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The Motives for the FDI Location Choice in the 'Old' and 'New' Europe

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The Motives for the FDI Location Choice in the 'Old' and 'New' Europe*

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Abstract

This paper offers comprehensive cross-country evidence on the motives that drive FDI location in the European Union and examines how these motives differ between 'old' and 'new' EU Member States. Specifically, the paper examines three main motives for FDI: market-seeking, resource-seeking and efficiency-seeking through economies of scale, where the latter is captured by expansionary investment. The study uses the *European Investment Monitor* database, which contains information on the location of over 35,000 individual cross-border investment projects that were implemented in the EU between 1997 and 2010. Using the conditional logit model the results show that investment in the 'old' EU is predominantly resource-seeking, whereas in the 'new' EU it is market-seeking including access to the European Single Market. On the third motive, our results show that the expansions are subject to market-access and resource-seeking motives and therefore, are not simply about adding scale to existing operations for the purpose of achieving greater economies to scale.

Keywords: foreign direct investment, location choice, European Union, conditional logit
JEL Codes: F23, R30, O52

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1 Introduction

On 1 May 2004 ten new countries, mostly the former transition economies of the Central and Eastern Europe, joined the European Union (EU). The Union grew from 15 to 25 members. The enlargement, often referred to as the Eastern enlargement, did not stop as on 1 January 2007 Bulgaria and Romania entered in the second wave, bringing the total number of Central and Eastern European Countries (CEECs) and former transition economies in the EU to ten.[1] The Eastern enlargement of the EU, which resulted in an addition of over 100 million people, made the EU the largest single market in the world with a combined population of 500 million inhabitants. As the largest combined economy in the world, where freedom of movement of people, goods, services and capital apply, the EU ranks first as the source and destination for Foreign Direct Investment (FDI) flows in the world, accounting for 34% and 42% of global inward and outward FDI stocks respectively in 2012 (see: UNCTAD 2013).

What is remarkable, however, is that despite the status of a prime destination for FDI, the cross-country understanding on what motives drive multinational firms' decisions to locate within the EU is virtually non-existent. Data availability considerations are partially the reasons for the fact that cross-country studies of FDI location decisions at the European level are rare.[2] The purpose of this study is to fill this research 'gap' and explore what motivates the location decisions of multinational firms that choose to invest in the EU, making an explicit distinction between market-seeking and resource-seeking motives . While there exist many empirical studies that analyse the determinants of FDI location choices for individual European countries (e.g. Hill and Munday 1992 for the UK; Guimaraes, Figueiredo, and Woodward 2000 for Portugal; Basile 2004 for Italy; Crozet, Mayer, and Mucchielli 2004 for France; Boudier-Bensebaa 2005 for Hungary; and Kalotay 2008 for Bulgaria and Romania), such studies fail to take the broader perspective and fail to account for the fact that a multinational firm want to invest in a EU Member State not only because it is interested in serving the national market of a country in question but because it is interested in gaining access to the European Single Market.

It is reasonable to suspect that the investing multinational firms view the 'old' EU-15 countries differently from the more recent EU entrants, and that the same location

[1] Most recently the EU grew yet again when Croatia joined the EU on 1 July 2013.

[2] Notable exceptions are Alegria (2006) and Disdier and Mayer (2004); the former analysed the location choices of European multinational firms at the country and region level in 25 European Member countries but only from 1998 to 2005; the latter was limited to a sample of French multinational firms that invested in Europe over the period 1980-99, allowing for the preference heterogeneity of investors locating in Western versus Eastern Europe.

factor may have different impacts on the probability of investment in the 'old' and the 'new' EU. Assuming international factor price differentials that exist between West and East, it is plausible that with the entry of CEECs into the EU and the resulting reduction in the trade costs in the enlarged EU, the 'new' EU Members began to attract multinational firms interested in serving not only the local markets of CEECs but also those of the neighbouring countries, thus becoming export platforms (see: Ekholm, Forslid, and Markusen 2007). Conversely, for the case of the 'old' EU Members, such market access opportunities may have been exhausted in the past and hence, motives other than pure market access may drive FDI location in the West. Therefore, we explore the possibility of a 'West-East divide' (Disdier and Mayer 2004) in the location decisions of foreign investors by explicitly allowing for the heterogeneity in the preferences of investors locating in the 'old' versus the 'new' EU Member States (West-East heterogeneity). We aim to find out whether the motives for FDI differ significantly between the 'old' and 'new' European Union. An understanding of the motives that drive FDI location in the EU-25 and the differences in the motives that may exist between 'old' and 'new' Member States is of potential interest to the policy makers, who seek to attract inward investment to stimulate job creation and economic growth.

This study considers those cross-border investment projects that located in one of 25 Member States (EU-25) of the EU between 1997 and 2010. In our choice set there are 15 countries that joined the EU by 1995 (EU-15), the remaining 10 countries joined the EU as part of the Eastern enlargement in 2004 and 2007 (EU-10).[3] We subsequently refer to the former group of countries as the 'old' EU; the latter group is referred to as the 'new' EU. Considering the discrete choice nature of location decisions, we use conditional logit model to examine the motives for FDI location choice.

The data at the individual project level was sourced from the Ernst and Young *European Investment Monitor* (EIM), which records information for 35,105 projects.[4] We collect data on and make a distinction between market-based and resource-based determinants to gauge if market access and resource motives impact on FDI location in EU-15 and EU-10, but also include macroeconomic and industry variables to control for other country-level factors that affect FDI. We draw on the International

[3]Specifically, in our study EU-10 group comprises of eight CEECs that joined the EU in 2004 (EU-8) and Bulgaria and Romania (EU-2), which joined in 2007. Cyprus and Malta are excluded owing to data availability considerations but these are small island economies, which received little productive inward FDI. EIM data does not record a single FDI project for Cyprus and Malta prior to their EU accession in 2004, which makes the two countries of little interest in our analysis.

[4]The EIM captures all project-based productive investment, so that it excludes mergers and acquisitions, and joint ventures (unless they result in new facilities or new jobs being created), licence agreements, extraction of ores, minerals and fuels, portfolio investments; hence, the EIM definition of FDI is narrower than that of UNCTAD.

Business literature, which identifies three motives for asset-exploiting FDI: market-seeking, resource-seeking and efficiency-seeking.

While the data enables us to identify market-seeking and resource-seeking motives for FDI location choice, we are not able to detect the efficiency-seeking motive without distinguishing between project types and looking explicitly at the expansionary investment. In essence, we recognize that the strategic determinants and specific motives that drive investment location choices may differ depending on whether an individual project is a new investment or an expansion of an existing project and investigate the possibility that location choice motives are fundamentally different between project types. Specifically, our project data makes a distinction between new investment projects ('greenfield' FDI) and expansions ('brownfield' FDI), which not only allows us to gauge if market access and resource-seeking motives are important, but also enables us to examine the presence of efficiency-seeking through economies of scale in the FDI location. Any significant differences between new investment and expansion projects for each of the EU-15 and EU-10 would imply that motives other than the efficiency drive expansionary investment.

The EU Single Market is likely to be a factor in its own right that attracts FDI to the individual EU Member States. Neary (2002) notes that there is 'considerable empirical evidence for the importance of the Single Market in encouraging more FDI into the EU'. Basile, Castellani, and Zanfei (2009), quoting Neven and Siotis (1996) and Barrell and Pain (1999), argued that the leading position of the EU in attracting inward investment can be attributed to the accelerating process of economic integration that occur between the Member States. Specifically, with an effective dismantling of trade barriers within the EU, freedom of movement of people, goods, services and capital may have made a significant contribution to attracting FDI by making country boundaries more blurred (Basile, Castellani, and Zanfei 2009) and hence, improving the market access for those firms that choose to set up their operations in an EU country.

To account for the possibility that investors choose to invest in the EU because it allows them to benefit from the unrestricted access to the European Single Market, we control for the existence of a pure EU Membership effect. Considering that the CEECs joined the EU over the study period provides a natural experiment for testing the market access motive for FDI location choice. Resmini (2007), who studied the effects of economic integration with the EU on regional patterns of industry location in four transition countries, argued that spatial implications of the EU integration process have been grossly neglected. We explore what role may have been played by additional EU-specific factors such as the introduction of the Single Currency and the European Structural Funds.

The rest of the paper is organised as follows. The following section considers the underlying theoretical framework. Section 3 discusses the econometric model and methodology. Section 4 introduces the model specification and describes the data. The results of the estimation are presented in section 5, while the conclusions are drawn in section 6.

2 Theoretical framework

The multinational enterprise (MNE) activity in the form of FDI has grown at a faster rate than most other international transactions and this has led to substantial interest in analysing the fundamentals that drive FDI behaviour (Blonigen 2005). The purpose of this section is to set out some of the theoretical frameworks explaining the typology of motives for FDI and factors that are deemed important in the plant location decisions.

In the modelling of FDI decisions the convention of a three-tiered hierarchy of 'MNE/exporters/domestics' has emerged (Cieslik and Ryan 2009). As illustrated by Basile, Castellani, and Zanfei (2008), in this set-up the decision process of a firm is of the following structure. Firstly, a firm makes a decision as to whether to serve a foreign market. Secondly, if a decision to supply a foreign market has been taken, the next step is to determine the best strategy to do so. The firm can choose from a range of possibilities like exporting, licensing, collaborative agreement or FDI. Lastly, if a firm decides to undertake FDI, it has to choose a location for its production facilities. Most studies focus on a single node of this decision-making process, with a research on the motivation for FDI location choice usually being conditional on MNEs having already decided to invest abroad.

According to Blonigen (2005) the standard answer that gives an intuitive explanation for the emergence of MNE activity essentially boils down to the existence of intangible assets that are specific to the firm: technologies, managerial skills, etc., in the sense that the use of these assets in one plant does not diminish their use in another plant. A paradigm that offered a more comprehensive explanation as to the magnitude and pattern of international production was the eclectic paradigm of Dunning (1977). The eclectic paradigm, also known as OLI framework, suggests that a firm will engage in FDI activity in a particular location if three separate conditions are satisfied:

- It possesses a firm-specific asset, which puts it at an advantage against a firm in another country (**O-advantage**);

- The benefit of employing this firm-specific asset in a foreign country has to exceed the benefit of utilising it in the domestic market (**L-advantage**);

- The best strategy for the firm is to transfer this asset internally to a foreign affiliation unit rather than to use the market to pass them to foreign firms, thus overcoming market imperfections (**I-advantage**).

A configuration of **OLI**-advantages differs between countries (regions), industries and firms and therefore, a change in any of **O**, **L** or **I** advantages directly cause a change in the inward or outward FDI position of a country (Dunning 1977).

Dunning (2009) acknowledged that: "We chose to call the paradigm 'eclectic' as we believed, and still believe, that a full explanation of MNE activity needed to draw upon and integrate a variety of contextually related theories; and most noticeably, those which took account of the different types of MNE activity." Subsequently to the 'eclectic paradigm' Dunning (1993), building upon the OLI framework (Dunning 1977) and drawing on the work of Behrman (1972), developed a taxonomy of four types of MNE activity, where the primary motive underlying FDI was a distinguishing feature. The following motives for FDI were identified: [5]

- Market-seeking FDI: an investing firm is interested in establishing production affiliate overseas to serve the demand in that market. A decision to invest is primarily driven by characteristics such as market size and market growth prospects, but also influenced by considerations such as the presence of the main suppliers, main customers and main competitors in those markets, aiming to adapt the goods to local tastes and preferences[6] (Dunning and Lundan 2008, Franco, Rentocchini, and Marzetti 2008). Unlike resource-seeking FDI, the market-seeking FDI is demand-side oriented.

- Resource-seeking FDI: the principal motive for a firm to engage in FDI is to acquire higher quality resources and/or factors of production at the lower real cost. Access to these resources is a source of a comparative advantages for the firm. Commonly sought resources include physical natural resources (such as minerals, fuels, metals or agricultural products), inexpensive unskilled or semi-skilled labour, as well as technological capability or managerial and organisational skills. Resource-seeking FDI is supply-side oriented.

[5] The first three types were initially identified by Behrman (1972).

[6] Consequently, market-seeking FDI is deemed to be the most responsive to the cultural differences. (Dunning and Lundan 2008).

