

The European Union Enlargement

Social and Economic Impacts



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*Effects of EU Enlargement on Foreign Direct Investment**

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Introduction

The beginning of the transition process in the CEEC witnessed a remarkable increase in FDI flows to the region. Although not equally benefiting all countries, such growth in external investment has been an important source of financing for industry restructuring and economic development. In addition, FDI is usually considered the fastest way of transferring intangible assets such as access to international market, new technologies, and also market-orientated business culture to the previously centrally controlled economies. These are especially important, given the plans of EU membership shared by all these countries.

Competition to actively attract FDI has therefore been fierce, becoming one of the driving forces of the structural reforms implemented in these countries to improve investment conditions for foreign firms.

A number of studies have focused, both theoretically and empirically, on the motives that lead entrepreneurs to engage in international application of funds, and on the motives that make some locations more attractive for certain types of projects than others. At the EU level, reduction of overall risk is probably one critical aspect, since every enlargement has generated a boost of FDI flows to the new members. In the case of the CEEC, however, the transition to a market economy and the prospect of future participation in the EU have, in most cases, *a priori* triggered the process.

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In this analysis, robust econometric techniques are employed to model FDI flows, to identify their main determinants, and to try to anticipate future trends of foreign investments in the CEEC and in two of the so-called cohesion countries, Portugal and Spain. The latter is done with the objective of ascertaining diversion of direct investment funds from peripheral EU countries to the CEEC.

The paper is organised as follows: section two describes the patterns of FDI to the CEEC along the transition process to join the EU, comparing with previous enlargements; in section three, the empirical literature on the determinants of FDI to transition economies is briefly reviewed; section four contains the empirical estimation of a gravity-type model and the interpretation of the obtained results; section five employs these results to examine the hypothesis of diversion effects of FDI from the Iberian countries to CEEC; section six concludes.

1. FDI in the CEEC: Characteristics and Trends

Since the political changes in the beginning of the nineties, when the CEEC' governments became particularly eager to attract foreign direct investment, there has been a continuous increase of FDI to the region. Figure 1 displays this trend of global FDI inflows to the CEEC, both as a ratio of GDP (right-hand scale) and of population (left-hand scale).

[Figure 1]

There is a significant upsurge in 1995, when FDI inflows almost doubled. In spite of a slight drop in the following year, the value doubled again in the second half of the nineties, reaching around 21.4 bn. USD in 2000, almost 6% of the region's total GDP. The slight drop in 2001 follows the worldwide trend.

This global trend obviously conceals some interesting particularities, both at sectoral and geographical levels. In terms of economic sectors, for example, and according to Eurostat data, FDI

in the CEEC is primarily directed at manufacturing activities, followed by "trade and repairs" and financial intermediation.

On the other hand, the group of Vizegrad countries (Poland, the Czech Republic and Hungary) were the ones which accounted for most of the FDI inflows: 77.6% of total FDI inflows to the region in 2001 (Table 1). Poland, by far the most important recipient since 1996, is also the most consistent, maintaining an almost constant continuous growth rate during the whole decade. Within this group, Hungary has registered a negative trend in absolute terms, since its peak value in 1995 (when it was the main recipient in the group), being surpassed by Poland in 1996 and the Czech Republic in 1998, but remaining however the third biggest FDI attractor. This negative trend possibly reflects the privatisation schedule, almost completed by the end of the decade.

Moreover, these three countries are listed on the top sixteen places of an FDI Confidence Index constructed from a survey conducted by the Global Business Policy Council (2002) on the world's 1000 largest firms, accounting for 70 percent of global FDI flows. The analysis of the potential FDI diversion from the southern EU countries in section 4 will concentrate mainly in these key FDI host countries.

[Table 1]

Examining the ratio between the stock of inward FDI and population in 2001 (last column on the right hand side of table 1), it is clear that the CEEC have not yet reached the levels of the EU countries, suggesting the continuation of a growth trend of FDI inflows above the average of the EU. Bulgaria and Romania present particularly low levels, perhaps due to not being included in the lead group of countries accepted to enter the EU by 2004.

By combining flow and stock data, Figure 2 illustrates the dynamics of FDI flows to the CEEC. It presents the ratio of FDI flows in the period 1995-2001 to the stock of FDI in 2001. High values of this ratio indicate that a high proportion of the FDI stock was established during the period or year considered. This was the case in Latvia, Poland and Bulgaria, where the ratio exceeded 95%. On the

other extreme, low ratios such as those in Spain and Portugal indicate that FDI stocks have been mostly build up in previous years, with a relative decline in the most recent years.

