

Foreign Direct Investment and Export Performance of the Transition Countries in Central and Eastern Europe

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Abstract

The purpose of this paper is to investigate whether the inward foreign direct investment (FDI) in 14 transition economies of Central and Eastern Europe, over the period between 1993 and 2001, have improved the export performance of the host countries. It is well known that besides the direct effects of FDI on export performance, i.e. the exports of subsidiaries of multinationals, there are also potential indirect effects of FDI on the host economy and thus possibly on exports, for example through technology transfers and knowledge spillovers. Until now, there has been no study for these countries at the aggregate, macroeconomic level which would encompass the overall, direct and indirect effects of FDI on exports at the same time. The results suggest that, along with real effective exchange rates and development on export markets, foreign direct investment has been a significant determinant of export performance for the whole sample as well as for the two subsamples, in various model specifications.

1 Introduction

The question that this paper tries to answer is whether the foreign direct investment (FDI) in 14 transition countries of Central and Eastern Europe (CEE), over the period between 1993 and 2001, has improved the export performance of the host economies.¹

Despite the persistent heterogeneity within the region with respect to GDP per capita levels and reforms that have been implemented, the majority of CEE countries have achieved reasonable macroeconomic stability and positive (average) GDP growth rates since the mid-

¹ The definition of FDI used in this paper is that of the IMF. FDI is "... international investment in which a resident entity in one economy (the direct investor) acquires a lasting interest in another economy (the direct investment enterprise)" (IMF, 1996). A lasting interest is implied if 10% or more of the ordinary shares or voting power is acquired by the investor. Only trade and exports of goods is considered in this paper (as in most of the related literature), while trade in services is omitted. On the other hand, total FDI, i.e. FDI in all sectors of the host economy is relevant. The countries in the sample are: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia FYR, Poland, Romania, Russian Federation, Slovakia, Slovenia and Ukraine. This choice has to a great extent been determined by the availability of data. Two terms are used to refer to this group of countries: transition countries or the countries of Central and Eastern Europe (CEEC).

and late 1990s. The most important task for their economic policies now is to facilitate the process of catching up with the richer countries of the European Union. Economic theory and the experiences of more developed countries provide some general policy guidelines for promoting long term growth. Those (policy guidelines) have already been put into practice to some extent by the transition countries, and the most important of these practices constitute the essence of the transition process. In addition to the leading role accorded to the private sector, free markets and prices, other important policy aspects include creation of an appropriate institutional and legal framework that encourages entrepreneurship, the promotion and maintenance of competition, and the provision of educational services and infrastructure. In this respect, the liberalization of the external sector is also considered important, and has been implemented to a greater or lesser extent in the great majority of transition economies.

Specifically, strong export orientation can be a powerful engine of economic growth as demonstrated by some East Asian economies in the second half of the 20th century or Ireland over the last two decades. Medina-Smith (2001) gives an extensive overview of the exports-growth nexus literature before making an empirical investigation for the case of Costa Rica. Although he finds evidence in favor of the export led growth hypotheses for this particular case, from the literature review he concludes that empirical evidence on the positive relationship between exports and growth may not always be very robust. Still, the majority of the reviewed studies report that exports can be considered to be significant “engine of growth”, though only with a relatively weak impact. Nevertheless, at the absolute minimum, this link can at least be regarded as a potential one. Moreover, some more recent studies report mostly positive and significant impact of exports on growth for different countries and country groups and various econometric approaches (see for example Balaguer and Cantavella 2004, Cuaresma and Wörz 2004, Dritsaki and Adamopoulos 2003 for positive evidence on export led growth hypotheses and e.g. Beko 2003 and Alam 2003 for different results). Policy makers, in particular, attach very high value to export promotion and expect gains in various forms: gains in employment, income and efficiency, increased foreign exchange earnings, economies of scale etc. (UNCTAD 2002). In addition, countries in CEE, with few exceptions, have mostly been running current account and especially trade in goods deficits over the last decade or so (the average trade in goods deficit for the countries in our sample over the period considered amounts to 7.52% of GDP), adding to the priority of export promotion as one of the important tasks for the national economic policies.²

Although the global as well as country specific circumstances are very different for the countries in Central and Eastern Europe, there are at least some positive lessons from the

² At the same time, these deficits have largely been financed by the significant FDI inflows into the region (on average, 3.49% of GDP for the sample and time period considered).

Asian and Irish experiences about what should be done in order to improve export performance (Kokko 2002). One of them is that foreign direct investment may help in promoting exports. This export-promoting strategy becomes relatively more important due to the narrowed choice of other export promoting instruments as a consequence of international trade agreements, or because some of them have been shown to be ineffective in many cases (UNCTAD 2002).³ This is especially important for those CEE countries whose goal is to join the EU and which are therefore, or are about to become, subject to even more restrictive regulations. One could say that it might be easier to attract an exporter, than to create one.

Basically, there are two ways in which FDI inflows, i.e. the increasing FDI stock, may be export-promoting: either directly, through exports of the multinational's subsidiaries, or indirectly, by affecting the domestically-owned firms in a number of ways, such as knowledge spillovers or improved access to world markets, and thus increasing the overall international competitiveness of the host economy.⁴ The potential significance of this link is not in question. The UNCTAD World Investment Report from 2002, devoted to exploring the relationship between transnational corporations and export competitiveness is only a part of the growing literature dealing with this issue. But the actual effects of FDI on the host economy and possibly on its exports depend on the type of the investment as well as on the specific host-country initial economic conditions. In order to check whether FDI has affected the export performance of the CEE countries, pooled data relating to the period between 1993 and 2001 for 14 countries are used. This study will consider both, direct and indirect, kinds of effect of FDI on host economy exports by performing an overall macroeconomic investigation.

The rest of the paper is organized as follows. The following section gives a short review of the relevant theory and of the empirical findings from earlier studies about the relationship between FDI and exports. This is followed by the presentation and analysis of data on FDI in transition countries and its determinants in order to get some insight into the nature of these capital movements. In the fourth part, an empirical model is given and discussed and summary statistics for other variables are presented. The results of the estimation are presented in the fifth, while some concluding remarks are given in the last section.

³ For example, direct export subsidies to specific industries for some East Asian countries did not contribute to export promotion. Moreover, they have caused many different problems for economic policy (Kokko 2002).

⁴ To state it clearly once again: although only the exports of goods are analyzed in this paper, the total amount of foreign investment (also the FDI in sector of services) is included because of the possible indirect effects.

2 Theoretical predictions and earlier empirical results⁵

2.1 Theory

The relevant theory can be divided into standard international trade theory on factor movements and trade in goods and theory of multinational enterprise. These two strains of the literature come close to each other in some recent theoretical contributions. In addition, although there is no separate theory on potential indirect effects of FDI, some of the theoretically possible channels of influence are shortly described.