- Efficiency-seeking FDI (also rationalised FDI): the main motivation for a firm to invest abroad is to promote the efficiency of MNE global or regional structure by means of reducing production costs or enhancing the efficiency of the division of labour or the process of specialisation. The benefits are achieved by exploiting the economies of scale. Efficiency-seeking MNEs essentially take advantage of differences in factor costs, factor endowments, institutional arrangements, governmental policies, market structures and consumer demand. Efficiency-seeking FDI is in many instances a sequential to the resource-seeking or market-seeking FDI activity (Dunning 2000).

The fourth and final motive for FDI identified by Dunning (1993), strategic-asset-seeking FDI, is different in nature to the first three types, since the primary purpose of investment is to acquire the new foreign asset, rather than to exploit the existing assets. In that respect, four motives for FDI can be subdivided into two types. The first three can be seen as 'asset-exploiting in nature' since the main objective of MNE is to generate higher profit stream through the use of the existing firm-specific O-advantages. On the contrary, the fourth motive for FDI relate to the situation when the firm's objective is to add to its existing portfolio of assets. Seeing that our data captures productive investment but excludes mergers and acquisitions, the final motive identified in this section is of no direct relevance to our research and will not be considered further.

In summary, the typology of FDI motives provides a logical framework for analysing the multinational firms' location decisions and subsequently it governs our choice of explanatory variables to analyse the destination for inward FDI in the EU-25.

3 Econometric framework

When selecting a location for their plant, an investing firm actually faces an economic decision, which by nature is a discrete choice (Crozet, Mayer, and Mucchielli 2004). In our model an individual firm chooses a single location from a set of 25 EU countries in any one year over the period 1997-2010. Our study on the motives for FDI location choice is made conditional on MNEs having already decided to invest in the EU-25. Crozet, Mayer, and Mucchielli (2004) said that the methodology used for modelling the location decisions of MNEs should account for the discrete choice nature of these decisions. This is why Random Utility Maximisation-based conditional logit model has been widely used in the applied research on industrial location.

Originally proposed by McFadden (1974), the conditional logit model was first applied to model firms' location decisions by Carlton (1979, 1983). Based on McFadden's

assumption of utility maximising behaviour of economic agents, the virtue of this framework is that it links a site selection by a profit-maximising firm to the attributes of the locations. For a location j to attract inward investment at time t it must possess a set of attributes such that an investing firm i can accrue a level of profits higher than profits that it would have derived from locating elsewhere: $\pi_{ijt} > \pi_{ilt}; \forall l \neq j$.

The profit function can be decomposed into a deterministic part (V_{ijt}), which is assumed to depend linearly on these observable attributes of a location (X_{ijt}) that affect the profitability of setting-up a plant in that location[7] and a stochastic part (ε_{ijt}) that captures the investor-specific idiosyncrasies, unobserved heterogeneity and a measurement error. In the random utility maximisation setting, profit maximisation behaviour implies that at time t the probability of a firm i selecting a production site in location j amounts to the probability that at time t locating the production in location j generates the greatest profit for firm i among a set of J different locations, where $J = (1, , j, , l)$, which in our setting is a set of 25 Member States of the European Union:

$$\begin{aligned} P_{ijt} &\equiv Pr(\pi_{ijt} > \pi_{ilt}) = Pr(V_{ijt} + \varepsilon_{ijt} > V_{ilt} + \varepsilon_{ilt}) \\ &= Pr(\beta X_{ijt} + \varepsilon_{ijt} > \beta X_{ilt} + \varepsilon_{ilt}) \\ &= Pr(\beta X_{ijt} - \beta X_{ilt} > \varepsilon_{ilt} - \varepsilon_{ijt}) \\ &= Pr(\beta(X_{ijt} - X_{ilt}) > \varepsilon_{ilt} - \varepsilon_{ijt}), \forall l \neq j \end{aligned} \tag{1}$$

It is assumed that the error terms ε_{ij} are identically and identically distributed (*iid*) across firms and locations and that they have standard Extreme Value Type I (Gumbel) distribution. Under this assumption, the probability that at time t firm i chooses location j rather than another location from a choice set is:

$$P_{ijt}^{CL} = \frac{e^{V_{ijt}}}{\sum_{j=1}^{J} e^{V_{ijt}}} = \frac{e^{\beta X_{ijt}}}{\sum_{j=1}^{J} e^{\beta X_{ijt}}} \tag{2}$$

As noted by Train (2003), McFadden (1974) demonstrated that the log-likelihood function with these choice probabilities is globally concave in parameters β, which makes the estimation of a vector of coefficients β by maximum likelihood procedure relatively easy.

The major shortcoming of the conditional logit model is the Independence of Irrelevant Alternatives (IIA) assumption, which imposes a uniform pattern of substitutability between any pair of location alternatives (McFadden 1974). The problem

[7] Crozet, Mayer, and Mucchielli (2004) highlighted the fact that "while the real underlying profit yielded by alternative locations cannot be observed, what is observed is the actual choice of each firm and the characteristics of the alternative locations."

arises when unobserved heterogeneity affects the uniform perceptions of the substitutability between locations and "make some choices closer substitutes in the eyes of certain investors than other choices", thus leading to the violation of IIA and resulting in biased and inconsistent estimates (Head, Ries, and Swenson 1995).

As long as there is a suspected correlation across locations that leads to the violation of the assumption of error terms being independent across both individual firms and spatial choices, the nested logit methodology should be used instead of conditional logit. Admittedly, the estimation of nested logit model is computationally intensive and may be infeasible in our set-up.[8] To our defence for using conditional logit methodology in this study, Guimaraes, Figueiredo, and Woodward (2004) argued that the violation of IIA assumption was more likely when spatial choices were analysed at small geographical units. This is because as the location alternatives get smaller in scale, these unobserved site characteristics are more likely to extend their influence beyond the boundaries of the considered spatial units.

4 Model specification and data

The conditional logit model in (2), where $i = 35,105$ FDI projects, $j = 25$ countries (EU-25) and $t = 14$ years from 1997 to 2010, giving $n = 877,625$ observations across all projects and countries. Country variables that are deemed to affect the profitability of investing in country j are lagged one year to account for the possibility that a rational firm selecting a location of its foreign affiliate at time t makes use of location-specific characteristics that were known to it at time $t-1$.

Two of the independent variables, EU Single Market and euro dummies, were not lagged one year. This is because the EU/EMU membership is announced in advance and the full benefits associated with the membership are available to a firm only upon the EU accession/euro adoption and thereafter. To illustrate, if we were to expect the access to the European Single Market to be an important motive for investment, we would expect a surge in FDI to occur around the time of the EU accession and not before. Furthermore, as EU accession and euro adoption are announced in advance, this gives a prospective investor a chance to strategically time their entry. Alongside the country variables we also include the country fixed effects (α_j). The dependent variable in the model is a dichotomous variable, which takes a value of one if at time t firm i chose to invest in country j, zero otherwise.

In the following subsections we describe the data and provide the justification for

[8] Considering the number of cases (35,105 FDI projects) and alternatives (25 EU Member States), the estimation of nested logit model appears computationally demanding.

our choice of explanatory variables, with reference to the theory. A full list of the variables is provided in the Appendix Table A1.

4.1 Dependent variable

The analysis makes use of the Ernst & Young *European Investment Monitor* (EIM) data. The EIM is an online information provider, which tracks and records inward investment in Europe. Data is collected for 25 European countries for each year from 1997. Identified by the EIM are all project-based foreign direct investments, grouped into the following project type categories: new investments, new co-locations and expansions. It excludes information on mergers and acquisitions, and joint ventures[9], licence agreements, extraction of ores, minerals and fuels, portfolio investments. This implies that the focus of our analysis is on the productive investment and it is important considering that determinants of location choices may vary depending on the entry mode (Basile 2004). Each FDI project is recorded individually and in addition to the location information, entries also contain information on company name, announcement and startup date, origin, industrial sector classification, employment and value of investment.[10]

Our final FDI dataset consists of 35,105 FDI projects for the 25 EU countries. Our preliminary data interrogation in Table 1 shows that the distribution of FDI projects between 'old' and 'new' EU Member States is unbalanced. Between 1997 and 2010 the EIM records 28,225 FDI projects in the EU-15 and 6,880 projects in EU-10, which represents 80% and 20% in the 'old' and 'new' EU respectively. Further analysis by three sub-periods, 1997-2003 (time prior to Eastern enlargement in 2004), 2004-2006 (in between two waves of Eastern enlargement in 2004 and 2007) and 2007-2010 (time after Eastern enlargement in 2007), reveals that the EU-15 appeared to be relatively less attractive destination for inward FDI in the period that immediately followed the EU enlargement in 2004, attracting 76% of all projects carried out between 2004 and 2006, as compared to the corresponding figure of 82% for the time period 1997-2003. In the period following the conclusion of the second wave of Eastern enlargement in 2007, however, the pattern of FDI appears to have returned to that of pre-Eastern enlargement.

As mentioned, our FDI dataset distinguishes between three project type categories: new investment, expansions and new co-locations. The difference between expansions and co-locations is that while the former results in an increase in capacity of

[9]Unless they result in new facilities or new jobs being created.

[10]Owing to the confidentiality considerations some information, such as number of jobs created or capital expenditure, are not available for all entries.

Table 1: Project numbers and projects shares by regional subgroup and by sub-period

Subgroup	1997-2003	2004-2006	2007-2010	1997-2010
'Old' EU-15	11,502	6,457	10,266	28,225
	(82.4%)	(75.6%)	(81.5%)	(80.4%)
'New' EU-10	2,458	2,086	2,336	6,880
	(17.6%)	(24.4%)	(18.5%)	(19.6%)
All countries	13,960	8,543	12,602	35,105
	(100.0%)	(100.0%)	(100.0%)	(100.0%)

(source: Authors' own elaboration of EIM data.)

existing functions at their present location, the latter involves new functions that are co-located at or near an existing activity.[11] In the empirical section of this paper, we define 'broad' and 'narrow' expansions, where the former consists of expansions and co-locations grouped together. In our econometric analysis whenever we distinguish between project types we tend to contrast new investment with 'broad' expansions.

Table 2, which gives the distribution of FDI projects by project type and regional subgroup, shows that new investment makes up about two thirds of a total number of projects in EIM dataset. It also demonstrates that the distribution of projects is unbalanced between EU-15 and EU-10, supporting what was shown in Table 1. 'New' EU countries receive only 20% of total new investment projects. The East performance lags further still behind that of the West in encouraging the re-investments, as only 18.5% of expansions are recorded to take place in the 'new' EU (17% if co-locations are excluded).

Table 2: Project numbers and projects shares by regional subgroup and by project type

Subgroup	New investment	Expansions and co-locations	Expansions	All
'Old' EU-15	18,626	9,599	7,834	28,225
	(79.9%)	(81.5%)	(83.1%)	(80.4%)
'New' EU-10	4,699	2,181	1,588	6,880
	(20.1%)	(18.5%)	(16.9%)	(19.6%)
All countries	23,325	11,780	9,422	35,105
	(100.0%)	(100.0%)	(100.0%)	(100.0%)

(source: Authors' own elaboration of EIM data.)

[11] For ease of the analysis EIM data uses the following function categories to describe the nature of the activity undertaken: contact centre (customer support functions), education & training, headquarters, internet data centre, logistics, manufacturing, research & development, sales & marketing, shared services centre (administrative support functions), testing & servicing.

4.2 Independent variables

Given that the main purpose of this study is to determine the motives for FDI location in EU-25, we sourced a range of country data to reflect on location characteristics that may appeal to different types of asset-exploiting FDI (i.e. resource-seeking, market-seeking and efficiency-seeking FDI, as outlined in Section 2). While it was relatively simple to decide on and collect demand- and supply-side factors that may appeal to market-seeking and resource-seeking FDI respectively, it was more problematic for efficiency-seeking FDI. On one hand, efficiency-seeking FDI takes advantage of differences in the availability and costs of traditional factor endowments in different countries (Dunning 1993) and in that respect is seen as overlapping with resource-seeking motive. On the other hand, it exploits economies of scale and scope, and takes advantage of differences in taste and supply capabilities (Dunning 1993). While we feel that it is difficult to capture differences in taste and supply capabilities with quantitative data, it is possible to examine the efficiency-seeking motive for FDI location by looking at the differences between 'greenfield' new investment and expansion projects.