[Figure 2]

In relative terms, however, the most prominent host countries of FDI are the Czech Republic, Estonia, Hungary and Latvia. The weight of FDI in these economies represent on average for the period 1995-2001 more than 5% of GDP, well above all the others (Table 1). These values for the CEEC are generally also higher in the same period, with the exception of Slovenia, than those for the two Iberian countries, Portugal and Spain.

The increase in FDI flows to the region in the last decade seem therefore to be intimately related to the prospect of adhesion to the EU, and the consequent fall in the risk of the investments. It may therefore be enlightening to compare with what happened in previous EU enlargement processes.

It is also interesting to compare, for example, the values for the CEEC in this pre-adhesion period with those registered in Portugal and Spain when they entered the EEC in 1986. Some similarities may be found in the economic and social conditions of these two groups of countries, in at least two aspects: they both emerge from dictatorships which have blocked international transactions with the rest of Europe; both initiated in these periods a process of privatisations, a traditionally strong factor to attract FDI. As may be observed in Figure 3, FDI inflows in Portugal and Spain have risen considerably in the second half of the eighties, after adhesion, falling afterwards, presumably as the privatisation process slowed down, or as FDI started to be diverted to the East.

[Figure 3]

A similar phenomenon can be observed for the two other enlargements since 1980. Although in a period of considerably higher barriers to capital flows, Greece's FDI inflows rose in the beginning of the eighties (Greece entered the Union in 1981), presenting twice the values of the EU's average. The same happened with the last enlargement in 1995. When Austria, Sweden and Finland got

membership they became a destiny for FDI in the U

With the exception of consequence of the in most world economies decades. The CEEC recession fostered in lower labour costs.

A very large share of Netherlands and Austria the nineties. German Czech Republic and a

In global terms, more outward flows to the American, or even Ce than to the CEEC. The similar determinants have dropped in relative to 13% in 1999 (Pass large margin (89%), b latter seems to be loc

membership they became more attractive to foreign investors and remain, nowadays, an important destiny for FDI in the Union.

With the exception of Greece, all other countries display a considerable fall on FDI inflows in 2001, a consequence of the business cycle, with a significant slowdown in financial and economic activity in most world economies. In global terms, FDI inflows dropped 51% worldwide, the largest fall in three decades. The CEEC, however, register a less dramatic fall in FDI, probably because the economic recession fostered increased competition, compelling firms to search for lower factor costs, namely lower labour costs.

A very large share of CEEC inward FDI flows originates in EU members, especially Germany, the Netherlands and Austria. Figure 4 highlights these three countries' contribution to each CEEC during the nineties. German investors were the main provider of FDI, preferring the neighbours Poland, the Czech Republic and also Hungary.

[Figure 4]

In global terms, more than half the FDI flows circulating in the world involve the EU, with the Union's outward flows to the CEEC still representing a very small proportion. Overall, EU's FDI flows to South American, or even Central American, countries are significantly larger and more rapidly increasing than to the CEEC. The recent attractiveness of these three blocks of countries probably resides on similar determinants: economic liberalisation and privatisations. However, EU's flows to the CEEC have dropped in relative terms, from 19% of total EU's FDI (excluding intra-EU and the USA) in 1995 to 13% in 1999 (Passerini, 2001). Poland, the Czech Republic and Hungary have, again and by a large margin (89%), been the most privileged destiny of EU capital during the nineties, although the latter seems to be loosing some appeal.

2. FDI Determinants: the Empirical Literature

As referred by Lankes and Venables (1996), FDI projects in the CEEC are very heterogeneous, differing in terms of magnitude, objectives, technology, geographical location, ownership, and control structures. This distinctive character reflects a variety of motivations on the part of the suppliers of direct investment funds.

A number of reasons may influence an entrepreneur's decision to invest abroad, but they all share the common feature of being in harmony with the optimum management strategies of multinational corporations. FDI may be broadly classified into two categories: market-seeking FDI, or FDI that aims at exploiting the advantages of being close to the consumer market, and efficiency-seeking FDI, which is implemented with the objective of exploiting cost advantages in different locations.

In addition to theoretical analyses, researchers have put considerable effort on the empirical identification of FDI determinants. In what concerns FDI directed to the CEEC, the two main approaches have been survey-type studies and formal quantitative analyses. Examples of the former may be found in Lankes and Venables (1996). Quantitative studies of the determinants of FDI are based on a number of different models, being the gravitational approach the most commonly adopted. Gravity models were firstly used in the 60s, in the analysis of international trade, but were subsequently also employed to model and explain FDI flows. In recent years, the issue of FDI to transition economies has been investigated mostly by means of econometric estimation of gravity type models.

