*, no.71.
- Frost, T. S. (2001). "The geographic sources of foreign subsidiaries innovations", *Strategic Management Journal*, 22(2), pp. 101-123.
- Fujita, M. (1995a). "Small and medium-sized transnational corporations: trends and patterns of foreign direct investment", *Small Business Economics*, 7(3), pp. 183-204.
- Fujita, M. (1995b). "Small and medium-sized transnational corporations: salient features", *Small Business Economics*, 7(4), pp. 251-271.
- Glickman, N.J. and D.P. Woodward (1988). "The location of foreign direct investment in the United States: patterns and determinants", *International Regional Science Review*, 11(2), pp. 137-154.

- 
- Gokcekus, O. and Knorich, J. (2006). "Does quality of openness affect corruption?", *Economics Letters*, 91(2): 190-196.
- Greene, W.H. (2000). *Econometric Analysis* (New Jersey: Prentice Hall), fourth edition.
- Grosse, R. and L.J. Trevino (1996). "Foreign direct investment in the United States: an analysis by country of origin", *Journal of International Business Studies*, 27(1), pp. 139-155.
- Grosse, R. and L.J. Trevino (2005). "New institutional economics and FDI location in Central and Eastern Europe", *Management International Review*, 45(2), pp. 123-145.
- He, C. (2003). "Location of foreign manufacturers in China: agglomeration economies and country of origin effects" *Papers in Regional Studies*, 82, pp. 351-372.
- Head, K, J. Ries and D. Swenson (1995). "Agglomeration benefits and location choice: evidence from Japanese manufacturing investments in the United States", *Journal of International Economics*, 38(3-4), pp. 223-247.
- Head, K. and J. Ries (1996). "Inter-city competition for foreign investment: static and dynamic effects of China's incentive areas", *Journal of Urban Economics*, 40(1), pp. 38-60.
- Head, K., J. Ries and D. Swenson (1999). "Attracting foreign manufacturing: investment promotion and agglomeration", *Regional Science and Urban Studies*, 29(2), pp. 197-216.
- Henisz, W.J. (2000). "The institutional environment for multinational investments", *Journal of Law, Economics and Organisation*, 16(2), pp. 334-364.
- Hensher, D.A., J. M. Rose, and W.H. Greene (2005). *Applied Choice Analysis: a Primer* (Cambridge: Cambridge University Press).
- Holland, D. and N. Pain (1998). "The diffusion of innovation in Central and Eastern Europe. A study of the determinants and impact of foreign direct investments", *National Institute of Social and Economic Research Discussion Paper*, no. 137.
- Istat (2006). *Commercio estero e attività internazionali delle imprese* (Istat, Roma).
- Kalotay, K. (2004). "The European flying geese: new FDI patterns for the old continent?", *Research in International Business and Finance*, 18(1), pp. 27-49.

- 
- Krugman, P. (1991). "Increasing returns and economic geography", *Journal of Political Economy*, 99, pp. 483-499.
- Lansbury, M., N. Pain and K. Smidkova (1996). "Foreign direct investment in Central Europe since 1990: an econometric study", *National Institute Economic Review*, 156, pp. 104-114.
- Lankes, H.P. and A.J. Venables (1996). "Foreign direct investment in economic transition: the changing pattern of investments", *The Economics of Transition*, 4(2), pp. 331-347.
- Lensink, R. and N. Hermes (2004). "The short-term effects of foreign bank entry on domestic bank behaviour: does economic development matter?", *Journal of Banking and Finance*, 28(3), pp. 553-568.
- Luger, M.I. and S. Shetty (1985). "Determinants of foreign plant start-ups in the United States: lessons for policymakers in the South-East", *Vanderbilt Journal of Transnational Law*, 18(2), pp. 223-245.
- Manea, J. and R. Pearce (2004). "Industrial restructuring in economies of transition and TNC's investment", *Transnational Corporations*, 13(2), pp. 8-27.
- McFadden, D. (1974). "Conditional logit analysis of qualitative choice behaviour", in P. Zarembka, ed. *Frontiers in econometrics* (New York: Academic Press), pp.105-142.
- Meltzer, A. (2000). *Report of the International Financial Institutions Advisory Commission*. (Washington, D.C.: United States Congress).
- Meyer, K.E. (1998). *Direct Investments in Economies in Transition* (Cheltenham: Edward Elgar).
- Meyer, K. (2001). "Institutions, transaction costs, and entry mode choice in Eastern Europe", *Journal of International Business Studies*, 32(2), pp. 357-367.
- Meyer, K. and A. Skak (2002). "Networks, serendipity and SME entry into Eastern Europe", *European Management Journal*, 20(2), pp. 179-188.
- Mariotti, S. and L. Piscitello (1995). "Information costs and location of FDIs within the host country: empirical evidence from Italy", *Journal of International Business Studies*, 26(4), pp. 815-841.
- Nachum, L. (2000). "Economic geography and the location of TNCs: financial and professional service FDI to the USA", *Journal of International Business Studies*, 31(3), pp. 367-385.
- Oxley, J.E. (1999). "Institutional environment and the mechanisms of governance: the impact of intellectual property protection on the