Different theoretical approaches give different predictions about the relationship between FDI and exports, or more generally, on the relationship between international factor movements and international trade in goods. As stated by Samuelson's (1948, 1949) factor price equalization theorem, in a standard Heckscher-Ohlin-Samuelson model (H-O-S), the factor prices will equalize even if there is only trade in goods and no factor movements at all. In this case trade and factor movements are obviously substitutes. This would also be true if only factors were mobile, and if there were no trade in goods as first demonstrated by Mundell (1957). Subsequent research has shown that if additional assumptions are included into the standard models, it is possible for factor movements and international trade to become complements. Different ways of achieving this result include, e.g., allowing for differences in technologies and preferences across countries, introducing production taxes, monopoly market structure, external economies of scale etc. (see Goldberg and Klein 2000 for an overview of relevant research). The reason is that in these cases, unlike in H-O-S model, differences in factor endowments are not a (at least not the only) cause of trade.

Unlike the international trade theory, the theory of multinational enterprise starts with an assumption that firms must have certain advantages in order to become multinational companies. It is reasonable to expect that firms can do business in foreign countries only at a higher cost than domestic firms. Without specific advantages capable of compensating for this inferior position, their foreign operations would not be sustainable. Dunning (1993) organized these advantages in three basic groups: the multinational firm has a product or a production process giving it some monopoly power in the foreign market ("ownership advantage"), and/or has a reason to locate production abroad ("location advantage"), and/or has an incentive to exploit its ownership advantage internally ("internalization advantage"). A direct conclusion is that firms may have different motives for becoming multinational enterprises. These motives may define different types of foreign direct investment, which on the other hand, may have different impact on the home and, for this research more interesting, host

⁵ This section is a shorter version of sections 3 and 4 in Vukšić (2005).

country's economy, and thus, export performance. This theory then suggests that if FDI is market-seeking, it would have positive influence on imports into host economy, and no effect on exports. For resource-seeking FDI, the situation is just the opposite: there is an increase of exports, while imports are unaffected. For strategic asset-seeking FDI, there are no unambiguous predictions. In order to predict the macroeconomic effect of FDI on exports, one needs to know the type of the majority of foreign investment projects, i.e. whether they are market- or resource-seeking. But even if one knew that most of the FDI in some host economy were e.g. market-seeking, there still might be some positive effects of FDI on exports through different channels of indirect influence.

Over the last two decades or so, the researchers have put in lot of efforts in incorporating the concept of the multinational enterprise (MNE) into the standard theory of international trade (see Helpman and Krugman 1985; Markusen 2002; see also Helpman 2006 for recent review). Some recent models (Markusen 2002), show that the results on the relationship between factor i.e. capital movements (FDI) and trade depend on whether the multinational firms are horizontally (the MNE produces the same product in multiple plants located in more than one country) or vertically integrated (segments of the production process are carried out in different countries). The type of integration is determined by factors such as transport costs or firm- and plant-level economies of scale. In the case of horizontal integration, the firm basically faces the dilemma of either producing abroad or exporting. Such foreign investments and trade are obviously substitutes (Markusen 2002). Things are different in the analysis of vertically integrated MNEs, which includes trade in intermediary products. The production process is likely to be geographically fragmented if the countries have factor-price differences and the stages of production have different factor intensities. Markusen (2002) shows that for this kind of FDI, resulting in a vertically integrated firm, the substitutability between FDI and trade is more likely if the host country is small and differences in endowments are relatively large.

The impact of FDI on host country exports is not only direct, through the exports of the foreign affiliates. There are very important side-effects of the foreign production, which may influence the export performance of domestic producers indirectly. As it has been mentioned above, the theory of multinational enterprise assumes that companies need to have some competitive assets, which are often firm-specific, in order to become MNEs (ownership advantages). It is especially difficult for local producers in less developed economies to acquire such assets and capabilities by themselves. But a transfer of these assets to foreign affiliates in the host economies by MNEs "... through training, skills development and knowledge transfers opens up prospects for further dissemination to other enterprises and the economy at large" (UNCTAD 2002, p.152). This upgrading of technical and managerial

skills, provided by the multinationals may spillover to domestic producers (for example, through mobility of trained human resources), enhancing their productivity and helping them to improve their competitiveness on the export markets. Locally owned firms might increase their efficiency by copying the operations of the foreign producers or may be forced to do so by the foreign competition (Lipsey 2002). These are the horizontal linkages inside the MNE's industry, but demonstration effects may arise also in unrelated firms and sectors. An especially important channel for productivity spillovers into industries different from the one in which foreign investor operates is constituted by the backward linkages to suppliers. Such productivity spillovers may occur because of intensified competition between local companies to become MNE suppliers or because of the demand of foreign producers for higher quality of (local) inputs (Lipsey 2002). The third type of linkage consists of forward linkages, which occur when foreign affiliates sell goods or services to domestic firms. Defined broadly, linkages can also be established to institutions such as universities, training centers and export promotion agencies (UNCTAD 2001). In addition, MNEs may facilitate access to foreign markets for the domestic producers, especially by processing information about their home economies. The links of foreign affiliates to MNE's intra-firm markets may also spill over to suppliers and other domestic firms, especially to those which succeed in enhancing their efficiency (UNCTAD 2002). All this may reduce the costs of entering foreign markets for domestic producers.

It must however be noted that the extent of the spillovers and indirect effects of FDI on exports may depend on the initial technological and human capital level of the domestic producers, on the intensity of competition in domestic markets, as well as on the government policies promoting linkages between domestic and foreign firms. Moreover, there are also potential negative effects of MNEs on domestic producers. Probably the most obvious example is the hypothetical situation in which MNEs capture domestic firms' market share and reduce the latter's profits or possibly endanger their survival (Barry and Bradley 1997).

2.2 Previous empirical findings

Methodologically, the three empirical studies most related to the present paper are Sun (2001), Zhang and Song (2000) and Goldberg and Klein (1999). Sun (2001) looks at the different impact of foreign investment on exports in three regions of China in a period from 1984 to 1997, and thus implicitly takes the specific initial conditions of the individual regions into account. He uses a panel data econometric model and finds that the effects of FDI on export performance vary across the three regions. The impact is positive and the strongest in the coastal region. In the central part of China it is weaker, but still positive and significant, while in the western region it is insignificant. Zhang and Song (2000) address the same

research question in China at the provincial level in the period from 1986 to 1997 with a somewhat different empirical specification. Using the panel data model, they also find that higher levels of FDI are consistent with higher provincial exports. It is worth noting that the positive effect of FDI on exports in China has mostly been a direct one. Goldberg and Klein (1999) analyze the impact of FDI from the United States in the manufacturing sectors of individual Latin American countries on the net exports of those and other sectors. They basically test if the capital movements and trade in goods are substitutes or complements. Thanks to the detailed data on bilateral capital and trade flows between the U.S. and host countries in Latin America, they are also able to address the inter-sectoral spillovers in a more explicit way. The results vary across sectors and host countries, reflecting the importance of the specific conditions in individual countries and industries. The fact that the results are mixed makes it impossible for the authors to draw a strong and clear conclusion on substitutability or complementarity of the FDI flows and trade.