A simple and straightforward version of the gravity approach is adopted in Brenton and Di Mauro (1999) to analyse FDI flows to the CEEC and to evaluate the possibility of a future surge in such flows. In their model the dependent variable - a bilateral FDI flow - is explained in terms of GDP and population of the host country, and of the distance between host and home countries. The data sample extends from 1992 to 1995 and comprises Germany, France, the UK and the USA, as investing countries, and a panel of around 35 destination countries that includes the transition economies. The results show that FDI is positively affected by GDP, but market size, as proxied by

population, does not appear to be positive and negative. A priori, it is expected that FDI may substitute exports, and therefore a negative connection is expected. However, an increase with distance is observed for all countries except the USA.

The same model applied to the CEEC and a wider temporal horizon, the results suggest that FDI flows have been diverted from the CEEC to other countries.

This last result of non-significance is also confirmed in the case of Portugal and the UK. The model that includes the host country's imports (proxied by GDP), as a proxy of its market size, from 1990 to 1997 and European countries, the results suggest an assessment of FDI to transition economies plus Japan is positive, and distance is negatively influenced. In the studies, population appears to positively influence FDI flows.

An important contribution is made by Bevan and Estrin (2000) in their study on credit rating, which in

population, does not appear to significantly affect FDI flows. The coefficient on distance is significant and negative. *A priori*, distance may be expected to affect FDI both positively and negatively. In fact, FDI may substitute exports in distant markets, leading to a positive link between the two variables. A negative connection may also emerge since the costs of operating affiliates in foreign locations increase with distance. The latter appears to be the dominant explanation in this study, in all countries except the UK.

The same model applied to a larger data sample, including more destination and investing countries and a wider temporal horizon (1982 to 1995), is used by Brenton, Di Mauro and Lücke (1999). The outcomes of the model, however, are qualitatively identical to those of the previous analysis. Other results suggest that trade and FDI are complements, and that FDI flows to the CEEC appear not to have been diverted from other European locations.

This last result of non-diversion of FDI flows is confirmed by Buch, Kokta and Piazzolo (2001) for the cases of Portugal and Spain, but not for Greece. Their empirical assessment is based on a gravity model that includes the above-mentioned three explanatory variables plus the ratio of the host country's imports (or trade) to GDP, as a proxy of openness to foreign trade, and the ratio of M2 to GDP, as a proxy of the size of host countries' financial systems. The model is estimated using data from 1990 to 1997 and suggests that the decline which may be observed in FDI flows to Southern European countries reflects an adjustment process towards a long-run equilibrium. The empirical assessment of FDI determinants, which is performed with data on eight source countries (six core EU countries plus Japan and the US), provides mixed results. GDP coefficients are mainly significant and positive, and distance coefficients are practically always negative and significant. As in previous studies, population appears not to explain FDI. In what concerns the variables included to proxy trade openness and financial system's size, the results are robust only for the former, which appears to positively influence FDI, as *a priori* anticipated by the researchers.

An important contribution is added to the empirical analysis of the determinants of FDI to the CEEC in Bevan and Estrin (2000), who explicitly take host countries' risk into account. Risk is associated to credit rating, which in turn is explained by macroeconomic, transition and *environmental* factors. Their

analysis is also based on a gravity-type model, and the data sample contains FDI flows from 18 market economies to 11 transition countries, from 1994 to 1998. The results show that FDI is determined by host country risk and size, labour costs and distance. Contrary to what is sometimes argued, on the basis of the Iberian integration experience, this research finds evidence that announcements concerning the future admission of CEEC to the EU tend to influence FDI positively and directly, and not via credit rating. According to these results, such announcements do not affect the rating of these countries directly. It is the subsequent increase in FDI that improves economic performance and, ultimately, improves credit rating.

Due to problems related with data availability and reliability, most empirical studies on FDI are performed using aggregate data. However, the heterogeneous character of FDI projects makes it interesting to investigate whether FDI in different sectors is triggered by different motivations. Two attempts to clarify this matter may be found in Resmini (2000), and in Altomonte (2000), who base their analyses in a common data set of European firms' foreign investments in the CEEC, which takes into account the specific characteristics of each project. Resmini's results suggest that market and strategic issues prevail on vertical (or export orientated) investments. Progress in transition is also found to be an important determinant for capital-intensive sectors, whereas wage differentials tend to attract traditional and science based sectors. Altomonte concludes that FDI appears to be influenced by GDP *per capita* and by population, but not by distance, whereas in previous analyses it is the coefficient on population that usually is non-significant. Wage differences are also found to be positively related to FDI, but a variety of other factors that the author takes into account appear not to be significant.