- 
- structure of inter-firm alliances”, *Journal of Economic Behavior and Organization*, 38(3), pp. 283-310.
- Porter, M.E. (1994). “The role of location in competition”, *Journal of Economics and Business*, 1(1), pp. 35-39.
- Porter, M. (1998). “Clusters and the new economics of competition”, *Harvard Business Review*, November-December, pp. 77-90.
- Rajan, R.G. and L. Zingales (1998). “Financial dependence and growth”, *American Economic Review*, 88(3), pp. 559-586.
- Resmini, L. (2000). “The determinants of foreign direct investment in the CEECs: new evidence from sectoral patterns”, *The Economics of Transition*, 8(3), pp. 665-690.
- Rugman, A.M. and A. Verbeke (2001). “Subsidiary-specific advantages in multinational enterprises”, *Strategic Management Journal*, 22(3), pp. 237-250.
- Savona, M. and R. Schiattarella (2004). “International relocation of production and the growth of services: the case of the ‘Made in Italy’ industries”, *Transnational Corporations*, 13(2), pp. 58-76.
- Scaperlanda, A.E. and R.S. Balough (1983). “Determinants of US direct investment in the EEC: revisited”, *European Economic Review*, 21(3), pp. 381-390.
- Shaver, J.M. (1998). “Do foreign-owned and US-owned establishments exhibit the same location pattern in US manufacturing industries?”, *Journal of International Business Studies*, 29(3), pp. 469-491.
- Shaver, J and F. Flyer (2000). “Agglomeration economics, firm heterogeneity, and foreign direct investment in the United States”, *Strategic Management Journal*, 21(12), pp. 1175–1193.
- Sin, C. and W.-F. Leung (2001). “Impacts of FDI liberalization on investment inflows”, *Applied Economic Letters*, 8, pp. 253-256
- Smarzynska, B.K. (2002). “Composition of foreign direct investment and protection of intellectual property rights: evidence from transition economies” *World Bank Policy Research Working Paper*, no.1786.
- Stiglitz, J.E. (1993). “The role of the state in financial-markets”, *World Bank Economic Review*, suppl. S, pp. 19-52.
- Strange R. and A. Majocchi (2007). “Economic liberalisation and the FDI location decision: evidence from Italian firms in Eastern Europe”, in J. Larimo, ed., *Market Entry and Operational Decision Making in East-West Business Relationship*, Haworth Press, New York, pp. 93-114.

- 
- Sun, Q., W. Tong and Q. Yu (2002). "Determinants of foreign direct investment across China", *Journal of International Money and Finance*, 21(1), pp. 79-113.
- Trevino, L.J., J.D. Daniels and H. Arbelaez (2002). "Market reform and FDI in Latin America: an empirical investigation", *Transnational Corporations*, 11(1), pp. 30-48.
- UNCTAD (2006). *World Investment Report 2006: FDI from Developing and Transition Economies - Implications for Development* (New York and Geneva: United Nations).
- Urata, S. and H. Kawai (2000). "The determinants of the location of foreign direct investment by Japanese small and medium-sized enterprises", *Small Business Economics*, 15(2), pp. 79-103
- Weller, C. (2000a). "Financial liberalization, multinational banks and credit supply: the case of Poland", *International Review of Applied Economics*, 14(2), pp. 193-211.
- Weller, C. (2000b). "Banking on multinationals", *EPI Issue Brief*, no.142., Economic Policy Institute.
- Wheeler, D. and A. Mody (1992). "International investment location decisions", *Journal of International Economics*, 33(1-2), pp. 57-76.
- Woodward, D.P. (1992). "Locational determinants of Japanese manufacturing start-ups in the United States", *Southern Economic Journal*, 58(3), pp. 690-708.
- Woodward, D.P. and R. Rolfe (1992). "The location of export-oriented foreign direct investment in the Caribbean Basin", *Journal of International Business Studies*, 24(1), pp. 121-144.
- Woodward, D.P., R.J. Rolfe, P. Guimarães and T. Douplik (2000). "Taxation and the location of foreign direct investment in Central Europe", in K. Fatemi, ed., *The New World Order: Internationalism and the Multinational Corporations* (London: Pergamon Press), pp.192-203.
- Wurgler, J. (2000). "Financial markets and the allocation of capital", *Journal of Financial Economics*, 58(1-2), pp. 187-214.
- Yamawaki, H. (1991). "Location decisions of Japanese multinational firms in European manufacturing industries", in K.S. Hughes, ed., *European competitiveness* (Cambridge: Cambridge University Press), pp. 11-28.