As for the studies on spillovers, Görg and Greenaway (2003) give an extensive review of the recent relevant literature. Out of 40 studies concerned with intra-industry productivity spillover effects from FDI on domestic firms in developed, developing and transition economies, 19 report statistically significant and positive spillovers, 15 studies do not find any significant effects, while 6 papers find some evidence of negative effects. Interestingly, many studies on FDI spillovers in transition countries find some evidence of negative spillovers. The evidence of positive horizontal, i.e. intra-industry spillovers, is even weaker if one considers some methodological drawbacks such as potential bias of the cross-section estimates used in many of the reviewed studies.⁶ The evidence on positive FDI productivity spillovers on forwardly and backwardly linked industries is somewhat more convincing than for the horizontal effects. The same is true for the papers dealing with the export spillovers.

In addition to (possibly) directly increasing the size of domestic exports, and (possibly) increasing the probability of domestic firms becoming exporters through spillover effects, FDI can affect the structure and direction of a host country's exports. As for the studies concerning transition countries, Jensen (2002) investigates the impact of FDI on the structure of Polish exports and finds that inward FDI in Poland positively affected the technology intensity of exports. Djankov and Hoekman (1996) analyze the changes in the structure and destinations of exports of CEE countries. According to their findings, the Czech and Slovak Republics have experienced the greatest redirection of trade as well as the fastest growth of

⁶ At this point, it is important to mention the „meta analysis“ of FDI and productivity spillovers by Görg and Strobl (2001). They investigate whether the study design affects the results and if there is a tendency in academic journals to publish the papers with statistically significant results. They conclude that the choice of empirical method used, and the definitions of the presence of multinationals affect the results, and that there is some evidence for the publication bias.

exports. On the other hand, the change of the composition of exports in these two countries has been relatively slow. In general, they find that the FDI inflows were strongly correlated with export performance and intra-industry trade levels.

3 FDI in CEE – Determinants and nature of FDI inflows and potential impact on exports

There has been a substantial increase in FDI flows into the countries of Central and Eastern Europe since the beginning of the transition process: the share of FDI inward stock in Central and Eastern Europe in the world's total FDI inward stock rose from about 0.2% in 1990 to 2.3% in 2001 (UNCTAD 2002). This development went hand in hand with the global increase of international capital movements: over the same period, the amount of the world's total inward stock of FDI has increased from 1 871 to 6 846 billion USD (at current prices, UNCTAD 2002). Data on percentage of FDI stock in GDP of the individual countries in the sample is given in Table 1. Minimum and maximum values are usually, but not always, the values from the beginning and the end of the period covered by the study.

As is obvious from the Table 1, there are large differences in the shares of inward FDI stock in GDP across countries in the sample. In Estonia, Czech Republic and Hungary, the maximal values of this percentage have exceeded 45%. Average FDI inflows, as a share of GDP, amounted to more than 5% for each of these three countries. On the other hand, the minimum values of FDI stock to GDP ratio for Hungary and Estonia were larger than the maximal value of the corresponding share of FDI stock in GDP for Russia and Ukraine.⁷

In order to better understand this uneven distribution, but also the motives of foreign investors in CEE countries, and thus, the types and possible consequences of FDI inflows on host economies, first the determinants of FDI flows are examined. There are quite a few studies on the determinants of FDI in the transition economies of CEE. One of the recent ones (Garibaldi et al. 2002) finds that good macroeconomic performance and stability, as measured by gross domestic product growth and high fiscal balance, promotes FDI inflows. Also, the level of economic reforms in general, and specifically the liberalization of international trade encourage foreign investment. It is important to note that Garibaldi et al. use the EBRD trade reform index as the measure of the trade liberalization. They also find that, as expected, countries rich in natural resources attract more investment. Also, the privatization method plays a significant role, with insider privatization discouraging FDI inflows. As expected, direct barriers to investment and complicated bureaucracy both have a deterrent effect on FDI

⁷ While the amount of FDI attracted by Russia was comparatively low, it received portfolio investment (those not exceeding 10% of total equity of the acquired company, (IMF 1996)) in amount far above the CEE average (Garibaldi et al. 2002).

inflows. In their specification, wages did not turn out to be a statistically significant determinant of FDI inflows.

Table 1: FDI inflow and stock in CEE countries, in % of GDP, 1993 – 2001

		<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std. deviation</i>
<i>Bulgaria</i>	Inflow	3.52	4.22	7.95	0.37	2.79
	Stock	11.70	9.15	29.53	1.30	10.62
<i>Croatia</i>	Inflow	3.79	2.74	8.17	0.64	2.88
	Stock	12.02	7.09	33.08	1.10	12.04
<i>Czech Republic</i>	Inflow	5.58	4.93	11.50	1.87	3.68
	Stock	23.74	17.43	47.18	9.78	13.79
<i>Estonia</i>	Inflow	7.19	5.99	11.16	3.45	2.52
	Stock	32.75	24.77	57.01	14.62	16.19
<i>Hungary</i>	Inflow	5.03	4.71	9.97	2.76	2.07
	Stock	32.67	35.17	45.38	14.49	11.04
<i>Latvia</i>	Inflow	5.29	5.74	9.24	2.08	2.31
	Stock	19.89	22.56	30.76	3.45	9.58
<i>Lithuania</i>	Inflow	3.22	3.37	8.61	0.74	2.44
	Stock	12.90	10.86	22.23	5.73	6.60
<i>Poland</i>	Inflow	3.62	3.41	5.93	2.00	1.30
	Stock	11.72	10.13	22.13	2.69	7.24
<i>Romania</i>	Inflow	2.26	2.82	4.86	0.36	1.48
	Stock	8.80	6.94	19.38	0.80	7.27
<i>Russia</i>	Inflow	0.87	0.80	1.71	0.25	0.41
	Stock	4.00	2.66	9.03	0.69	3.33
<i>Slovakia</i>	Inflow	3.36	1.80	10.55	1.04	3.29
	Stock	12.97	9.97	27.28	3.85	8.12
<i>Slovenia</i>	Inflow	1.26	0.97	2.35	0.89	0.56
	Stock	12.16	12.12	17.06	7.53	3.24
<i>Macedonia</i>	Inflow	2.61	0.56	12.91	0.04	4.21
	Stock	5.41	1.49	24.04	0.04	7.79
<i>Ukraine</i>	Inflow	1.28	1.24	2.11	0.42	0.60
	Stock	5.80	3.87	12.15	1.13	4.54

Notes: All data sources are defined in the fifth section.