In our analysis we also include a set of additional controls on macroeconomic and institutional environment, and industry-specific characteristics, the choice of which has been dictated by the theoretical underpinnings of the spatial choice literature. The main source of the country-level location data is EUROSTAT, the Statistical Office of the European Union, albeit some of the indices were constructed by the authors.

Market demand is the fundamental location determinant because it captures the market potential of the host economy (Procher 2009) and market-seeking firms are traditionally attracted to those locations where they can benefit from large demand (Alegria 2006). By locating in a host country which is a Member State of the EU, an investing multinational firm gains not only an access to the local market of its host economy but importantly an unlimited access to the European Single Market of 500 million consumers. An EU Membership dummy controls for the EU Single Market access motive for FDI location in the EU-25. Furthermore, an access to the local market of an individual EU-25 host country may be an important location consideration and so we include real GDP to proxy for the absolute local market demand. Real GDP per capita is included to capture the relative purchasing power in the local market and real GDP growth rate is an indication of the sustainability of the economic performance and the economic prospects (Procher 2009, 2011). Population density indirectly captures the market potential, as it measures the degree of urbanisation and therefore, the size of the consumer base. The more dense population density allows a firm to capture the larger consumer market within a given geographical space and thus, may

appeal to market-seeking FDI. Among market potential variables we also include a measure of external market access. Alegria (2006) argues that in the EU, the investing firms are likely to consider not only the internal market demand of the host country, but also the demand of the other economies of the Single Market, and therefore it is important to consider the EU-25 wide market access. This is what a market distance index, otherwise a gravity-weighted market size measure of external market potential (in the manner of Harris's (1954) market potential), aims to do. Specifically, a market distance index is a measure of the within the EU market distance that attempts to quantify how central/peripheral a location is, and therefore, its relative position to the other markets. The market distance index is a proxy for the transport costs within the EU-25, and in that respect complements the EU Single Market access dummy, which captures the reduction in overall trade costs associated with the removal of internal trade barriers for CEECs within the EU-25 (e.g. tariffs). Lastly, for policy purposes it is of interest to know if FDI has shifted its location pattern within the EU in response to the Eastern enlargement in 2004 and 2007, and for that purpose we include an East intercept dummy in those regressions where we allow for the FDI motives to vary between 'old' and 'new' EU Member States (East-West heterogeneity). Specifically, an East dummy determines how different is the perception of the 'new' EU Member States vis-a-vis the 'old' EU-15.

For the case of resource-oriented FDI, the optimisation strategy of the investor is also influenced by the supply side considerations associated with the access to the higher quality resources and/or factors of production, which directly affect the cost of producing in a given location. The motorway density is used as a proxy for the quality of the physical infrastructure, which may be one of the resources that FDI seeks to benefit from, as it facilitates the transport of goods. The supply side characteristics also encompass factors such as labour costs, skills and the quality of the labour force, labour availability. The skill base of the workforce, including technological capacility or managerial and organisational skills, is an important resource for MNEs and in our analysis it is captured by the education attainment of the working-age population, both secondary and tertiary. The unemployment rate is used to capture the availability of workforce. Disdier and Mayer (2004) note that high rate of unemployment can be interpreted as the signal of availability of a large pool of workers (in which case, the unemployment is a factor that attracts inward FDI), but it can also be viewed as the sign of a rigid labour market and poor quality labour force (which would discourage the investment). Finally, a resource-seeking FDI often search to acquire higher quality resources and factors of production at a lower real cost and to capture this we include real wage in manufacturing to proxy for the economy-wide labour costs. Generally,

labour cost is one of the largest components of production costs and hence, one the most important cost considerations for firms. Since an increase in wages leads to a fall in profit margin for firms, *ceteris paribus*, the expected effect of wages on the probability of inward investment is negative. However, it is also plausible that multinational firms are attracted to the high labour costs locations as it is where highly skilled workforce may be found (Procher 2011).

While with the market potential and resource variables we hope to capture if the motive for FDI location in th EU-25 is market-seeking or resource-seeking in nature, it is important to include a range of other controls in our analysis of FDI location choices. Essentially, the aforementioned variable groups focus on the profit- and cost-driving factors, which feature in the neoclassical theories. Neoclassical theories assume that agents are rational and perfectly-informed, and optimise their decisions by choosing the investment location such that the profits are maximised or the costs are minimised.[12] Alegria (2006) argues that the traditional neoclassical location determinants are 'the principal motive for multinationals' location choices in the existing literature'.

In addition to the neoclassical strand, the institutional theories emphasise the role of the institutional environment of the host country, such as network of economic relations (relations of MNEs with their clients, rival firms, suppliers, public administration and local authorities) and judicial and regulatory systems (Arauzo-Carod, Liviano-Solis, and Manjon-Antolin 2010, Procher 2011). Furthermore, favourable macroeconomic conditions of the host country, characterised by political and macroeconomic stability, is what motivates inward investment location as the risk and uncertainty associated with investing abroad is reduced. Trade openness index was included to establish the relative importance of market access and trade liberalisation in the location decisions, which is essentially a question of whether trade and FDI are substitutes or complements. Real exchange rate and its volatility influence the country choice for location of production facilities (Goldberg and Kolstad 1994), especially when risk averse investors want to use the new foreign affiliate overseas to access and serve the other markets. Real Effective Exchange Rate (REER) and its variability control for the effect of the exchange rate stability. The corporate tax rate was used since the tax burden determines the post-tax economic rent that can be earned at the location (Procher 2011). Moreover, risk averse investors consider the political risk of the host country (Busse and Hefeker 2007). Finally, among the macroeconomic variables we also include the controls for the impact that the membership of the European

[12]It is the principle underlying the Random Utility Maximisation framework discussed in previous section.

Monetary Union (EMU) and the adoption of the Single Currency (the euro) on the location choices of investors. An euro dummy examines whether the elimination of the transaction costs that is associated with the use of a Single Currency was a catalyst for attracting FDI into the eurozone. Furthermore, an effect of the EU Regional Policy is controlled for by including the total EU Structural Funds payments. While the EU has no policy instrument 'dedicated' to attracting FDI (Basile, Castellani, and Zanfei 2008), it is of interest to establish whether the EU Regional Policy, that aims to promote the economic convergence between countries and regions of the EU by co-financing the projects in infrastructure and education, helped to attract FDI into the poorer economies.

Finally, in addition to the demand-side and supply-side attributes, we decided to include a set of controls to characterise the industrial base of a location; these were industrial specialisation indices, inter-industry agglomeration index and industrial concentration index. All variables in the industry category were constructed by the authors. Two types of industrial specialisation index, location quotients, were calculated based on EIM FDI project data and EU KLEMS[13] employment data respectively. The location quotients, in our study referred to as foreign and domestic specialisation, attempt to capture the benefits that arise because of specialisation externalities and which occur predominantly between firms of the same industry (Marshall 1890, Arrow 1962, Romer 1986). The specialised workforce, close input-output relations (backward and forward linkages) and knowledge spillovers are what Marshall (1890) listed as the main advantages of the geographical clustering of firms in his discussion on specialisation externalities and agglomeration economies. Inter-industry agglomeration index, Jacobs term, measures how different an industry of a country is from a 'typical' EU-wide industry base. The objective of the Jacobs term index is to establish whether the diversification externalities, also known as urbanisation externalities, are present. This is the concept developed by Jacobs (1969), which says that since knowledge spillovers occur not only between firms of the same industry but span over complementary industries, a greater industrial diversity attracts more firms to a location. Finally industrial concentration index, otherwise known as Herfindahl index and developed by Ellison and Glaeser (1997), measures an extent to what an individual industry is concentrated in space and attempts to pick up the localisation economies.

[13]EU KLEMS data is available at: http://www.euklems.net/

5 Empirical Results

This section discusses the empirical results of our analysis. The purpose of the paper is to analyse the motives for FDI location choice in the EU-25. Considered in our study are three asset-exploiting motives: market-seeking, resource-seeking and efficiency-seeking through exploiting economies of scale. Initially we consider if inward FDI across EU-25 is market or resource-oriented, but subsequently examine the differences in motives for FDI between West and East. Seeing that the motives for FDI may differ significantly between new and expansionary investment, the estimation results by project type are of main interest. By comparing new investment and expansions, we are able to establish if efficiency-seeking motive is the primary driver of expansionary investment. In the Appendix we also report the estimation results for a restricted sample of Manufacturing FDI and FDI from outside EU-25.

5.1 Location choice in EU-25

We begin with estimating the motives for FDI location choice across the EU-25, before analysing how the motives vary between West and East, and between project types. The purpose of estimating the base model on a full sample of countries and FDI projects, without making a distinction between EU-15 (West) and EU-10 (East), and between different project types, is to analyse the overall FDI location and examine the sensitivity of results. In that respect this subsection does not tackle the main research question of this paper. We begin with estimating the model without the country fixed effects (Table 3, column (I)), but we subsequently include the fixed effects in column (II). Columns (III) and (IV) are the variations of our base model, where we introduce an interaction term of market distance with EU Single Market and East dummies in (III), and exclude EU Single Currency dummy in (IV). Columns (III) and (IV) will provide an information on the sensitivity and robustness of our base model results.

We begin with comparing differences in conditional logit estimation results between models without and with country fixed effects (column (I) and column (II)). In principle, by including country fixed effects, we are controlling for the average differences across countries in any observable or unobservable predictors. This greatly reduces the threat of omitted variable bias. Therefore, in all estimations but column (I) country fixed effects are included in the econometric model specification.

It is evident that a large part of our market potential variables are affected by the inclusion of the country fixed effects, both with respect to the coefficient sign and statistical significance. Crucially, the two models are not conclusive as to the role of trade

Table 3: Full sample results

	Dependent variable: location choice			
Sample:	Full	Full	Full	Full
Column:	(I)	(II)	(III)	(IV)
Market potential variables				
Single Market (EU)	0.028	0.259***	-0.383	0.264***
	(0.047)	(0.049)	(0.408)	(0.049)
Market distance	0.812***	-5.684***	-5.112***	-3.466**
	(0.033)	(1.492)	(1.535)	(1.413)
Market distance * EU * East	-	-	0.182	-
			(0.115)	
National market	0.941***	-3.926***	-3.607**	-3.393**
	(0.019)	(1.446)	(1.459)	(1.443)
Income per capita	-0.317***	2.584*	2.358*	2.173
	(0.045)	(1.415)	(1.420)	(1.413)
Population density	-0.251***	-1.264	-1.752	-0.877
	(0.017)	(1.423)	(1.455)	(1.421)
Growth rate	0.026***	0.021***	0.020***	0.020***
	(0.004)	(0.004)	(0.004)	(0.004)
Resource variables				
Physical infrastructure	-0.020	0.455***	0.459***	0.446***
	(0.016)	(0.061)	(0.061)	(0.061)
Secondary education	-0.009***	0.011***	0.011***	0.006**
	(0.001)	(0.003)	(0.003)	(0.003)
Tertiary education	0.016***	0.004	0.004	0.001
	(0.002)	(0.004)	(0.004)	(0.004)
Unemployment rate	-0.013***	-0.012***	-0.011***	-0.014***
	(0.003)	(0.004)	(0.004)	(0.004)
Wage rate	-0.289***	-0.621***	-0.787***	-0.879***
	(0.039)	(0.166)	(0.197)	(0.158)
Macroeconomic variables				
Openness to trade	0.005***	-0.001	-0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Exchange rate	-0.009***	-0.003***	-0.004***	-0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
Exchange rate volatility	-0.004**	-0.003	-0.003	-0.002
	(0.002)	(0.002)	(0.002)	(0.002
Single currency	-0.287***	0.200***	0.186***	-
	(0.020)	(0.043)	(0.044)	
Corporate tax rate	-0.025***	-0.010***	-0.010***	-0.011***
	(0.001)	(0.002)	(0.002)	(0.002)
EU Structural Funds	-0.034***	-0.067***	-0.070***	-0.064***
	(0.007)	(0.008)	(0.008)	(0.008)
Country risk	-0.002	-0.003	-0.003	-0.005*
	(0.002)	(0.002)	(0.002)	(0.002)
Industry variables				
Foreign specialisation	0.014***	0.015***	0.015***	0.015***
	(0.002)	(0.002)	(0.002)	(0.002)
Domestic specialisation	0.152***	0.140***	0.141***	0.141***
	(0.006)	(0.006)	(0.006)	(0.006)
Jacobs term	0.012	-0.077***	-0.077***	-0.084***
	(0.009)	(0.012)	(0.012)	(0.012)
Herfindahl index	-1.233***	-1.031***	-1.033***	-1.032***
	(0.030)	(0.031)	(0.031)	(0.031)
Country fixed effects	No	Yes	Yes	Yes
Log-likelihood	-90,330.8	-89,652.8	-89,651.6	-89,663.4
Wald statistic	36,007.9	38,044.1	38,044.1	38,015.3
N	877,625	877,625	877,625	877,625

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.

and transport costs in attracting inward FDI across EU-25. While the model without country fixed effects demonstrates that the multinational firms prefer markets close to the core, although not necessarily within the European Single Market, the model with fixed effects suggests that peripheral locations within the EU Single Market are preferred. The positive and statistically significant coefficient on real GDP growth in both models confirms that investors prefer those markets that grow faster.