The scarcity of data relative to FDI in the CEEC creates important constraints to the development of econometric analyses. One strategy to mitigate this problem is to use panel data techniques in the estimation process. Examples of studies that followed this approach may be found in Lansbury, Pain and Smidkova (1996), and in Holland and Pain (1998). The former try to identify the determinants of FDI from 14 OECD countries to the Czech Republic and Slovakia, Hungary and Poland, from 1991 to 1993, focusing on the privatisation process and on the trade linkages between host and investor

countries. The set of export energy consumption and FDI patterns are positively related to the number of patents) and

Holland and Pain (1998) overall risk and relative to host economies. The ten econometric analyses deal with the privatisation method. Governments may strengthen estimated coefficients of importance of efficiency-

In what follows, we try to employ a more updated including some variables

3. Empirical Analysis

In order to study the panel data approach is entirely novel, follows comparison of results. Moreover, as referred

countries. The set of explanatory variables includes country risk, the cost of labour, expenses in energy consumption and the relative stock of patents in the host country. The results suggest that FDI patterns are positively affected by the privatisation schedule, the research base (as proxied by the number of patents) and trade links.

Holland and Pain (1998) focus on the importance of variables such as the privatisation process, overall risk and relative labour costs. They examine the period from 1992 to 1996, considering as host economies the ten CEEC with EU accession agreements plus Croatia. After a variety of econometric analyses designed to explore alternative model specifications, the authors conclude that the privatisation method is an important determinant of FDI, after controlling for market size, and that governments may strengthen this link by improving the prospects for macroeconomic stability. The estimated coefficients on labour costs are statistically significant, therefore highlighting the importance of efficiency-seeking investment projects in the region.

In what follows, we try to extend the existing empirical literature on the subject of FDI determinants by employing a more updated sample of data, by adopting a more robust econometric technique, and by including some variables not previously taken into account.

3. Empirical Analysis of FDI determinants

In order to study the determinants of bilateral FDI flows, a gravity type model is estimated using a panel data approach for the period 1993-1999. The estimation of a gravity model, although not entirely novel, follows the usual methodology in this area of research, and allows a more direct comparison of results. The period of analysis was chosen according to reliable data availability. Moreover, as referred in section 2, it was only after the early nineties that Western FDI grew in

importance in the CEEC. We consider 14 investing countries and a total of 27 destination countries, including Western and Eastern European countries.¹

Unlike most previous empirical studies, bilateral common effects are considered in the model, to take into account all unobservable country-pair specific effects that are time-invariant and may affect FDI flows between two countries (geographical, historical, political, cultural and other effects). Recent research on the issue of econometric specification of gravity models conclude that the inclusion of bilateral effects is more general and may produce better estimates than the traditional specifications (see for example Egger and Pfaffermayer (2000)). Moreover, it is stressed that this approach also gives better in sample predictions.

The following model is the basis for the empirical analysis:

$$\ln(FDI_{ijt}) = \alpha_{ij} + \gamma_t + \beta_1 \ln(GDPcap_{it}) + \beta_2 \ln(GDPcap_{jt}) + \beta_3 \ln(pop_{it}) + \beta_4 \ln(pop_{jt}) + \beta_5 \ln(open_{jt}) + \beta_6 \ln(CL_{ijt}) + \beta_7 \ln(dist_j) + \beta_8 Frontier + \epsilon_{ijt}$$

where *FDI* represents the bilateral foreign investment flows over the population of the destination country, *GDPcap* stands for *GDP per capita* in the origin country (*i*) and host country (*j*), *pop* is the population of origin country (*i*) and host country (*j*), *open* is the degree of openness of the host country, proxied by the ratio of external trade (exports plus imports) to GDP, *CL* are the compensation levels of host country in relation to the compensation levels of the origin country,² *dist* is the geographical distance between the two countries' capital cities and *Frontier* is a dummy variable taking the value of one when the countries share a common border.³ The specification also includes time dummies (γ_t) to take into account business cycle effects.⁴

¹ See Appendix for a detailed description of the countries used.

² Compensation levels comprehend total hourly compensation for manufacturing workers, including wage and supplementary benefits (World Competitiveness Yearbook, 1993 to 1999).

³ Although developments in technology and communications have shortened the relative distance between countries, suggesting that these variables are losing importance and even raising doubts on the present validity of the gravity models,

As in our model we are considering all countries, over a period of time was not possible, as the model comprises variables such as population transformation or private

In what follows, however, we will focus on countries only, but instead of considering both transition

The common bilateral effects are correlated. The Hausman test can be used to test the hypothesis of no common random-effects model. If the test is consistent and efficient, the estimated are displayed

One may conclude that the estimates suggest that the degree of openness of the host country.⁵

Eurostat data for 1999 is used. We prefer the Baltic countries (Estonia, Latvia and Lithuania) and also France, are limited

⁴ See the Appendix for a detailed description of the countries used.

⁵ Other explanatory variables are not significant and therefore

⁶ The degree of openness is measured at the 12% level in the third

As in our model we are using a large number of destination countries, both Western and Eastern countries, over a period of 7 years, the inclusion of other variables used in some previous studies was not possible, as they were not available for a sufficient number of countries and years. These comprise variables such as skills content of the labour force, country risk, measures of economic transformation or privatisation schedules⁵.