Using a better measure of labor costs, namely unit labor costs, Bevan and Estrin (2000) find that these are a significant factor for foreign investment, along with host market size, gravity factors and perceived country risk. This risk, on the other hand, is found to be largely

determined by government balance, private sector and industrial development, gross reserves and corruption. These results can to some extent be considered as confirmed by Garibaldi et al. (2002) because of the very likely correlation between some explanatory variables used in these studies: host market size and fiscal balance are indicators similar to macroeconomic performance from Garibaldi et al., private sector development can be expected to be correlated with level of reforms and privatization, corruption sometimes with red tape etc. In addition, Bevan and Estrin (2000) also find that announcements of EU accession for some countries had positive impact on FDI flows into these economies. Moreover, this impact was both direct and also worked through improved perceived country risk, though with a time lag.

Both of the above studies are concerned with aggregate foreign direct investment. But since the focus of this research is on the effects of FDI on exports, it is very important to know the determinants of FDI inflows in manufacturing sectors. Exactly this question was addressed by Resmini (2000). She splits manufacturing into four sectors: scale-intensive, high technology, specialized producers and the traditional sector. While over 80% of the FDI in twelve CEE countries go to scale-intensive and traditional sectors, there are some important differences among individual host economies. After a descriptive analysis, it is shown that the countries most successful in the transition process attracted the most scale-intensive and high technology investments; that proximity to Western Europe seems to be an important factor for FDI; that there is a strong correlation between the transition process, privatization and FDI; and that market size has played an important role. After a panel data econometric investigation with common slope coefficients for all sectors, and without restrictions on intercepts, it is confirmed that market size, country risk indicator and wage differentials were statistically significant determinants of FDI inflows. On the other hand, the size of the manufacturing sector and the degree of openness as measured by the share of bilateral trade with EU in GDP were not found to be significant. After relaxing the assumption of common slope coefficients for all sectors (thus, reducing the number of degrees of freedom and making the estimation less reliable), it is found that the results for scale-intensive sector are very similar to the results obtained earlier, and quite different from the results for the traditional sector. The latter show that openness positively affects FDI, but the size of the manufacturing sector and differences in labor costs negatively. At the same time, for the high technology sector, it is found that openness negatively and significantly affects FDI inflows. This and some other unexpected results, which could not be explained, suggest that the findings in the specification without any restrictions on slope coefficients are to be taken with great caution.

Taken all together, the empirical evidence on the determinants of FDI flows in CEE countries reveals a variety of important factors, leading to the conclusion that there have been different motives, and thus types of foreign investment into these countries. In terms of the theory of

multinational enterprise, there have been market-seeking, resource-seeking (especially efficiency and labor) and strategic-asset seeking (through privatization) FDI inflows. It is difficult to predict any relationship with exports based on these findings and the theoretical expectations.

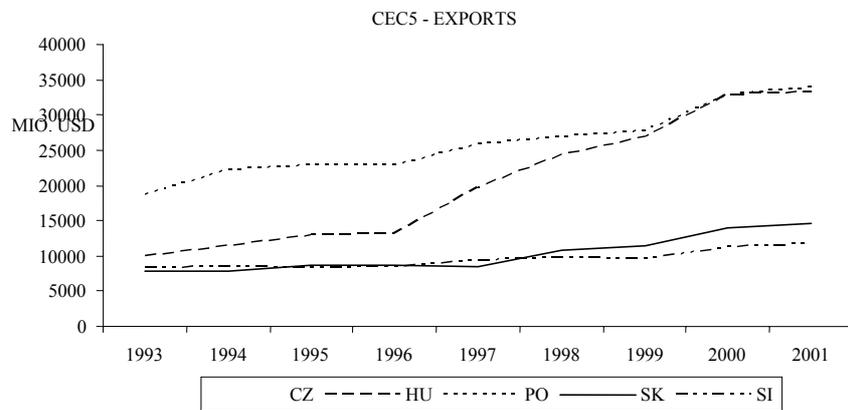
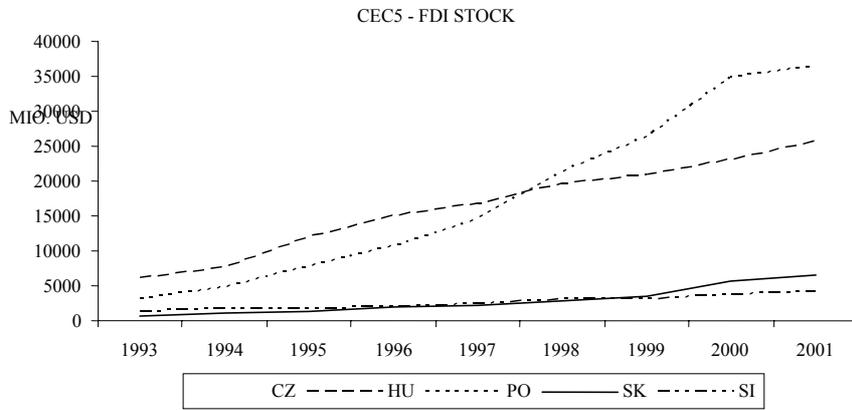
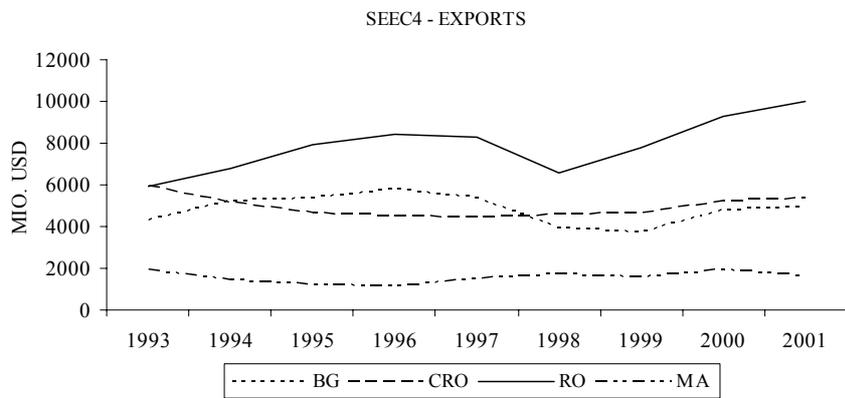
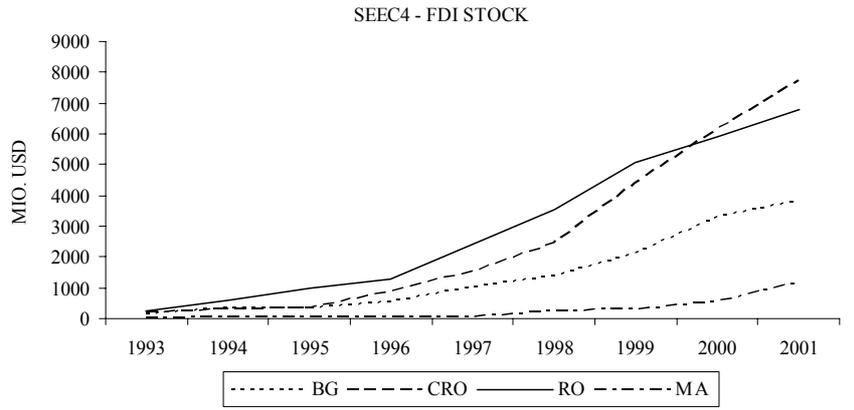
Figure 1 shows the development of the FDI inward stock and exports for each of the countries in the sample, divided into four groups, expressed in millions of US dollars, at constant (1995) prices. SEEC4 denotes four South-East European countries (Bulgaria, Croatia, Romania and Macedonia FYR), CEC5 stands for five Central European countries (Czech Republic, Hungary, Poland, Slovakia and Slovenia) and BC3 for three Baltic countries (Estonia, Latvia and Lithuania).