The size of the national market, captured by real GDP, and its average effect on the FDI location choice across all 25 EU Member States is not obvious. As expected, the size of the national market has a positive and statistically significant effect on FDI location in column (I), but with the country fixed effects included (column (II)) the sign on the real GDP turns negative. The reverse is observed for the real GDP per capita. While in column (I) the sign on the coefficient on income per capita is negative, the sign turns positive in column (II). In both cases, the models show a statistically significant effect of income per capita on FDI location. Population density in both models is negatively signed, but it is statistically significant only in column (I).

We feel a further explanation may be required with respect to the counter-intuitive behaviour and signs on GDP, GDP per capita ($\frac{GDP}{POP}$) and population density ($\frac{POP}{km^2}$), especially with reference to the model without country fixed effects. Essentially, these three terms are potentially related, which may constrain the estimates on these. To see this, we can write these terms as follows:

$$(a+b+c)\ln GDP - (b+c)\ln(\frac{GDP}{POP}) - c\ln(\frac{POP}{km^2}) \tag{3}$$

Applying the logarithmic properties, the above can be rewritten as:

$$(a+b+c)\ln GDP - (b+c)(\ln GDP - \ln POP) - c(\ln POP - \ln km^2) \tag{4}$$

The equation simplifies further to:

$$a\ln GDP + b\ln POP + c\ln km^2 \tag{5}$$

Since GDP, POP and km^2 all capture country size it is plausible that estimates on a, b and c are positive, which in 3 implies that signs are positive (GDP), negative ($\frac{GDP}{POP}$) and negative ($\frac{POP}{km^2}$), and this is what we find when estimating the model without country fixed effects in column (I). It gives some motivation for the negative sign on per capita GDP in particular. We do not regress 5, as these terms correlated and are difficult to interpret, while we can give meaning to the terms in 3. It shows why some signs are counter-intuitive.

On the resource factors, the quality of the road infrastructure captured by the motorway density is a factor that tends to attract FDI across EU-25, albeit the effect is not statistically significant when country fixed effects are not included in the model specification. As far as the education attainment is concerned, the models in columns (I) and (II) do not offer a compelling evidence as to the role of the education on the inward FDI location in the EU-25. While in the model without country fixed effects secondary education deters and tertiary education attracts FDI location, the inclusion of fixed effects leads to the effect of tertiary education becoming insignificant and secondary education turning positive. Model with fixed effects, thus, suggests that in the EU-25 as a whole multinational firms seek educated workforce but are not essentially interested in higher level skills.

Two remaining variables in the resource category encompass unemployment rate and wage rate, and their effect on FDI location choice in the EU-25 is not affected by the inclusion of the country fixed effects in the model. The multinational firms appear to avoid the locations with high level of unemployment, as they may consider such locations to have a rigid labour market and poor quality workforce. Importantly, and as expected, the location choice is negatively influenced by labour costs, meaning that multinational firms may be interested in achieving greater efficiency by means of reducing their costs.

Turning to the macroeconomic factors, according to column (I) more open economies in the EU-25 attract more FDI, while trade openness does not appear to be an important consideration in the FDI location according to column (II). The negative and statistically significant coefficient on the real effective exchange rate, which is consistent across two models, demonstrates that the probability of inward FDI is reduced when the domestic currency of a host economy experiences a real appreciation. Real effective exchange rate appreciation implies a loss in competitiveness and will discourage FDI whenever the size of the operating costs and willingness to re-export from a location are important considerations for an investing firm. On the other hand, the effect of the exchange rate volatility depends on the inclusion of country fixed effects. While exchange rate volatility discourages FDI in the model without fixed effects, the effect turns insignificant in column (II).

To our surprise, but similarly as it was with the EU Single Market dummy, models in columns (I) and (II) offer contradictory evidence on the role of the EU Single currency. Specifically, the euro appears to reduce the probability of inward FDI location according to the model without the country fixed effects. However, the inclusion of the fixed effects leads to the coefficient on the Single currency dummy turning positive. It may be more intuitive to expect that a membership of the EMU increases the

probability of FDI location as investors may want to benefit from the removal of transaction costs and elimination of exchange rate risks that are associated with the use of the Single Currency.

We also find that the preferred locations across EU-25 are those where the corporate income tax rate and hence, tax burden are low, and this result holds in columns (I) and (II). The size of the EU Structural Funds payments has a negative effect on the probability of location, showing that the EU Regional Policy failed to attract more FDI (albeit it is not an explicit objective of the EU Regional Policy). Finally, political risk index of a country does not alter the location choices of multinational firms.

The industry variables have generally the predicted signs. The positive sign on foreign and domestic specialisation and the negative sign on Jacobs term demonstrate that the probability of inward investment is higher for those locations where the multinational firm can benefit from specialisation externalities (both from foreign and domestic firms) and diversification externalities, although the latter are not statistically significant location determinant in column (I). An industrial structure resembling that of a monopoly, (Herfindahl index closer to one), discourages FDI.

In column (III) we introduce a new term and keep country fixed effects in (as in column (II)). The extra term is an interaction of market distance with EU Single Market and East dummies, and it attempts to capture a distance to the Single Market in the new 'EU' in the post-accession period. The decision of how close to the core of the EU Single Market in the East the investor wants to locate will be affected by the investor's willingness to capture market demand in the 'new' EU Member States in the post-accession period. Nevertheless, we find that the new interaction term is not statistically significant. Furthermore, the Single Market (EU) loses statistical significance. All other results remain unaffected by the inclusion of the new market distance term.

Finally, in column (IV) we drop EU Single currency dummy to check how if it may alter the effect of the EU Single Market on FDI location choice. However, we find no evidence for this, as EU dummy remains positive and statistically significant. In comparison with column (II), the results in column (IV) are largely robust. The only two changes to report is income per capita that turns insignificant (positive and statistically significant at 10% in column (II)), and political risk index that is now negative and statistically significant at 10% significance level (insignificant in column (II)).

5.2 'West-East divide' in the location choice motives

In this section we reestimate the base model on a full sample of countries, but this time we allow for heterogeneity in the preferences of investors locating in the 'old' versus the 'new' EU (West-East heterogeneity in column (V)). In the basic model in Table 3, we assumed that the effect of each predictor variable (i.e. the slope) was identical across all countries. By allowing for West-East heterogeneity in the FDI location motives we allow for the slopes to differ between 'old' EU-15 countries and 'new' EU-10 countries. Therefore, in column (V) we introduce slope dummies, i.e. interactions between West and East dummies and the key predictor variables. They tell us whether an individual variable has a statistically significant effect on FDI location in the West and in the East. In addition, significance information in the square brackets informs us whether the effect is statistically different between West and East. This allows us to highlight the differences in the location choice motives between West and East, rather than to assume that the average effect on FDI location choice is uniform across all 25 EU Member States. This should enable us to establish whether there exists a 'West-East divide' (see: Disdier and Mayer 2004) in the location choice motives.

In columns (VI) and (VII) respectively we show the base model estimation results for a restricted sample of EU-15 and EU-10 countries. In that respect, while in columns (VI) and (VII) we show FDI location choice within West and within East, we are not able to address the research question of this paper as the location choice is made conditional on the multinational firm having already made a decision to invest in the West (column (VI)) or in the East (column (VII)). In that respect, the results of the base model estimation within West and within East are of no main interest to us but we report them for the readers' reference.

Turning to interpreting the regression results in column (V) it has to be said we make no distinction between project types, although we do it in the following section. In that sense, in this section we look at differences in FDI location motives between West and East overall, but we can only test the relative importance of market access and resource seeking motives. We are not able to examine efficiency-seeking motive, as new investment projects are grouped together with the expansions, but we evaluate the presence of the efficiency-seeking motive in the following section.

In column (V), in addition to the slope terms we include East intercept, which demonstrates that the 'new' EU Members continue to be relatively less attractive destination for inward FDI as compared against their EU-15 counterparts. Foreign investors continue to be attracted by the EU Single Market.[14] Negative sign on the mar-

[14]The limitation of this study is that we are not able to allow for the EU Single Market effect to differ

Table 4: West-East heterogeneity

Sample:	Dependent variable: location choice			
	Full		West only	East only
Column:	(V)		(VI)	(VII)
	West × var	East × var		
Market potential variables				
East	-41.631***		-	-
	(13.112)			
Single Market (EU)	0.177***		-	-0.068
	(0.055)			(0.076)
Market distance	-3.570**	3.983*[***]	-5.310***	20.810***
	(1.709)	(2.097)	(1.927)	(5.211)
National market	0.472	-7.577***[**]	1.697	-6.535***
	(3.358)	(1.971)	(3.401)	(2.058)
Income per capita	-2.679	4.538***[*]	-4.100	3.317*
	(3.376)	(1.796)	(3.418)	(1.909)
Population density	-6.658**	1.666[**]	-8.273**	5.817**
	(3.216)	(2.090)	(3.256)	(2.298)
Growth rate	0.020**	0.025***	0.028***	0.019***
	(0.008)	(0.006)	(0.009)	(0.007)
Resource variables				
Physical infrastructure	0.886***	0.081[***]	0.943***	0.017
	(0.106)	(0.112)	(0.107)	(0.135)
Secondary education	0.012***	-0.018[**]	0.010***	-0.002
	(0.003)	(0.012)	(0.003)	(0.013)
Tertiary education	0.026***	-0.029**[***]	0.026***	-0.008
	(0.007)	(0.013)	(0.007)	(0.014)
Unemployment rate	-0.050***	0.000[***]	-0.057***	-0.012
	(0.006)	(0.007)	(0.006)	(0.008)
Wage rate	0.408	-0.449[*]	0.568	-0.847**
	(0.350)	(0.306)	(0.372)	(0.335)
Macroeconomic variables				
Openness to trade	-0.001	-0.006***[**]	-0.001	-0.006***
	(0.001)	(0.002)	(0.001)	(0.002)
Exchange rate	-0.009***	-0.018***[***]	-0.010***	-0.012***
	(0.002)	(0.003)	(0.002)	(0.003)
Exchange rate volatility	-0.010***	0.008**[***]	-0.009**	0.012***
	(0.003)	(0.004)	(0.004)	(0.004)
Single currency	0.241***	0.729***[***]	0.227***	0.658***
	(0.056)	(0.117)	(0.065)	(0.120)
Corporate tax rate	-0.006**	-0.035***[***]	-0.008***	-0.041***
	(0.003)	(0.005)	(0.003)	(0.006)
EU Structural Funds	-0.042	-0.073***	-0.043	-0.030**
	(0.029)	(0.010)	(0.030)	(0.014)
Country risk	0.000	0.012*	0.003	0.016**
	(0.003)	(0.007)	(0.003)	(0.008)
Industry variables				
Foreign specialisation	0.085***	0.011***[***]	0.092***	0.009***
	(0.005)	(0.001)	(0.005)	(0.002)
Domestic specialisation	0.177***	0.115***[***]	0.160***	0.091***
	(0.010)	(0.009)	(0.010)	(0.016)
Jacobs term	-0.068***	-0.007[**]	-0.033**	-0.023
	(0.013)	(0.024)	(0.015)	(0.035)
Herfindahl index	-0.916***	-0.996***	-0.691***	-0.714***
	(0.037)	(0.050)	(0.040)	(0.064)
Country fixed effects	Yes		Yes	Yes
Log-likelihood	-89,451.9		-59,148.5	-13,537.2
Wald statistic	38,200.6		25,491.5	3,406.5
N	877,625		423,375	68,800

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
[***]/[**]/[*] coefficient significantly different at 1%/5%/10% significance level between West and East;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.

ket distance term in the West suggests that access to the market is unimportant for FDI in the West, so that FDI prefers the more peripheral locations, whereas for location in the East the positive sign suggests access is important and it is consistent with the strong significant estimate found for the Single Market. The size of the national market and income per capita are not the factors that motivate FDI location in the West, whereas in the East investors seek to locate in the more prosperous markets, albeit negative size on real GDP may be an indication of the diminishing marginal returns to the national market size. In both West and East investors are attracted by locations with high growth potential.