In what follows, however, the aim is not to specifically identify the motives that drive FDI to transition countries only, but instead to uncover general determinants of FDI in a larger sample of countries, including both transition and market economies.

The common bilateral effects (α_{ij}) can be treated as being random or fixed. If the common specific effects are correlated with the explanatory variables, a fixed-effects model should be adopted. The Hausman test can be used to test for such correlation. In our case, the test did not reject the null hypothesis of no correlation between the common specific effects and the regressors. Therefore, a random-effects model is adopted and the Generalised Least Squares is employed to obtain consistent and efficient estimates. The results related to the several specifications that were estimated are displayed in table 2.

[Table 2]

One may conclude that the coefficient estimates are quite stable for the several specifications. The estimates suggest that FDI flows are positively influenced by the GDP *per capita* and trade openness of the host country,⁶ and negatively by distance and relative labour compensation levels. The GDP

Eurostat data for 1999 suggests that EU firms still prefer to invest in geographically close countries: the Nordic investors prefer the Baltic countries, the Swedish investors supply mainly Estonia and Lithuania, Austrian and German firms contribute largely to Slovenia and the Slovak Republic, while firms in the Netherlands and Germany (the main investors in the CEEC), and also France, are important investors in Poland.

⁴ See the Appendix for sample data description and sources.

⁵ Other explanatory variables, like the weight of the deficit on the country's GDP and the inflation rate turned out to be not significant and therefore were not included in the specifications presented.

⁶ The degree of openness of the host country is statistically significant at the 1% level in the second model and significant at the 12% level in the third. These outcomes suggest that there is in fact a positive relationship between the two variables.

per capita of the country of origin and the fact that investing and host countries share a common border do not seem to significantly affect FDI. Population of the investing countries is significant and positively related to FDI. As we are considering as dependent variable the ratio of FDI flows over population of the host country, the population of the host country is not significant, which is in accordance with the findings of previous studies.

The results indicate that, as suggested by theoretical analyses, both market and efficiency reasons determine the decision to invest abroad. The positive relationship between host country's GDP *per capita* and FDI flows imply that the hypothetical purchasing power of potential consumers is taken into account by international entrepreneurs when deciding the international allocation of investment funds. This is obviously the case of those projects directed to the supply of foreign markets. Although low labour costs often reflect a low average productivity and/or a scarcity of skilled labour, a negative significant relationship between labour compensation levels and FDI emerges from the estimations, thus sustaining a rationale for efficiency seeking FDI. In fact, some projects are implemented abroad with the objective of reducing production costs and are therefore attracted to areas where labour is less expensive, independently of its inherent qualifications and/or productivity.

In contrast with the majority of previous empirical research, our study uncovers a positive relationship between FDI and the population of investing countries, a variable usually not tested. This positive link indicates that the larger the population, the more probable it is for domestic entrepreneurs to engage in foreign investments. A possible justification is that firms in more populated countries have higher possibilities of internally reaching the minimum efficient scale necessary to support the structures for international expansion. Countries that are relatively less populated, and that have relatively small potential demand, are less stimulating and less capable of generating the appropriate environment for the emergence of large-scale firms, that are those which are most probably prepared to expand their activities at the international level.

The positive relationship that appears to exist between host country trade openness and FDI inflows suggests that trade and FDI are complements and not substitutes, as it is sometimes argued. This

result supports the segmentation, thus inc

4. Assessment of FDI

The estimation results predictions of FDI flow objective is to assess analysis of the potential values would displayed in table 3), observed on average members, although with the Union's average. investors are considered FDI inflows as a ratio

It may be concluded that cases the displayed were expected), and above that FDI stocks are a characteristics in terms hypothesis, however, evidence is found of This does not guarantee reliable data is not a

result supports the argument that FDI is associated with the intensification of production segmentation, thus increasing the number of commercial exchanges at the international level.

4. Assessment of FDI diversion

The estimation results, and more specifically those of specification (3) are used to perform in-sample predictions of FDI flows to Portugal, Spain, Poland, the Czech Republic, Slovenia and Hungary. The objective is to assess FDI diversion from the EU periphery to the CEEC, by means of comparative analysis of the potential and current flows to these countries. It would be reasonable to expect that potential values would be below observed ones in the CEEC (values below unity in the indicator displayed in table 3), considering that these countries still hold FDI stocks below the volumes observed on average in the EU. The same could be expected to happen in the EU's Southern members, although with lower magnitudes, given that they also still present values much lower than the Union's average. In the calculus of FDI potentials, only the FDI flows from the major European investors are considered: Austria, Germany, Netherlands and France. The results of the expected FDI inflows as a ratio to observed ones are displayed in Table 3.