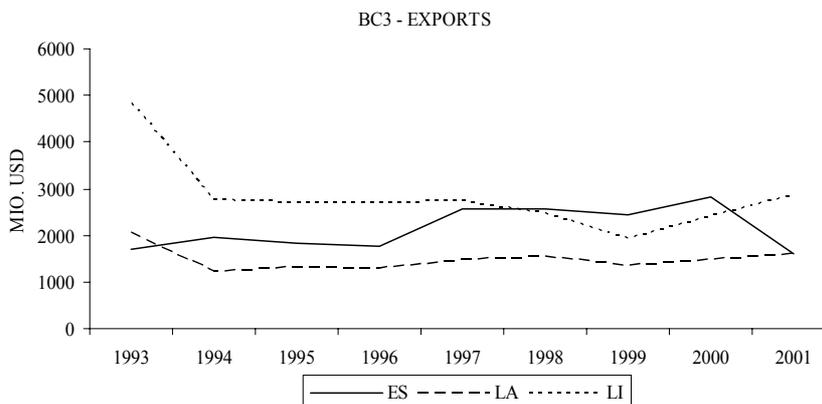
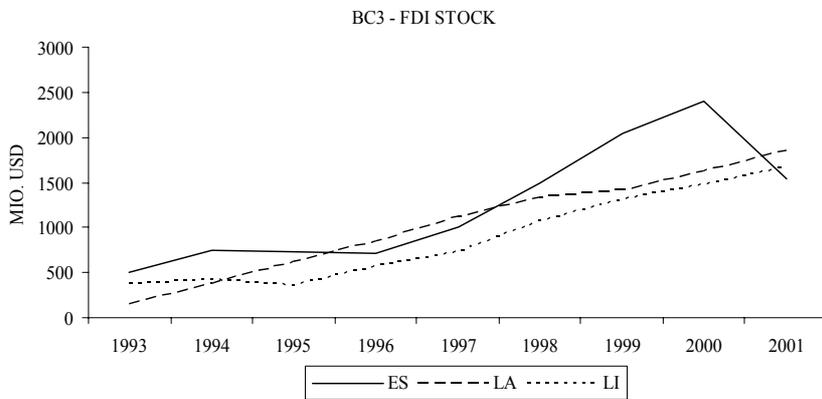
It is easy to notice that the amount of FDI stock has almost constantly increased in all countries in the sample, over the period considered. At the same time, exports have mostly been stagnating in all countries except for the five Central European economies. Also, there has been an upward trend in Russian, Ukrainian and Romanian exports for the second half of the observed period.

As for the direct influence of MNEs on exports, UNCTAD (2002) reports the shares of foreign affiliates in the exports of selected host countries. This data is available only for some of the CEE countries and for some years: this share amounted to 26% in Slovenia and 80% in Hungary (data for 1999), 60% in Estonia, 56% in Poland and 21% in Romania (data for 2000).⁸ There are obviously large differences in the export-orientation of foreign producers in different host economies. It should be noted that these shares do not have to represent “new exports” created by the MNEs. Foreign investors may have acquired a domestic exporting company, without increasing its production for exports. Since it is not possible to judge if FDI has significantly influenced exports from the countries of this region, based on these data and Figure 1 only, an empirical model has been specified in order to test that relationship econometrically.

⁸ Data for Poland and Estonia include exports of majority-owned foreign affiliates only.

FIGURE 1





4 Model specification and the data

This study concentrates on 14 countries of Central and Eastern Europe over the period between 1993 and 2001. The countries are: Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia FYR, Poland, Romania, Russian Federation, Slovakia, Slovenia and Ukraine. This choice has to a great extent been determined by the availability of data. The following specifications of the one way error component panel data model have been used in order to test if there was a significant relationship between foreign investment and export performance:

$$\ln EX_{it} = \alpha_i + \beta_1 \ln FDI_{i(t-1)} + \beta_2 \ln REER_{it} + \beta_3 \ln EM_{it} \quad (1)$$

$$\ln EX_{it} = \alpha_i + \beta_1 \ln FDI_{i(t-1)} + \beta_2 \ln REER_{it} + \beta_3 \ln EM_{it} + \beta_4 \ln I_{i(t-1)} \quad (2)$$

$$\ln EX_{it} = \alpha_i + \beta_1 \ln FDI_{i(t-1)} + \beta_2 \ln REER_{it} + \beta_3 \ln EM_{it} + \dots + \beta_5 \Delta TLI_{it} \quad (3)$$

$$\ln EX_{it} = \alpha_i + \beta_1 \ln FDI_{i(t-1)} + \beta_2 \ln REER_{it} + \beta_3 \ln EM_{it} + \beta_4 \ln I_{i(t-1)} + \beta_5 \Delta TLI_{it} \quad (4)$$

The use of the linear unobserved effects panel data model is appropriate because of some unobserved (and/or omitted), country-specific variables, which influence countries' export performance. The most important examples are geographic location and traffic infrastructure (accessibility), natural resource endowments or initial situation with exports, but there may also be relevant policy variables not included in any of the above specifications. Since some of these obviously relevant but omitted variables may be correlated with some explanatory variables, especially with foreign direct investment, the above equations were estimated using the fixed effects method. Unlike the random effects estimator, it is robust in this respect and allows for such correlation (Wooldridge 2002). The above specifications are combinations and modifications of the models used by Sun (2001), Zhang and Song (2000), and Goldberg and Klein (1999). Subscript i stands for cross section units, i.e. countries ($i=1\dots 14$), while t denotes time.