On the resources, it is evident that the investors locating in the 'old' EU have a clear preference for well-connected locations with good quality road infrastructure but on the other hand, the motorway network density has no effect on location decisions in the 'new' EU. There is a marked difference in preferences of investors locating in the West versus the East with respect to the education attainment and skills of the labour force. Specifically, an increase in the education attainment of the working-age population, be it secondary or tertiary education, motivates inward FDI location in the 'old' EU. In the EU-10, on the other hand, education either discourages FDI (tertiary education) or is a factor of no importance (secondary education), implying that in the 'new' EU skills are not the resource that investing multinational firms are seeking for.

The coefficient on unemployment rate is negative and statistically significant in the West suggesting that when locating in the EU-15 investors view the unemployment as a signal of inflexible labour markets and poor quality workforce, and avoid such locations. The location of FDI in East is not affected by unemployment. Wages appear not to have a statistically significant effect on FDI location choice, although the results demonstrate that the effect of wages between West and East is different at 10% significance level.

The coefficients on trade openness show that trade and inward FDI are substitutes in serving the local markets in the East. On the other hand, the degree of openness does not have any influence on FDI location in the 'old' EU. The variability of real exchange rate has opposite effect on location choice in the 'old' versus the 'new' Member States of the EU. While the volatile exchange rate deters FDI in the West, it is a factor that attracts investors to the East. Although counter-intuitive at first, it provides a further support for trade-FDI substitute hypothesis in the sense that less volatile exchange rate may encourage firms to serve the markets of CEECs by cross-border trade instead of FDI, thus reducing the inflows of inward FDI to the East.

between West and East, as there is no variation in EU Membership status for EU-15 group throughout the period 1997-2010.

The model in column (V) shows that the effect of EU Regional Policy differs between West and East. While in the 'old' EU the location choices are not affected by EU Structural Funds, in the East the EU support appears to be associated with less-attractive locations as we observe an inverse relationship between the EU Structural Fund payments and the location choice probability. The political risk rating of a country does not alter FDI location choice in the West, while an improvement in the rating in the East increases the probability of inward FDI. For the remaining macroeconomic factors, we discover that their effect on FDI location choice is similar in the 'old' and 'new' EU Member States. Exchange rate appreciation continues to deter FDI location, while the Single currency motivates multinational firms to invest. Firms are discouraged by high level of company tax rate.

Turning to the industry variables, we find that foreign and domestic specialisation externalities attract FDI in both 'old' and 'new' EU. The difference in FDI location motives between West and East is noticeable in the preferences towards inter-industry agglomeration. While in the West, diversified industry is a factor that attracts inward investment, in the East it is a factor of no importance in the location choice. A presence of a monopoly reduces the probability of FDI location in both EU-15 and EU-10.

The results of estimation within West (column (VI)) and within East (column (VII)) largely comply with the West and East effects estimated in column (V). Population density appeared to be insignificant in column (V), while in column (VII) it is a factor that motivates FDI location within the East. Within East estimation results also show a negative and significant effect of labour costs on location, and a lack of desire of multinational firms to seek educated labour (insignificant coefficients on secondary and tertiary education attainment).

The findings in this section tend to provide an evidence that investment in the EU-15 is predominantly resource-seeking as investors are attracted to locations with educated workforce, low unemployment, good physical infrastructure and are not discouraged by wage demands of the labour force. On the contrary, the market-seeking motive appears to dominate in the 'new' EU Member States, as the multinational firms choose to invest in the densely populated and rich core markets.

5.3 Location choice motives for 'greenfield' and 'brownfield' FDI

The strategic determinants and specific motives that attract inward investment into a location may differ depending on whether an individual project is a new investment or an expansion of an existing project. In this section we explore the possibility that location choice motives are fundamentally different between new investment projects

('greenfield' FDI) and expansions ('brownfield' FDI). The purpose of this section is to analyse and highlight the differences in the location preferences of both types of investors. To establish that differences in preferences do exist between the types of FDI projects, we run a base model on a full sample of FDI projects but as it was in column (V) we allow for the slope on predictor variables to differ between project types (project type heterogeneity) by means of interacting individual variables with project type dummies. The results of empirical estimation for manufacturing FDI are shown in Table 5.

Although we allow for the motives for FDI to differ between different types of projects, in this section we do not make an allowance for the motives to differ between West and East so that the results in Table 5 show the combined West-East effect. Considering that the results in Table 4 in the previous section demonstrated that the effect is likely to differ between 'old' and 'new' EU Member States (West-East heterogeneity), we will examine this possibility in the next section.

As shown in Table 2, our dataset distinguishes between three different project types: new investment, expansions and co-locations. For the purpose of our analysis, we agree on two separate definitions of expansion-type projects. The first definition is the 'broad' one, whereby we group together expansions and new co-location. The second definition is the 'narrow' one, whereby we only count investment projects classed as expansions, but do not count co-locations. The exact difference between these two project types is that while expansions are defined as increases in capacity of existing functions at their present location, co-locations involve new functions that are co-located at or near an existing activity.

We begin with estimating a model in which we contrast the motives for FDI between new investment and 'broad' expansions (column (VIII)). Subsequently, we narrow down our definition of expansions and contrast it with the new investment and co-location projects (column (IX)). The information contained in Table 5 reveals not only whether the effect of a variable in question is statistically significant for a respective project type, but also reports in the square brackets whether the effect is statistically different between project types.

A key argument here is that if expansions were motivated by exploiting economies of scale, then we would expect to find that location factors are the same, considering that a random draw of projects chooses to re-invest. However, the estimation results in Table 5 reveal that there exist significant differences between new investment and expansion projects, suggesting that motives other than economies of scale are important for re-investments.

The results in Table 5 indicate a very different effect of growth potential on new in-

Table 5: Project type heterogeneity

Sample:	Dependent variable: location choice			
	Full		Full	
Column:	(XI)		(XII)	
	A × var	(B ∪ C) × var	(A ∪ C) × var	B × var
Market potential variables				
Single Market (EU)	0.188***	0.449***[***]	0.234***	0.347***
	(0.057)	(0.083)	(0.054)	(0.099)
Market distance	-4.952***	-4.168***[***]	-5.803***	-4.621***[***]
	(1.497)	(1.498)	(1.498)	(1.499)
National market	-3.615**	-3.577**	-4.184***	-4.081***[**]
	(1.449)	(1.449)	(1.450)	(1.450)
Income per capita	2.221	2.356*	2.842**	2.771*
	(1.418)	(1.420)	(1.419)	(1.424)
Population density	-1.156	-1.375[***]	-0.876	-1.175[***]
	(1.423)	(1.423)	(1.424)	(1.424)
Growth rate	0.029***	0.006[***]	0.028***	-0.002[***]
	(0.005)	(0.007)	(0.005)	(0.008)
Resource variables				
Physical infrastructure	0.472***	0.405***[*]	0.485***	0.337***[***]
	(0.062)	(0.066)	(0.062)	(0.068)
Secondary education	0.017***	0.001[***]	0.017***	-0.008**[***]
	(0.003)	(0.003)	(0.003)	(0.003)
Tertiary education	0.010**	-0.002[***]	0.009**	-0.009*[***]
	(0.004)	(0.005)	(0.004)	(0.005)
Unemployment rate	-0.012***	-0.016***	-0.009**	-0.024***[**]
	(0.005)	(0.006)	(0.004)	(0.006)
Wage rate	-0.629***	-0.849***[**]	-0.649***	-0.810***
	(0.169)	(0.180)	(0.168)	(0.189)
Macroeconomic variables				
Openness to trade	-0.001	0.000	-0.001	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
Exchange rate	-0.004***	-0.002	-0.004***	-0.003
	(0.001)	(0.002)	(0.001)	(0.002)
Exchange rate volatility	-0.004	-0.000	-0.005**	0.001
	(0.003)	(0.004)	(0.003)	(0.004)
Single currency	0.150***	0.277***[***]	0.175***	0.236***
	(0.047)	(0.051)	(0.045)	(0.055)
Corporate tax rate	-0.007***	-0.016***[***]	-0.008***	-0.018***[***]
	(0.002)	(0.003)	(0.002)	(0.003)
EU Structural Funds	-0.065***	-0.070***	-0.076***	-0.036**[***]
	(0.009)	(0.012)	(0.008)	(0.014)
Country risk	0.003	-0.017***[***]	-0.000	-0.013***[***]
	(0.003)	(0.004)	(0.003)	(0.004)
Industry variables				
Foreign specialisation	0.011***	0.074***[***]	0.011***	0.102***[***]
	(0.002)	(0.006)	(0.001)	(0.007)
Domestic specialisation	0.128***	0.174***[***]	0.132***	0.180***[***]
	(0.007)	(0.011)	(0.007)	(0.013)
Jacobs term	-0.085***	-0.053***[*]	-0.085***	-0.051***[*]
	(0.014)	(0.018)	(0.013)	(0.019)
Herfindahl index	-0.895***	-1.141***[***]	-0.956***	-1.011***
	(0.037)	(0.058)	(0.035)	(0.065)
Country fixed effects	Yes		Yes	
Log-likelihood	-89,268.3		-89,134.7	
Wald statistic	38,370.5		38,363.8	
N	877,625		877,625	

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
[***]/[**]/[*] coefficient significantly different at 1%/5%/10% significance level between project types;
A - captures new investment; B - captures expansions; C - captures co-locations;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.

vestment location versus re-investment. While new investment is motivated by higher growth rates, it is a factor of no significance in the case of expansions. Furthermore, column (VIII) shows that while expansions and co-locations are motivated by rich markets, new investment appears not to attach any importance to income per capita. This tendency is not evident when we work with the 'narrow' definition of expansions in column (IX), as all project types appear to be attracted by higher income per capita.

In the resource variables category, we notice a marked difference between new investment projects and re-investments with their attitude towards education and skills of the workforce. Multinational firms, which establish new investment facilities in the EU-25 appear to seek skilled workers. In the case of expansions, the investors either appear indifferent towards skills ('broad' definition of expansions used in column (VIII)) or are discouraged from re-investing further if the education level of the labour force is high ('narrow' definition of expansions in column (IX)).

There is a heterogeneity between project types in their attitude towards the exchange rate behaviour. In essence new investments are deterred by appreciating exchange rate, a factor to which expansion type projects attach no importance. The volatility of exchange rate is insignificant when we compare new investment with 'broad' expansions in column (VIII). However, when we work with the 'narrow' definition, we observe that volatile exchange rate has a negative effect on the probability of new investment and new co-location, but not 'narrow' re-investments. Finally, political risk of a country appears to discourage expansions from taking place, albeit it does not deter new investment in the first place.

For the remaining variables we do not observe their effect on FDI location choice to differ between project types and the coefficient signs are in accordance with the results presented in Table 3, column (II). Importantly, all project types are motivated by the access to the EU Single Market, although the multinational firms prefer to set up new investment and re-invest in the periphery, where they can benefit from the well developed physical and transport infrastructure. The growth prospects are important for investors, albeit the national market size exhibits diminishing marginal returns in motivating inward FDI. All project types are deterred by higher wages and unemployment, as well as by the tax burden. Analogously to the preference for the Single Market access, new investment and re-investment projects are also attracted by the Single currency, although the probability of new investment and expansion is lower in those depressed locations that benefit from the EU Structural Funds.