[Table 3]

It may be concluded that there is not much difference among the several countries' results. In most cases the displayed values are below unity until 1998 (slightly lower for the CEEC but not as much as expected), and above unity in 1999. This latter result may suggest either a transitory phenomenon or that FDI stocks are already reaching their equilibrium levels in comparison with countries of similar characteristics in terms of the major determinants of FDI identified in the model. This latter hypothesis, however, is not confirmed by the values in the last column of table 1. Therefore, no evidence is found of diversion of FDI flows from the Southern countries to the CEEC in these years. This does not guarantee, of course, that it did not happen outside the time interval considered, when reliable data is not available and announcement effects would have to be introduced, nor, on the

other hand, that it could not happen in the future, as accession takes place and new developments unfold. However, these results are in line with the findings of previous papers such as Buch et al. (2001), but not with the results for example in Braconier and Ekholm (2001), who find diversion effects on employment considering disaggregated data.

It is, however, interesting to refer that our results are according to the conclusions that may be drawn when examining two indicators computed by UNCTAD (2002): the performance and the potential indices of FDI attraction. The performance index is computed as the ratio between the share of a country's FDI inflows in the world global FDI and the share of that country's GDP in the world's GDP. A value of unity indicates that this country attracts FDI in proportion to its economic dimension. Most countries in this sample present values above unity in the period 1998-2000, with a few exceptions revealing possible structural competitiveness problems in those economies.

The potential index intends to measure each country's potential to attract FDI, and it is computed as a simple weighted average of some structural variables, including some of those employed in the model estimated above (real GDP growth, GDP per capita, total exports, telephone mainlines, commercial energy use, R&D expenditures, students in tertiary education and country risk). However, no econometric analysis is performed to test each variable's significance.

Figure 5 compares the position of some countries in terms of both indices. The arrows indicate the evolution from the period 1988-90 to the period 1998-2000. The figure confirms that both the Southern countries and the CEEC present similar characteristics. All these countries increased their potential to attract FDI but, simultaneously, all worsened their performance.

[Figure 5]

Curiously, the situation is quite different in the Northern and Central EU members. In all these countries displayed in the figure, the potential values have also increased but, at the same time, all were able to also augment their performance in attracting FDI. This raises the question whether FDI

from the South may be members.

Conclusions

The empirical assessment is mainly determined by to world trade and low only significant feature funds. These results with lower purchasing CEEC, may have become non-interest force is relatively of attraction for efficient

To this respect, use enlargement on FD accumulation and negatively affect g asymmetry also not

Possible FDI divers whether the observed the model, in-sample results suggest the the Southern Europe flows to these countries

from the South may be diverted not to the EU newcomers but to the current Northern and Central EU members.

Conclusions

The empirical assessment of the determinants of FDI suggests that international investments are mainly determined by host country characteristics such as its dimension, potential demand, openness to world trade and lower relative labour compensation levels. In terms of the investing country, the only significant feature is population, which appears to be positively related with the supply of FDI funds. These results suggest that countries such as Portugal, which has reduced potential demand with lower purchasing power than other EU members, and displays higher labour costs than most CEEC, may have problems in attracting foreign investments. Countries with such features may become non-interesting for those investors engaged in market-seeking FDI. However, if the labour force is relatively cheap, even if not especially qualified, the area may continue to exert some attraction for efficiency-seeking investors.

To this respect, using a world macroeconomic model, Breuss (2001) predicts that the effects of enlargement on FDI flows will spur economic growth in the CEEC, especially due to capital accumulation and the renewal of capital stocks (as Baldwin *et al.*, 1997, had stressed before), but negatively affect growth in the current EU members, especially in the Southern countries (an asymmetry also noted by Baldwin *et al.*), either due to a diversion effect or to a crowding-out effect.

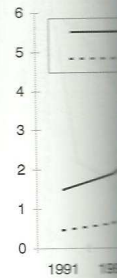
Possible FDI diversion was empirically assessed in the present work. With the objective of examining whether the observed volume of FDI flows were above or below the potential values suggested by the model, in-sample predictions were performed for several CEEC and Southern EU countries. The results suggest that, contrary to what could be expected, there is no evidence of FDI diversion from the Southern European countries to the CEEC. These results suggest that the trends observed in FDI flows to these countries in the last few years merely reflect the expected upsurge of FDI inflows in the

wake and immediately after accession, and, if the experience from previous enlargement processes continues to hold, the gradual downturn some years later, when FDI stocks reach a certain equilibrium level.