The dependant variable is the natural logarithm of exports $\ln EX$ (as in Sun 2001 and Zhang and Song 2000). The first explanatory variable taken is the natural logarithm of the cumulative stock of the foreign direct investments $\ln FDI$ (again following Sun 2001 and Zhang and Song 2000). The theoretical arguments given in the second part would justify its adoption in the model, even if the focus of this paper were not exactly the effect of FDI on exports. It enters the model with a one-year lag, since it is assumed that it takes some time for the effects of FDI on exports to take place.⁹ The cumulative stock variable has been chosen

⁹ Sun (2001) and Goldberg and Klein (1999) use the same or similar approaches, i.e. Goldberg and Klein also use the second lags for foreign investment variable, which is in their case FDI inflows.

over the FDI inflows, based on the assumption that the presence and relative importance of foreign investors as described by the cumulative stock variable is a better predictor of overall effects on exports i.e. it is a source of the indirect effects on host economy, which does not disappear over time. (It should be reminded once again that the aim of the paper is to test for both, direct and indirect effects of FDI on exports together at the macroeconomic level.) The same effect could possibly be achieved by using FDI inflows, but this would require using many lags of FDI variable, reducing the number of observations. As for the potential endogeneity of FDI variables, it was mentioned in the previous section that openness has been a significant determinant of FDI flows only when measured by the trade liberalization index (Garibaldi et al. 2002). When the measure was the share of the country's trade in GDP, it was not significant, not even when only FDI in the manufacturing sector was considered (Resmini 2000). In addition, the FDI stock variables enter the model with a one year lag, which should further alleviate the potential problem.

As the macroeconomic theory suggests, one important explanatory variable should be the real effective exchange rate $\ln REER$ (again, the natural logarithm is taken), which should reflect the domestic and foreign price conditions, with an increase of the value of the variable denoting the real appreciation. Thus, it is expected that the coefficient for this variable is negative. Sun (2001) uses the nominal exchange rate, but this does not fully capture the differences in price levels. There are many other factors influencing the price differences, so that the real effective exchange rate seems to be the better choice. Goldberg and Klein (1999) use real exchange rates.

The next independent variable $\ln EM$, tries to capture the demand conditions in the main trading partner economies i.e. developments on the export markets. For this purpose, the natural logarithm of the gross domestic product of developed European economies is used as a proxy after being weighted by the share of exports to these countries in the total country's exports of each CEE country.¹⁰

The gross domestic product growth rates of the trade partner economies also enter the model of Goldberg and Klein (1999), but not the ones in Sun (2001) or in Zhang and Song (2000). They use the domestic investment as an additional independent variable. This could partly capture the above effect, because domestic investment decisions are based on the expectations

¹⁰ Developed countries in Europe are: Austria, Belgium, Denmark, Faeroe Islands, Finland, France, Germany, Gibraltar, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Weighting is necessary since these markets are not equally relevant for all countries in the sample. According to the UNCTAD Handbook of Statistics (see below), the average share of exports from the countries under study to this region varied from 47% to 58% over the observed period. The smallest values were a little over 10%, for Ukraine in the beginning of the period, and the highest ones exceeded 77%, for Hungary in 1999. The differences are large, which justifies using these shares to weight the GDP of export markets.

regarding the demand conditions at home and abroad. Still, their basic argument for including domestic investment as an independent variable is that it is the main determinant of productive capacity, and therefore of the domestic supply of commodities and thus export supply. They explicitly want to separate the effect of FDI on exports from the export effect of investment in general. This study uses the gross fixed capital formation variable in order to check for the effect of domestic investment lnI , in addition to other variables. Some caution is required in such specification since there may be a causal relationship between FDI and gross fixed capital formation, especially in the case of greenfield investment. Krkoska (2001) finds that in transition countries, although many of the FDI inflows were due to acquisitions of local firms in the privatization process, these flows have been a significant source of financing for capital formation. This may represent a problem in estimation, which is at least partly alleviated by using cumulative FDI stock variable instead of inflows. The investment variable also enters the model with a one year lag, with the same justification as with foreign investment.

An index has been added as a proxy for trade liberalization (TLI).¹¹ It can take values between 1 and 4.3, where the lower value stands for less liberalized regime. A change of trade liberalization index is used as a variable in the estimations. The four model specifications will also be estimated using alternative definitions of the presence of foreign capital and of investment i.e. the share of FDI stock in GDP, and investment share in GDP.

Data on FDI stock, exports, gross fixed capital formation and real effective exchange rates stem from various WIIW publications for all countries except for Baltic countries. The latter are taken from IMF's International Financial Statistics (2003), and various IMF country reports.¹² All variables are expressed in USD at constant 1995 prices after being deflated using consumer price indices, or if those were not available, retail price indices.¹³ Price indices and the exchange rates data are also taken from WIIW publications, except for the Baltic countries for which they stem from IMF. Data on the real growth rates and levels of the developed European countries' gross domestic product and their shares in total exports of the countries in the sample are taken from the UNCTAD database, for all countries in the sample.¹⁴ The values of real GDP are expressed in USD at constant 1995 prices. Data on the trade liberalization index stem from the EBRD's Transition Report (2003).

Tables 2 and 3 show the descriptive statistics of the variables as they enter the estimation. Natural logarithms of all variables are taken, except for trade liberalization index for which

¹¹ The index was constructed by EBRD and it is called: "Index of forex and trade liberalization" (see EBRD 2003).

¹² The country reports are available from www.imf.org.

¹³ This may not be the best choice, but the data on producer price indices or labor unit costs were not available for all countries. Repkine and Walsh (1998) also use CPI to deflate trade data.

¹⁴ The UNCTAD Handbook of Statistics is available on-line at: www.unctad.org.

first differences are taken, and for the shares of FDI stock and gross fixed capital formation in GDP.