5.4 Location choice motives for 'greenfield' and 'brownfield' FDI with 'West-East divide'

The empirical evidence presented in the preceding sections established that motives for FDI differ between 'old' and 'new' EU countries, as well as between new investments and re-investments. In this section we are able to combine two sets of evidence as we run a base model on a set of three restricted samples (new investment only in column (X), 'broad' expansions only in column (XI) and 'narrow' expansions only in column (XII)), allowing for a different slope on key predictor variables for the West and the East. In that respect, empirical findings contained in Table 6 are of a main interest in addressing the main research question of our study.

This section of our study allows us to examine a degree to which market access and resource factors affect new investment and expansions in the EU-15 and EU-10. By focussing predominantly on columns (X) and (XI) we attempt to gauge the degree to which the market access and resource factors affect investment in the West and in the East, and whether market access and resource factor appeal more to those multinational firms that carry out a new investment project or expand the existing activity. Estimation results for a sample of 'narrow' expansions are reported in column (XII) for the readers' reference.

By examining market potential variables, we notice that the access to the EU Single Market motivates re-investments but does not appear to stimulate new FDI. This is surprising at first but the explanation may be that with the new investment, multinational firms are willing to take more risk in order to gain access to the new markets. As far as re-investments are concerned, a decision to expand the existing activity will follow the successful economic performance of a foreign subsidiary. It is possible that the EU Single Market creates an economic environment conducive to firms' growth and new job creation, and therefore, is associated with the higher probability of re-investments.

We notice that none of the market access factors affect the new investment location in the West, as not only the access to the EU Single Market is insignificant, but nor is the size of the national market or income per capita. New investment in the West displays a preference to locate in the periphery, away from the main markets. The behaviour of the new investment locating in the East is different, as it appears to be motivated by higher per capita income and growth rates.

Turning to the expansions and co-locations, a positive and statistically significant coefficient on the market distance suggest that the probability of re-investment in the East increases in the markets closer to the core. It may again be a result of business

Table 6: Results by project type with West-East heterogeneity

Sample:	Dependent variable: location choice					
	New investment		Expansions and co-locations		Expansions	
Column:	(XIII)		(XIV)		(XV)	
	West × var	East × var	West × var	East × var	West × var	East × var
Market potential variables						
East	-26.830*		-71.853***		-92.516***	
	(16.216)		(22.889)		(27.078)	
Single Market (EU)	0.076		0.411***		0.396***	
	(0.066)		(0.101)		(0.120)	
Market distance	-4.524**	1.202[***]	3.915	13.787***[***]	3.681	14.598***[***]
	(2.094)	(2.566)	(3.057)	(3.749)	(3.564)	(4.403)
National market	0.089	-8.853***[*]	5.407	-4.607	0.164	-6.631
	(4.208)	(2.365)	(5.630)	(3.681)	(6.549)	(4.340)
Income per capita	-3.034	5.515***[*]	-5.888	2.439	-0.815	4.442
	(4.228)	(2.139)	(5.670)	(3.446)	(6.596)	(4.083)
Population density	-5.364	0.293	-12.099**	4.003[**]	-9.031	9.419**[**]
	(4.034)	(2.523)	(5.363)	(3.896)	(6.257)	(4.558)
Growth rate	0.010	0.034***[**]	0.050***	0.012[**]	0.066***	-0.008[***]
	(0.010)	(0.007)	(0.015)	(0.010)	(0.017)	(0.012)
Resource variables						
Physical infrastructure	0.834***	0.170[***]	1.018***	-0.130[***]	1.027***	0.132[***]
	(0.136)	(0.133)	(0.170)	(0.212)	(0.193)	(0.251)
Secondary education	0.019***	-0.008[*]	0.004	-0.028	-0.002	-0.035
	(0.004)	(0.014)	(0.006)	(0.022)	(0.007)	(0.027)
Tertiary education	0.013	-0.015	0.071***	-0.042*[***]	0.060***	-0.050*[***]
	(0.009)	(0.016)	(0.013)	(0.025)	(0.015)	(0.030)
Unemployment rate	-0.069***	-0.000[***]	-0.019*	0.005	-0.035***	-0.007
	(0.008)	(0.009)	(0.011)	(0.014)	(0.013)	(0.016)
Wage rate	-0.115	-1.062***[*]	1.128*	0.631	2.283***	-0.086[**]
	(0.432)	(0.375)	(0.612)	(0.554)	(0.712)	(0.671)
Macroeconomic variables						
Openness to trade	0.000	-0.005**[*]	-0.001	-0.004	-0.001	-0.002
	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.004)
Exchange rate	-0.009***	-0.018***[**]	-0.009***	-0.014***	-0.007*	-0.017***
	(0.002)	(0.003)	(0.003)	(0.005)	(0.004)	(0.005)
Exchange rate volatility	-0.015***	0.014***[***]	0.001	-0.002	0.006	-0.004
	(0.004)	(0.005)	(0.005)	(0.007)	(0.006)	(0.008)
Single currency	0.168**	0.636***[***]	0.348***	0.795***[**]	0.496***	0.699***
	(0.071)	(0.150)	(0.095)	(0.193)	(0.113)	(0.222)
Corporate tax rate	-0.004	-0.034***[***]	-0.006	-0.037***[***]	-0.008	-0.041***[***]
	(0.003)	(0.006)	(0.005)	(0.008)	(0.006)	(0.010)
EU Structural Funds	-0.038	-0.042***	-0.022	-0.123***[*]	-0.078	-0.112***
	(0.034)	(0.013)	(0.054)	(0.019)	(0.061)	(0.022)
Country risk	0.003	0.012	-0.006	0.010	-0.009	0.019[*]
	(0.004)	(0.008)	(0.006)	(0.013)	(0.006)	(0.015)
Industry variables						
Foreign specialisation	0.070***	0.009***[***]	0.140***	0.056[***]	0.187***	0.087[***]
	(0.006)	(0.002)	(0.013)	(0.009)	(0.016)	(0.009)
Domestic specialisation	0.171***	0.107***[***]	0.202***	0.137***[***]	0.199***	0.146***[**]
	(0.013)	(0.010)	(0.017)	(0.016)	(0.020)	(0.018)
Jacobs term	-0.047***	-0.036	-0.103***	0.029[***]	-0.095***	-0.014[*]
	(0.016)	(0.032)	(0.025)	(0.039)	(0.027)	(0.044)
Herfindahl index	-0.802***	-0.911***	-0.933***	-1.130***[*]	-0.824***	-0.853***
	(0.044)	(0.061)	(0.070)	(0.093)	(0.080)	(0.106)
Country fixed effects	Yes		Yes		Yes	
Log-likelihood	-60,417.3		-28,491.2		-22,087.4	
Wald statistic	24,575.9		13,742.6		11,890.0	
N	583,125		249,500		235,550	

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
[***]/[**]/[*] coefficient significantly different at 1%/5%/10% significance level between West and East;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.

environment that is more conducive to firms' growth that in the case of 'new' EU Member States exists only in the core markets with low transport costs. Expansions in the EU-15, on the other hand, albeit they do not reveal a preference for either core or periphery, they are attracted by the markets that grow faster. The re-investments in the West are deterred by the congestion as demonstrated by the negative and statistically significant coefficient on population density.

Considering the resource-seeking motive, both new investment and expansions reveal their appreciation of a well-developed physical infrastructure in the West. Furthermore, also the merit of skills and education of the workers is valued highly in the EU-15; while the middle range of skills captured by secondary education are sought to be utilised in the new investment projects, the higher level skills more often find their use in re-investments that demonstrate their willingness to pay for these skills. In the West, new investments and expansions are both found to avoid areas with high unemployment, as this may be where skills of the workforce are poor.

In the 'new' EU, unlike in the West, the physical infrastructure is not sufficiently attractive resource to attract new FDI or encourage re-investment. The role of education in attracting new investment and encouraging expansions in the East is generally not statistically significant either, although in the case of tertiary education, it shows to discourage re-investments. Higher wage rates in the East deter new inward FDI.

The remaining macroeconomic and industry controls are on the whole significant across the West and East, and for different project types. The Single currency appears to motivate inward FDI, regardless of whether it is a new investment or an expansion, while the tendency of an exchange rate to appreciate is a deterrent of FDI. An exchange rate volatility has a negative effect on new investment in both 'old' and 'new' EU Member States, but does not affect the probability of expansions. The results in column (X), (XI) and (XII) reveal that corporate tax rate and EU Structural Funds have a significant and negative effect on the probability of new investment location and re-investment in the East, but this effect is not detected in the West. This 'West-East divide' in the adverse effect of taxes and EU Regional Policy was not evident when we conducted our analysis on a full sample of projects (Table 4).

The coefficients on the industry variables demonstrate that foreign and domestic specialisation externalities, as well as industrial concentration affect new investment and expansion projects across West and East. Inter-industry agglomeration term is negative statistically significant for the West only for different project types suggesting that industrial diversity is more important for FDI location choice in the West.

Finally, we examine the efficiency-seeking motive for FDI location in the 'old' and 'new' EU by looking for any differences among market access and resource factors

that exist between new investment and expansions in the West, and between new investment and expansions in the East. Considering that re-investments should be just a random sample of the new investment projects that were carried out at an earlier stage, if we were to believe that exploiting economies of scale is the sole motive for expansions then we would not expect any differences in market-seeking and resource-seeking motives to exist between a sample of new investment projects and a sample of re-investments.

At first inspection it is evident that significant differences exist between new investment and expansion projects, and which suggest that expansion investments in both the EU-15 and EU-10 are more market-driven. In particular, while new investment projects in the West do not display any market-seeking tendency, as they opt for peripheral locations, expansions in the West prefer markets that grow faster. Likewise, in the East expansion projects have a strong preference to locate in the central markets, which is unlike the new investment that is indifferent between the core and periphery. In the case of the resource-motives the location factors also do not uniformly affect choices of the new investment and expansions in the West and East. Overall, this suggests that expansions are quite different in nature to new investments, so that they are not simply about adding scale to existing operations for the purpose of achieving greater economies to scale. While greater economies of scale or scope may be a consequence of these expansions, the results of this analysis suggests that they are also subject to market-access and resource-seeking motives, so that they are not being made to simply add scale to existing operations for efficiency motives.

In the Appendix, for readers' own reference we also show extra estimation results for project type subsamples of Manufacturing FDI only (Table A2) and FDI originating from outside EU-25 (Table A3). These results show that Manufacturing investment is clearly deterred by higher level skills in the 'new' EU and is motivated by a well developed physical infrastucture in the EU-15. Manufacturing re-investment is encouraged by the access to the Single Market and the probability of re-investment is less likely in the East. The similar pattern is not evident for the Manufacturing new investment.

Astonishingly, new investment originating from outside of EU-25 prefers to locate in the 'new' EU Member States, suggesting that new market access motive may be driving this behaviour. The new investment from outside EU-25 appreciate middle range skills in the West, whereas the re-investments reveal their preference for access to highly skilled workers in the West to whom they are prepared to pay a premium salary.

In summary, these results give us a basis to argue that market-seeking motive is more important for new investment projects setting up their production facilities in

the 'new' EU countries rather than the 'old' EU. Market access is an important motive for re-investments in the East, where the probability of 'brownfield' FDI is higher in the core locations. The resource-seeking motive tends to drive the behaviour of new investment and expansions in the EU-15, but is not evident in the pattern of FDI location in the EU-10. Motives other than efficiency-seeking through economies of scale drive the behaviour of expansionary investment in both 'old' and 'new' EU.

6 Conclusions

This paper provides comprehensive cross-country evidence on the motives that drive FDI location decisions in the EU-25. It distinguishes between market access and resource factors, and tests for the presence of the efficiency-seeking behaviour. Specifically it examines how the three motives for FDI location differ between 'old' and 'new' Member States of the EU and seeks to establish whether there exists a significant 'West-East divide' in the location preferences of multinational firms. To capture the discrete choice nature of the location choice, a conditional logit model is used and a range of market-based and resource-based factors are analysed, while macroeconomic and industry characteristics are included to control for other country-level factors that affect FDI location. Among others, the controls include EU-specific factors such as the Single currency and the EU Structural Funds.