Even though there is no evidence of FDI diversion from EU peripheral countries, the empirical analysis suggests that in the Southern countries more attention should be paid to the issue of attracting and maintaining foreign investments. These regions are known as suppliers of cheap and low qualified labour, and may therefore be of some interest to a number of investment projects, but are also relatively poor and distant from the EU core, which is an important source of direct investment funds. Efforts should therefore be focused on the implementation of structural reforms capable of generating the necessary competitiveness conditions to attract market-seeking FDI and upgrade the demand for efficiency-seeking projects.

Figures and Tables

Figure 1. G



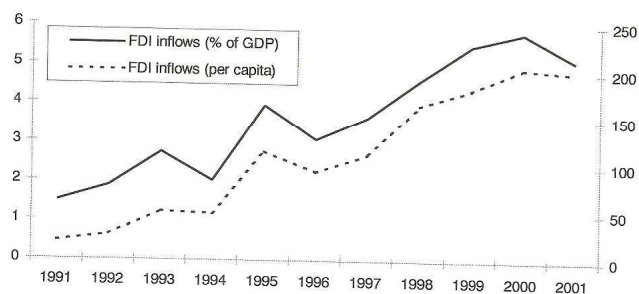
Source: Own calculation

- Latvia
- Poland
- Bulgaria
- Lithuania
- Czech Republic
- Romania
- Slovak Republic
- Estonia
- Hungary
- Portugal
- Spain
- Slovenia

Note: The values above
exchange rate change
capital participation rise
Source: Own calculation

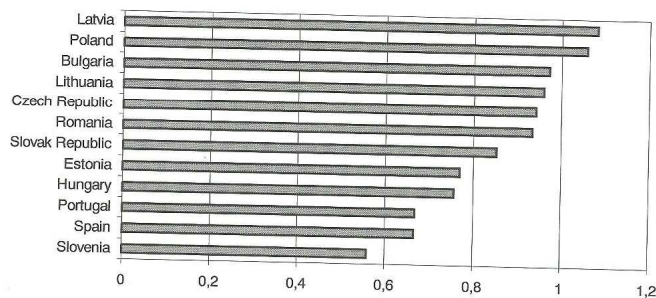
Figures and Tables

Figure 1. Global FDI inflows in the CEEC, 1991/2001 (% GDP and population)



Source: Own calculations based on International Financial Statistics, IMF.

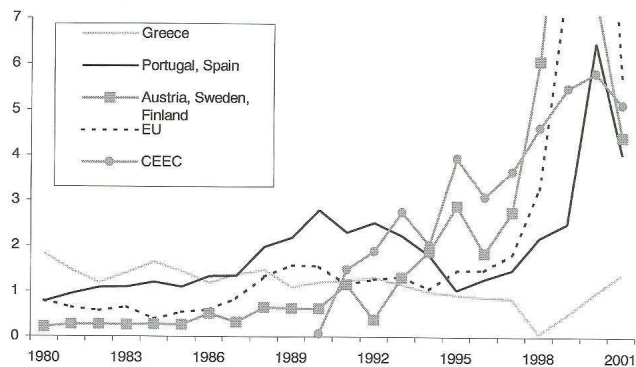
Figure 2. Ratio of FDI flows to stocks, 1995-2001



Note: The values above unity reminds that FDI stocks do not exactly equal accumulated flows due to price and exchange rate changes and other adjustments such as changes between portfolio and direct investment (when capital participation rises above 10%)

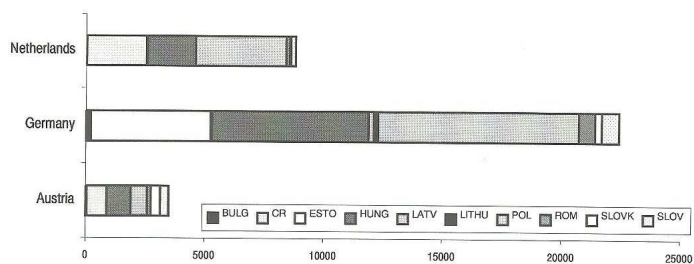
Source: Own calculations based on International Financial Statistics, IMF.

Figure 3. FDI inflows in the EU across four enlargement periods, 1980-2000 (% GDP)



Source: Own calculations based on International Financial Statistics, IMF. To facilitate comparisons, the extremely high values for 1999 in the group of Austria, Sweden and Finland (12.1%) and for 2000 in the EU (13.3%) are out of sight.