Table 2: Descriptive statistics

	<i>Mean</i>	<i>Median</i>	<i>Maximum</i>	<i>Minimum</i>	<i>Std. deviation</i>
<i>Exports</i>	8.96	9.04	11.89	7.07	1.20
<i>Foreign direct investment</i>	7.48	7.54	10.46	0.60	1.66
<i>Real effective exchange rates</i>	4.66	4.63	5.14	4.22	0.16
<i>Export markets</i>	15.38	15.48	15.89	13.74	0.42
<i>Investment</i>	8.47	8.59	11.32	6.42	1.31
<i>Trade liberalization index</i>	0.10	0.00	2.00	-1.70	0.39
<i>Foreign direct investment / GDP</i>	13.07	10.10	53.19	0.04	11.46
<i>Investment / GDP</i>	21.83	21.39	36.24	10.98	5.22

FDI variables, exports and investment have relatively high standard deviations, as compared to other variables. In addition, there are high correlation coefficients between these three variables.

Table 3: Correlation coefficients

	<i>Foreign direct investment</i>	<i>Foreign direct investment / GDP</i>	<i>Real effective exchange rates</i>	<i>Export markets</i>	<i>Investment</i>	<i>Investment / GDP</i>	<i>Trade lib. index</i>
<i>Exports</i>	0.745	-0.021	0.0260	0.040	0.963	0.174	-0.138
<i>Foreign direct investment</i>	---	0.490	0.334	0.400	0.734	0.490	-0.278
<i>Foreign direct investment / GDP</i>	---	---	0.466	0.542	-0.069	0.369	-0.137
<i>Real effective exchange rates</i>	---	---	---	0.081	0.055	0.236	-0.099
<i>Export markets</i>	---	---	---	---	0.036	0.171	-0.198
<i>Investment</i>	---	---	---	---	---	0.241	-0.139
<i>Investment / GDP</i>	---	---	---	---	---	---	-0.089

The correlation coefficient between exports and investment is 0.963 and between exports and FDI 0.745. FDI and investment are correlated with a coefficient of 0.734. Especially the last correlation coefficient may represent a problem in regression. Therefore, all four

specifications are estimated twice: first using the logs of FDI and investment, and then using the ratios of these variables to GDP as explanatory variables. There are two reasons for this: first is to alleviate the potential collinearity problem, since the new pair of variables is uncorrelated, and second, to check for the robustness of the results to different definitions of the presence of foreign capital.

5 Empirical results

As mentioned in the last section, a fixed effect, one way error component panel data model is used here in order to estimate the model specifications (1) – (4). This technique is chosen instead of the random effects estimator because the unobserved and omitted variables may be correlated with some of the explanatory variables, which would lead to inconsistent estimates when using random effects method. The significance of the individual, cross-section, and of time effects has been tested and for all specifications the same results were obtained: the individual effects were highly significant, and time effects were always insignificant. Therefore, only individual effects are allowed for. First, the models were estimated for the complete sample of 14 countries, and then also for two subsamples: separately for eight countries joining the EU in 2004 and the other six countries. This is an implicit test of the robustness of the results, but also of the parameter heterogeneity. Heteroskedasticity and serial correlation robust standard errors are reported for estimated coefficients (calculated according to Wooldridge 2002). Also, the adjusted R^2 measures capturing only the variance explained by the variables entering the regression, and excluding the portion of variance explained by individual effects (which was always rather high) is reported. This is done for the better understanding of the results, since the adjusted R^2 was always between 0.97 and 0.99 for regressions with dummies for each country (i.e. including the individual effects). That result has been rather constant across specifications and different samples, because an omitted variable would be “picked up” by the individual effect. Leaving out the dummies and calculating the adjusted R^2 only for the part of the variance explained by the variables does not affect the coefficient estimates and provides a better insight in how the effects of the omitted variables vary across different specifications and samples. First, the results for the complete sample are presented in Tables 4 and 5.

According to the results of the basic specification, model (1), all three variables have been significant determinants of export performance, with the expected signs. FDI was significant only at 10% significance level. The proportion of the variance explained by them is not very high and amounts to 0.328. The impact of FDI on growth was weaker than that of the other two variables: a 1% increase in FDI stock leads to 0.04% growth of exports for the complete

sample and model (1). Introducing investment and trade liberalization variables in the model, separately and together, increases somewhat the value of the adjusted R^2 .

Table 4: Complete sample, results I

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment</i>	0.0457* (0.0261)	0.0269 (0.0274)	0.0549** (0.0243)	0.0358 (0.0261)
<i>Real effective exchange rates</i>	-0.6464*** (0.1320)	-0.6906*** (0.1276)	-0.6300*** (0.1348)	-0.6742*** (0.1302)
<i>Export markets</i>	0.5863*** (0.1217)	0.6221*** (0.1231)	0.5832*** (0.1162)	0.6180*** (0.1190)
<i>Investment</i>	---	0.1961** (0.0770)	---	0.1889** (0.0747)
<i>Trade liberalization index</i>	---	---	0.0650** (0.0319)	0.0585** (0.0286)
R^2_{adj}	0.328	0.358	0.336	0.363
<i>Observations</i>	112	112	112	112

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

Both new variables enter the regression significantly and with positive signs, as expected. Inclusion of the investment picked up the effects of FDI on exports, i.e. it made the FDI variable insignificant and its coefficient was lowered. Real effective exchange rates and export markets remain highly significant across all specifications.

In order to alleviate the potential collinearity problem between FDI and investment variables that was described earlier, all four models were estimated again using the shares of FDI stock and gross fixed capital formation in GDP, as explanatory variables (Table 5).

The results show that with these alternative definitions of variables, FDI remains highly significant in all models and the investment turns out to be insignificant. Other results are basically unchanged, except that the value of the adjusted R^2 is now higher (it amounts to little over 0.4) and almost equal for all specifications.

Table 5: Complete sample, results II

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment / GDP</i>	0.0120*** (0.0034)	0.0114*** (0.0035)	0.0120*** (0.0034)	0.0115*** (0.0035)
<i>Real effective exchange rates</i>	-0.7906*** (0.1233)	-0.8013*** (0.1233)	-0.7854*** (0.1246)	-0.7963*** (0.1247)
<i>Export markets</i>	0.4395*** (0.1095)	0.4455*** (0.1100)	0.4599*** (0.1060)	0.4668*** (0.1074)
<i>Investment / GDP</i>	---	0.0060 (0.0054)	---	0.0062 (0.0053)
<i>Trade liberalization index</i>	---	---	0.0465* (0.0269)	0.0480* (0.0266)
R^2_{adj}	0.419	0.420	0.422	0.423
<i>Observations</i>	112	112	112	112

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

The next step was to estimate the models for a smaller sample of eight new EU member states (including the five Central European countries and three Baltic countries). On average, and in most cases also individually, these countries are more advanced in the transition process than the rest of the sample, and thus also in trade liberalization (especially in trade with the EU due to liberalization steps in the European Agreement). They are also characterized by the greater macroeconomic stability and better performance and it has been known for some time that they would be the first among transition countries to join the EU. For all these reasons, they have been able to attract more FDI relative to their GDP than the rest of the sample (though with some exceptions). The results for this group of countries are presented in the Tables 6 and 7. For all four models, foreign investment, exchange rates and export markets have been significant determinants of export performance, all with the expected signs. The adjusted R^2 is somewhat higher than for the full sample and relatively constant.