Overall, we find that market access and resource-seeking motives are both important for FDI location in the EU-25, but crucially they differ between the West and the East. Allowing for FDI location motives to differ between 'old' and the 'new' EU Member States, the results show that FDI tends to avoid congested locations in the EU-15 by locating in the periphery further away from main markets, but this tendency is not evident for the EU-10 countries, which suggests that access to the Single Market is important for these. Investment in the EU-15 is predominantly resource-seeking, as better educated workforce attracts FDI and multinational firms are prepared to pay for the skills of the labour force. It appears that in the 'new' EU the market-seeking motive dominates, as investment tends to locate in the rich, core markets, albeit we notice that greater education attainment and higher labour costs both deter FDI.

An analysis by project type indicates that market access motive dominates the location choices of new investment and expansions in the East, but in the West market-seeking considerations impact on a decision to expand an existing activity rather than to carry out a new investment. The resource-seeking motive affects new investment and re-investment projects in the West, as investing multinational firms are motivated

by an access to the better physical infrastructure and skilled labour force. Our project type analysis reveals that the access to the EU Single Market increases the likelihood of re-investment but does not affect the probability of a new investment.

Our analysis suggests that expansions are quite different in nature to new investments, so that they are not simply about adding scale to existing operations for the purpose of achieving greater economies to scale. While greater economies of scale or scope may be a consequence of these expansions, the results of this analysis suggests that they are also subject to market-access and resource-seeking motives, so that they are not being made to simply add scale to existing operations for efficiency motives.

The estimates on the controls are plausible and they indicate that on the whole the access to the EU Single Market increases the inflow of FDI, indicating that the 'new' EU benefited from the EU accession in 2004 and 2007. Similarly, the Single currency is also found to encourage FDI location, suggesting that the 'new' EU Member States should see their investment grow as they choose to adopt the Single currency. While it is not an official target of the EU Structural Funds, the payments under the EU Regional Policy support failed to stimulate the inward FDI, and in the case of the EU-10 we detect an inverse relationship between the size of the EU Structural Fund payments and the probability of inward FDI. The 'old' EU continues to be a more attractive destination for investment than the 'new' EU Member States, regardless of whether it is a new investment project or an expansion of an existing activity. Overall, the paper shows that there are important differences in the nature of FDI between the West and the East of Europe.

References

ALEGRIA, R. (2006): "Countries, Regions and Multinational Firms: Location Determinants in the European Union," ERSA conference papers ersa06p143, European Regional Science Association.

AMITI, M., AND B. SMARZYNSKA JAVORCIK (2008): "Trade Costs and Location of Foreign Firms in China," *Journal of Development Economics*, 85(1-2), 129–149.

ARAUZO-CAROD, J.-M., D. LIVIANO-SOLIS, AND M. MANJON-ANTOLIN (2010): "Empirical Studies In Industrial Location: An Assessment Of Their Methods And Results," *Journal of Regional Science*, 50(3), 685–711.

ARROW, K. (1962): "Economic Welfare and the Allocation of Resources for Invention," in *The Rate and Direction of Inventive Activity: Economic and Social Factors*, NBER Chapters, pp. 609–626. National Bureau of Economic Research, Inc.

BARRELL, R., AND N. PAIN (1999): "Domestic Institutions, Agglomerations and Foreign Direct Investment in Europe," *European Economic Review*, 43(4-6), 925–934.

BASILE, R. (2004): "Acquisition versus Greenfield Investment: The Location of Foreign Manufacturers in Italy," *Regional Science and Urban Economics*, 34(1), 3–25.

BASILE, R., D. CASTELLANI, AND A. ZANFEI (2008): "Location Choices of Multinational Firms in Europe: The Role of EU Cohesion Policy," *Journal of International Economics*, 74(2), 328–340.

——— (2009): "National Boundaries and the Location of Multinational Firms in Europe," *Papers in Regional Science*, 88(4), 733–748.

BEHRMAN, J. (1972): *The Role of International Companies in Latin American Integration: Autos and Petrochemicals*, Supplementary paper of the Committee for Economic Development. Lexington Books.

BLONIGEN, B. A. (2005): "A Review of the Empirical Literature on FDI Determinants," NBER Working Papers 11299, National Bureau of Economic Research, Inc.

BOUDIER-BENSEBAA, F. (2005): "Agglomeration Economies and Location Choice: Foreign Direct Investment in Hungary," *The Economics of Transition*, 13(4), 605–628.

BUSSE, M., AND C. HEFEKER (2007): "Political Risk, Institutions and Foreign Direct Investment," *European Journal of Political Economy*, 23(2), 397 – 415.

CARLTON, D. W. (1979): "Why New Firms Locate Where They Do: An Econometric Model," in *Interregional Movements and Regional Growth*, ed. by W. Wheaton, pp. 13–50. The Urban Institute, Washington, D.C.

——— (1983): "The Location and Employment Choices of New Firms: An Econometric Model with Discrete and Continuous Endogenous Variables," *The Review of Economics and Statistics*, 65(3), 440–49.

CIESLIK, A., AND M. RYAN (2009): "Firm Heterogeneity, Foreign Market Entry Mode and Ownership Choice," *Japan and the World Economy*, 21(3), 213–218.

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), 27–54.

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), 280–296.

DUNNING, J., AND S. LUNDAN (2008): *Multinational Enterprises and the Global Economy*. Edward Elgar.

DUNNING, J. H. (1977): "Trade, Location of Economic Activity and MNE: A Search for an Eclectic Approach," in *The International Allocation of Economic Activity*, ed. by B. Ohlin, P. Hesselborn, and P. Wijkmann, pp. 395–418. McMillan, London.

——— (1993): *Multinational Enterprises and the Global Economy*. Addison-Wesley, Boston, MA.

——— (2000): "The Eclectic Paradigm as an Envelope for Economic and Business Theories of MNE Activity," *International Business Review*, 9(2), 163–190.

——— (2009): "Key Literature on IB Activities: 1960-2006," in *The Oxford Handbook of International Business*, ed. by A. Rugman, Oxford Handbooks in Business and Management C, pp. 39–71. OUP Oxford.

EKHOLM, K., R. FORSLID, AND J. R. MARKUSEN (2007): "Export-Platform Foreign Direct Investment," *Journal of the European Economic Association*, 5(4), 776–795.

ELLISON, G., AND E. L. GLAESER (1997): "Geographic Concentration in U.S. Manufacturing Industries: A Dartboard Approach," *Journal of Political Economy*, 105(5), 889–927.

FRANCO, C., F. RENTOCCHINI, AND G. V. MARZETTI (2008): "Why Do Firms Invest Abroad? An Analysis of the Motives Underlying Foreign Direct Investments," Discussion paper.

GOLDBERG, L. S., AND C. D. KOLSTAD (1994): "Foreign Direct Investment, Exchange Rate Variability and Demand Uncertainty," Working Paper 4815, National Bureau of Economic Research.

GUIMARAES, P., O. FIGUEIREDO, AND D. WOODWARD (2000): "Agglomeration and the Location of Foreign Direct Investment in Portugal," *Journal of Urban Economics*, 47(1), 115–135.

——— (2004): "Industrial Location Modeling: Extending the Random Utility Framework," *Journal of Regional Science*, 44(1), 1–20.

HARRIS, C. D. (1954): "The, Market as a Factor in the Localization of Industry in the United States," *Annals of the Association of American Geographers*, 44(4), 315–348.

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), 223–247.

HILL, S., AND M. MUNDAY (1992): "The UK Regional Distribution of Foreign Direct Investment: Analysis and Determinants," *Regional Studies*, 26(6), 535–544.

JACOBS, J. (1969): *The Economy of Cities*, Vintage international. Random House.

KALOTAY, K. (2008): "FDI in Bulgaria and Romania in the Wake of EU Accession," *Journal of East-West Business*, 14(1), 5–40.

MARSHALL, A. (1890): *Principles of Economics*, no. v. 1 in Principles of Economics. Macmillan and Company.

MCFADDEN, D. L. (1974): "Conditional Logit Analysis of Qualitative Choice Behavior," in *Frontiers in Econometrics*, ed. by P. Zarembka, pp. 105–142. Academic Press, New York.

NEARY, J. P. (2002): "Foreign Direct Investment and the Single Market," *Manchester School*, 70(3), 291–314.

NEVEN, D., AND G. SIOTIS (1996): "Technology Sourcing and FDI in the EC: An Empirical Evaluation," *International Journal of Industrial Organization*, 14(5), 543–560.

PROCHER, V. (2009): "FDI Location Choices: Evidence from French First-Time Movers," *AStA Wirtschafts- und Sozialstatistisches Archiv*, 3(3), 209–220.

——— (2011): "Agglomeration Effects and the Location of FDI: Evidence from French First-Time Movers," *The Annals of Regional Science*, 46(2), 295–312.

RESMINI, L. (2007): "Regional Patterns of Industry Location in Transition Countries: Does Economic Integration with the European Union Matter?," *Regional Studies*, 41(6), 747–764.

ROMER, P. M. (1986): "Increasing Returns and Long-run Growth," *Journal of Political Economy*, 94(5), 1002–37.

TRAIN, K. (2003): *Discrete Choice Methods with Simulation*. Cambridge University Press, Cambridge.

UNCTAD (2013): "World Investment Report 2013: Global Value Chains: Investment and Trade for Development," Report UNCTAD/WIR/2013, United Nations Conference on Trade and Development (UNCTAD), New York and Geneva.

7 Appendix

Table A1: Explanatory variables: list and description

Variable	Description	Source	Sign
East	Dummy variable = 1 if a country is a 'new' EU Member State (joined the EU as part of the Eastern enlargement in 2004/2007); zero otherwise	authors' own construction	-
Single Market	Dummy variable = 1 if a country is an EU Member State; zero otherwise	authors' own construction	+
Market distance	Distance-weighted external market size index calculated as $\sum_{j \neq l}(\frac{GDP_l}{D_l} \times \frac{1}{\omega})$, where D is within country distance of country l (see: Amiti and Smarzynska Javorcik 2008) and ω is a distance between the capital of county j and the capital of country l **(LOGGED)**	author's own construction	-
National market	Total GDP at constant prices, chain-linked volumes, reference year 2005 (at 2005 exchange rates); expressed in millions of euro **(LOGGED)**	Eurostat	+
Income per capita	GDP per capita at constant prices, chain-linked volumes, reference year 2005 (at 2005 exchange rates); expressed in euro **(LOGGED)**	Eurostat	+
Population density	Number of persons per $1km^2$ of land area **(LOGGED)**	Eurostat	+
Growth rate	Growth rate of real GDP (national currency)	Eurostat	+
Physical infrastructure	Motorway network density, km of motorways per $1000km^2$ **(LOGGED)**	Eurostat	+
Secondary education	% of labour force with secondary education	World Bank	+/-
Tertiary education	% of labour force with tertiary education	World Bank	+/-
Unemployment rate	% of total labour force aged 15 and over that is unemployed but currently available for work and actively seeking employment	LaborSta (1995-1998), Eurostat (1999-2009)	+/-
Wage rate	Hourly compensation cost in manufacturing at constant prices (deflator = price index, 2005=100, based on euro); original data is expressed in USD and has been converted into euro by applying nominal bilateral EUR/USD exchange rate **(LOGGED)**	International Labor Comparisons (ILC) database of U.S. Bureau of Labor Statistics (BLS)	-
Dummy: wage rate	Dummy variable = 1 if wage rate is a missing value for a given country j and time t; zero otherwise	author's own construction	+/-
Openness to trade	Degree of openness to trade of an economy; calculated as $\frac{exports+imports}{GDP}$	authors' own construction	+
Exchange rate	Real Effective Exchange Rate (REER) series for a basket of 36 countries (EU-27 + Australia, Canada, United States, Japan, Norway, New Zealand, Mexico, Switzerland and Turkey); reference year 2005=100	Eurostat	+/-
Exchange rate volatility	Variability of the Real Effective Exchange Rate data; calculated as $\lvert REER_t - REER_{t-1} \rvert$	authors' own construction	-
Single currency	Dummy variable = 1 if the euro is the national currency of a country; zero otherwise	authors' own construction	+
Corporate tax rate	Adjusted statutory rate of corporate income tax	2011 edition of "Taxation Trends in the European Union", a joint publication of Eurostat and Directorate-General for Taxation and Customs Union	-
EU Structural Funds	EU Structural policies payments by Member State and Fund (executed payments in million ECU 1979-1998/in million EUR 1999-2009) at constant prices (deflator = price index, 2005 = 100, based on euro) **(LOGGED)**	European Commission, Directorate-General for Regional Policy	+/-
Country risk	Political risk rating of a country	The PRS Group, Inc., 1979-2012, East Syracuse, NY, 13057 USA.	+
Foreign specialisation	Location quotient calculated as $(\frac{FDI_{k,j}}{FDI_j})/(\frac{FDI_{k,EU}}{FDI_{EU}})$ based on EIM FDI project data to capture foreign industry specialisation in industry k in country j relative to that of EU-average specialisation	authors' own construction	+
Domestic specialisation	Location quotient calculated as $(\frac{EMP_{k,j}}{EMP_j})/(\frac{EMP_{k,EU}}{EMP_{EU}})$ based on EU KLEMS employment data to capture domestic industry specialisation in industry k in country j relative to that of EU-average specialisation	authors' own construction	+
Jacobs term	Inter-industry agglomeration index calculated as $1/(\sum_k \lvert \frac{EMP_{k,j}}{EMP_j} - \frac{EMP_{k,EU}}{EMP_{EU}} \rvert)$ based on EU KLEMS employment data to capture industrial diversity in country j relative to that of EU-average diversity	authors' own construction	-
Herfindahl index	Industrial concentration index calculated as $\sum_k s_k^2$ based on EIM FDI project data to capture plant employment share in total industry k employment	author's own construction	-
Dummy: Bulgaria-Romania	Dummy variable = 1 if country = Bulgaria or country = Romania; zero otherwise (EU KLEMS data is unavailable for Bulgaria and Romania)	authors' own construction	+/-
Dummy: Herfindahl index	Dummy variable = 1 if Herfindahl index is a missing value owing to the lack of FDI projects for a given industry k, country j and time t; zero otherwise	authors' own construction	+/-