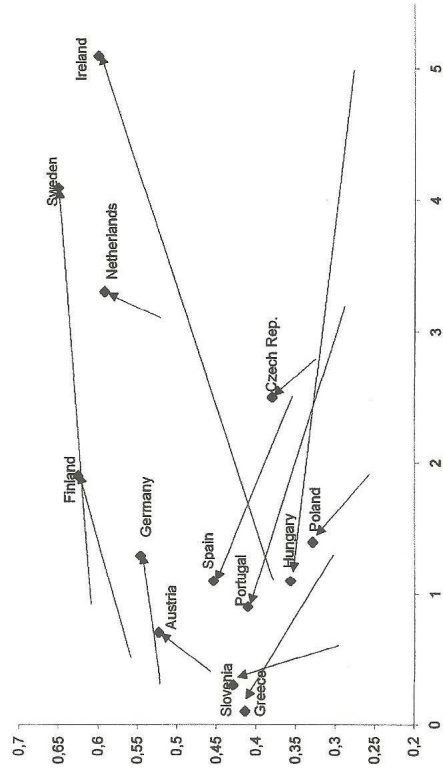
Figure 4. FDI inflows from the three main investors (millions USD)



Source: Own calculations based on EUROSTAT database.

Figure 5. Inward FDI Performance and Potential Indices, 1988-90 to 1998-2000 (UNCTAD)

Figure 5. Inward FDI Performance and Potential Indices, 1988-90 to 1998-2000 (UNCTAD)



Source: Performance and potential indices from UNCTAD (2002)

Table 2. Determinants of FDI flows (1993-1999)

Random-Effects GLS Regressions			
Variable	(1) Coefficient (Std. Err.)	(2) Coefficient (Std. Err.)	(3) Coefficient (Std. Err.)
GDPcapi	0.875 (0.873)	0.634 (0.872)	1.023 (1.026)
GDPcapj	0.867* (0.162)	1.037* (0.170)	1.888* (0.374)
Popi	0.780* (0.150)	0.722* (0.150)	0.904* (0.169)
Popj	-0.214 (0.149)	0.020 (0.165)	-0.067 (0.178)
Openj	-	0.993* (0.316)	0.598 (0.400)
Cl ij	-	-	-0.785* (0.264)
Distij	-0.618* (0.199)	-0.448** (0.205)	-0.612* (0.221)
Frontier	0.598 (0.578)	0.686 (0.574)	0.428 (0.590)
1993	-0.709* (0.149)	-0.425** (0.174)	-
1994	-0.610* (0.131)	-0.416* (0.145)	-0.260 (0.170)
1995	-0.558* (0.118)	-0.543* (0.117)	-
1996	-0.543* (0.108)	-0.557* (0.108)	-0.392* (0.123)
1997	-0.331* (0.097)	-0.339* (0.097)	-0.316* (0.107)
1998	-0.140 (0.092)	-0.158 (0.092)	-0.130 (0.099)
Constant	-12.962 (8.914)	-13.426 (8.868)	-25.310** (11.073)
N	1933	1933	1221
Wald Test (all coeff. =0)	256.06*	267.53*	152.06*
Std. Deviation Residual	1.036	1.035	1.026
Hausman specif. test	8.45	10.08	10.30

All variables in logs. Dependent variable is the logarithm of FDI flows/POP_i. Variables definition, countries used in regression and data sources are displayed in the appendix. The year 1999 was the time dummy left out. (*) and (**) denotes values significant at 1% and 5% respectively.

Table 3. Potential and Current FDI Flows

	(Potential/Current)			
	1996	1997	1998	1999
Czech Rep.	0.98	0.80	0.91	1.08
Hungary	0.59	0.96	0.70	2.52
Poland	0.49	0.92	-	-
Slovenia	-	-	0.56	1.02
Portugal	0.87	0.88	1.09	1.29
Spain	0.80	0.58	0.68	1.18

Source: Potential values use the estimates from specification (3) on table 2.

Appendix

The empirical analysis
Denmark, Finland, France,
Germany, Greece, Ireland,
Italy, Kingdom, United States,
Japan, United States,
Romania, Slovenia, Spain,

GDPcapi and GDPpc

Source: Chelem Data

popi and popj – population

Source: Chelem Data

Distj – geographical distance

Source: <http://www.cepr.org>

Frontier – dummy variable

CLij – compensating variation

Source: World Development Indicators

All variables are in logarithmic form

Appendix

The empirical analysis is performed using OECD data on FDI outflows from Austria, Benelux, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom, United States and Japan to a panel of countries that include all the present EU members, Japan, United States, Canada, Australia, Norway, Switzerland, Poland, Czech Republic, Hungary, Romania, Slovenia, Slovakia and Bulgaria, between 1993 and 1999, whenever data is available.

GDPcapi and GDPcapj – GDP per capita from origin country and destination country

Source: Chelem Database

popi and popj – population of both origin and destination countries

Source: Chelem Database

Distj – geographical distance in km between the countries' capital cities

Source: <http://www.indo.com/distance/>

Frontier – dummy variable equal one if the countries share a common border

CLij – compensation levels of host country in relation to the compensation levels of origin country

Source: World Development Report 1993-1999

All variables are in constant values (1990 US dollars).

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