Table A2: Results by project type with West-East heterogeneity (Manufacturing FDI)

	Dependent variable: location choice					
Sample:	Manufacturing New investment		Manufacturing Expansions and co-locations		Manufacturing Expansions	
Column:	(XVI)		(XVII)		(XVIII)	
	West × var	East × var	West × var	East × var	West × var	East × var
Market potential variables						
East	-20.530		-65.237***		-89.636***	
	(22.426)		(24.702)		(28.711)	
Single Market (EU)	0.098		0.441***		0.382***	
	(0.084)		(0.108)		(0.127)	
Market distance	-2.058	5.880[***]	2.660	14.186***[***]	2.276	14.671***[***]
	(3.011)	(3.611)	(3.421)	(4.161)	(3.927)	(4.804)
National market	-1.550	-9.211***	0.415	-7.436*	-3.240	-9.488**
	(6.269)	(3.020)	(6.358)	(3.945)	(7.289)	(4.604)
Income per capita	-1.668	4.737*	-0.540	4.983	2.979	6.997
	(6.310)	(2.771)	(6.395)	(3.737)	(7.328)	(4.383)
Population density	-4.980	-1.908	-7.750	6.088[*]	-6.555	11.189**[**]
	(5.997)	(3.328)	(6.037)	(4.160)	(6.929)	(4.829)
Growth rate	-0.018	0.048***[***]	0.034**	0.001[*]	0.061***	-0.014[***]
	(0.015)	(0.010)	(0.017)	(0.011)	(0.019)	(0.013)
Resource variables						
Physical infrastructure	0.819***	0.174[**]	1.007***	-0.032[***]	1.077***	0.206[**]
	(0.210)	(0.168)	(0.198)	(0.226)	(0.223)	(0.264)
Secondary education	0.006	-0.018	-0.005	-0.045*	-0.007	-0.044
	(0.006)	(0.018)	(0.006)	(0.024)	(0.007)	(0.029)
Tertiary education	-0.002	-0.036*	0.063***	-0.064**[***]	0.064***	-0.063**[***]
	(0.014)	(0.020)	(0.015)	(0.027)	(0.017)	(0.032)
Unemployment rate	-0.090***	-0.017[***]	-0.014	-0.012	-0.025*	-0.019
	(0.012)	(0.011)	(0.013)	(0.015)	(0.014)	(0.017)
Wage rate	-0.718	-1.226**	0.995	0.536	2.017**	-0.087[**]
	(0.648)	(0.482)	(0.692)	(0.589)	(0.798)	(0.697)
Macroeconomic variables						
Openness to trade	0.003	-0.008***[***]	0.001	-0.003	0.001	0.000
	(0.003)	(0.003)	(0.002)	(0.004)	(0.003)	(0.004)
Exchange rate	-0.007**	-0.025***[***]	-0.006*	-0.019***[**]	-0.004	-0.020***[**]
	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.006)
Exchange rate volatility	-0.008	0.019***[***]	0.002	-0.005	0.005	-0.010
	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)
Single currency	0.083	0.939***[***]	0.429***	0.762***	0.591***	0.617***
	(0.100)	(0.186)	(0.105)	(0.200)	(0.124)	(0.228)
Corporate tax rate	-0.006	-0.041***[***]	-0.005	-0.045***[***]	-0.007	-0.046***[***]
	(0.005)	(0.007)	(0.006)	(0.009)	(0.006)	(0.011)
EU Structural Funds	0.005	-0.037**	-0.003	-0.139***[**]	-0.056	-0.124***
	(0.051)	(0.016)	(0.061)	(0.020)	(0.068)	(0.024)
Country risk	-0.006	0.011	-0.005	0.003	-0.009	0.013
	(0.006)	(0.010)	(0.006)	(0.014)	(0.007)	(0.016)
Industry variables						
Foreign specialisation	0.142***	0.106***[*]	0.224***	0.099***[***]	0.217***	0.114***[***]
	(0.019)	(0.009)	(0.021)	(0.011)	(0.022)	(0.014)
Domestic specialisation	0.100***	0.021[**]	0.187***	0.238***	0.190***	0.250***
	(0.018)	(0.030)	(0.020)	(0.034)	(0.023)	(0.038)
Jacobs term	-0.074***	-0.016	-0.107***	0.057[***]	-0.097***	0.006[**]
	(0.024)	(0.043)	(0.028)	(0.042)	(0.031)	(0.046)
Herfindahl index	-0.516***	-0.752***[**]	-0.733***	-0.875***	-0.676***	-0.613***
	(0.071)	(0.081)	(0.084)	(0.103)	(0.094)	(0.117)
Country fixed effects	Yes		Yes		Yes	
Log-likelihood	-29,259.5		-22,809.4		-17,842.6	
Wald statistic	9,683.3		10,329.2		8,933.4	
N	275,475		233,300		187,000	

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
[***]/[**]/[*] coefficient significantly different at 1%/5%/10% significance level between West and East;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.

Table A3: Results by project type with West-East heterogeneity (outside EU-25 FDI)

	Dependent variable: location choice					
Sample:	New investment from outside EU-25		Expansions and co-locations from outside EU-25		Expansions from outside EU-25	
Column:	(XXIV)		(XXV)		(XXVI)	
	West × var	East × var	West × var	East × var	West × var	East × var
Market potential variables						
East	49.446*		-31.110		-35.675	
	(28.561)		(38.689)		(47.876)	
Single Market (EU)	0.017		0.396**		0.289	
	(0.115)		(0.175)		(0.213)	
Market distance	-9.121***	-3.383[**]	1.142	8.076[**]	2.633	12.563*[**]
	(3.005)	(3.898)	(4.482)	(5.849)	(5.261)	(6.917)
National market	-9.855	-4.312	11.294	-3.069	2.307	-5.981
	(6.268)	(4.329)	(8.647)	(6.657)	(10.255)	(7.767)
Income per capita	7.225	1.309	-11.857	2.577	-2.973	4.100
	(6.306)	(3.908)	(8.721)	(6.140)	(10.345)	7.176
Population density	2.743	-10.626**[*]	-13.055	-3.477	-5.428	5.615
	(6.123)	(4.400)	(8.443)	(6.886)	(10.039)	(7.944)
Growth rate	0.036***	0.043***	0.077***	0.023[**]	0.099***	0.013[***]
	(0.014)	(0.013)	(0.021)	(0.019)	(0.024)	(0.022)
Resource variables						
Physical infrastructure	1.050***	0.200[***]	0.751***	-0.209[**]	0.710***	-0.249[*]
	(0.188)	(0.240)	(0.233)	(0.378)	(0.264)	(0.447)
Secondary education	0.023***	-0.037[**]	-0.002	-0.036	-0.006	0.004
	(0.005)	(0.024)	(0.008)	(0.038)	(0.009)	(0.046)
Tertiary education	0.019	-0.049*[**]	0.057***	-0.041[**]	0.036*	-0.001
	(0.012)	(0.028)	(0.018)	(0.042)	(0.021)	(0.051)
Unemployment rate	-0.057***	-0.001[***]	-0.017	-0.004	-0.026	-0.013
	(0.011)	(0.015)	(0.016)	(0.025)	(0.019)	(0.030)
Wage rate	0.171	-0.803	1.686**	0.489	2.952***	-0.508[**]
	(0.595)	(0.679)	(0.859)	(0.991)	(1.011)	(1.171)
Macroeconomic variables						
Openness to trade	-0.002	-0.004	0.001	-0.004	0.001	-0.006
	(0.002)	(0.004)	(0.003)	(0.007)	(0.003)	(0.008)
Exchange rate	-0.009***	-0.023***[**]	-0.008*	-0.011	-0.005	-0.014
	(0.003)	(0.005)	(0.004)	(0.008)	(0.005)	(0.009)
Exchange rate volatility	-0.019***	0.020**[***]	0.002	0.004	0.008	0.007
	(0.006)	(0.008)	(0.007)	(0.012)	(0.009)	(0.014)
Single currency	0.290***	0.685**	0.234*	0.639*	0.404**	0.467
	(0.097)	(0.268)	(0.134)	(0.332)	(0.160)	(0.385)
Corporate tax rate	-0.006	-0.035***[***]	-0.013*	-0.036**	-0.009	-0.038**
	(0.005)	(0.010)	(0.007)	(0.015)	(0.008)	(0.018)
EU Structural Funds	-0.043	-0.022	0.058	-0.144***[***]	-0.022	-0.103**
	(0.045)	(0.022)	(0.074)	(0.034)	(0.084)	(0.040)
Country risk	0.010**	-0.000	-0.008	-0.014	-0.012	-0.006
	(0.005)	(0.015)	(0.008)	(0.022)	(0.009)	(0.027)
Industry variables						
Foreign specialisation	0.071***	0.011***[***]	0.164***	0.076***[***]	0.223***	0.075***[***]
	(0.009)	(0.002)	(0.020)	(0.014)	(0.022)	(0.016)
Domestic specialisation	0.172***	0.124***[**]	0.154***	0.150***	0.140***	0.164***
	(0.015)	(0.015)	(0.020)	(0.024)	(0.023)	(0.027)
Jacobs term	-0.043*	-0.010	-0.140***	0.036[**]	-0.124***	-0.004
	(0.023)	(0.050)	(0.036)	(0.068)	(0.040)	(0.075)
Herfindahl index	-0.568***	-1.165***[***]	-0.939***	-1.079***	-0.858***	-0.798***
	(0.062)	(0.107)	(0.100)	(0.157)	(0.115)	(0.181)
Country fixed effects	Yes		Yes		Yes	
Log-likelihood	-29,712.7		-13,658.8		-10,477.8	
Wald statistic	17,631.3		8,020.5		6,748.8	
N	317,275		152,100		120,600	

Notes: *** = 1% significance level; ** = 5% significance level and * = 10% significance level;
[***]/[**]/[*] coefficient significantly different at 1%/5%/10% significance level between West and East;
Part of the model specification are also auxiliary dummy variables: wage rate dummy, Bulgaria-Romania dummy and Herfindahl dummy, but the coefficient estimates are not of direct interest and hence, not reported in the Table.