It should be noted that the coefficient for the FDI variable is substantially higher for new EU member states than for the complete sample, reflecting the stronger positive contribution of FDI to export promotion, possibly due to the different types of foreign investments attracted by these countries.

Table 6: New EU member states, results I

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment</i>	0.2003*** (0.0545)	0.1474* (0.0769)	0.2049*** (0.0522)	0.1531** (0.0762)
<i>Real effective exchange rates</i>	-0.8281*** (0.2790)	-0.8234*** (0.2735)	-0.7983*** (0.2776)	-0.7967*** (0.2728)
<i>Export markets</i>	0.4964*** (0.1671)	0.5118*** (0.1796)	0.4940*** (0.1667)	0.5092** (0.1796)
<i>Investment</i>	---	0.1808 (0.1354)	---	0.1755 (0.1363)
<i>Trade liberalization index</i>	---	---	0.0642 (0.0677)	0.0577 (0.0688)
R^2_{adj}	0.394	0.397	0.388	0.391
<i>Observations</i>	64	64	64	64

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

Table 7: New EU member states, results II

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment / GDP</i>	0.0123** (0.0053)	0.0122** (0.0050)	0.0124** (0.0053)	0.0123** (0.0050)
<i>Real effective exchange rates</i>	-0.7559*** (0.2763)	-0.7804*** (0.2676)	-0.7338*** (0.2712)	-0.7499*** (0.2629)
<i>Export markets</i>	0.5493*** (0.1853)	0.4776*** (0.1783)	0.5515*** (0.1852)	0.4786*** (0.1787)
<i>Investment / GDP</i>	---	0.0137** (0.0068)	---	0.0141** (0.0068)
<i>Trade liberalization index</i>	---	---	0.0416 (0.0533)	0.0586 (0.0600)
R^2_{adj}	0.400	0.422	0.392	0.416
<i>Observations</i>	64	64	64	64

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

Neither domestic investment nor trade liberalization was found to be significant. The latter may possibly be explained by the fact that there was very little variation in the trade liberalization index for these countries in the period under observation, since these economies undertook their liberalizing steps relatively early in the transition. As for the investment variable, the results change in regressions with alternative definitions of the FDI and

investment variables (Table 7). Investment becomes significant, with positive impact on exports and without changing the results for other variables.

For the group of six other countries (including four Southeast European countries, Russia and Ukraine), which did not join the EU in 2004, the results are somewhat different (Tables 8 and 9). Foreign direct investment and real effective exchange rates are significant and have theoretically predicted signs in all four models except for the FDI variable in the first model specification. The coefficients of the FDI variable are lower than for the sample of eight new EU member states in all, and for the complete sample, in the first and third model specifications. The exchange rates coefficients, on the other hand, are larger (in absolute value) for this group. While trade liberalization has also turned out to be a significant factor for export performance, export markets were an important determinant only in models not including investment, indicating some possible collinearity between these two variables. This unexpected relationship can not be detected by observing the simple correlation coefficients between these variables in this sample, which are negative, but not very high.

Table 8: Southeast Europe, Russia and Ukraine, results I

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment</i>	0.0315 (0.0230)	0.0514* (0.0294)	0.0392* (0.0212)	0.0600** (0.0271)
<i>Real effective exchange rates</i>	-0.8290*** (0.1203)	-0.8494*** (0.1143)	-0.8161*** (0.1246)	-0.8365*** (0.1185)
<i>Export markets</i>	0.3707*** (0.1388)	0.2053 (0.1673)	0.3720*** (0.1261)	0.2019 (0.1549)
<i>Investment</i>	---	-0.2037** (0.0990)	---	-0.2096** (0.0921)
<i>Trade liberalization index</i>	---	---	0.0525** (0.0254)	0.0549** (0.0248)
R^2_{adj}	0.477	0.503	0.488	0.517
<i>Observations</i>	48	48	48	48

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

The investment itself is highly significant, but has a negative impact on exports. If there were no strange relation to the export markets variable, one could construct (speculative and probably unreliable) scenarios in which investment negatively influences exports.¹⁵

¹⁵ For example, that domestic consumption growth was the primal determinant of domestic investment, leaving no or very few resources that could have been devoted to building or extending the production capacities for exports. Moreover, some of the capacities that have been used to produce for foreign markets are used to produce for domestic one.

Table 9: Southeast Europe, Russia and Ukraine, results II

<i>Dependent variable: EXPORTS</i>				
	<i>model(1)</i>	<i>model(2)</i>	<i>model(3)</i>	<i>model(4)</i>
<i>Foreign direct investment / GDP</i>	0.0081*** (0.0026)	0.0112*** (0.0028)	0.0082*** (0.0025)	0.0112*** (0.0027)
<i>Real effective exchange rates</i>	-0.8951*** (0.1189)	-0.8966*** (0.1063)	-0.8946*** (0.1203)	-0.8961*** (0.1072)
<i>Export markets</i>	0.3491*** (0.1206)	0.2025 (0.1241)	0.3759*** (0.1125)	0.2292** (0.1168)
<i>Investment / GDP</i>	---	-0.0216*** (0.0069)	---	-0.0210*** (0.0067)
<i>Trade liberalization index</i>	---	---	0.0396 (0.0249)	0.0338 (0.0255)
R^2_{adj}	0.511	0.567	0.513	0.567
<i>Observations</i>	48	48	48	48

Heteroskedasticity/serial correlation - robust standard errors are in parentheses. ***, **, * indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

Both, this result and the unusual relationship between investment and export markets are robust to using alternative definitions of FDI and investment variables. Another reason for being cautious about these findings is that the number of observations for this sample is lower than for the previous estimations, possibly affecting the reliability of results. It should be noted that using alternative definitions of investment and FDI lowers the significance of the trade liberalization variable. Overall, for this group of countries more variance of export performance is explained by the variables used in regression than for other samples. Adjusted R^2 reaches values of over 0.5 for models (2) and (4) in the first, and for all models in the second set of results.

6 Conclusions

The relationship between international factor movements and international trade has been at the center of extensive theoretical and empirical research by many economists for a long time. There are also many recent contributions, supplementing the earlier findings by introducing additional aspects in the literature. For example, attempts have been made to explain the emergence of multinational enterprises and their significant role in determining the directions and extent of international trade flows. Also, analyses of the indirect effects of foreign-owned enterprises on domestic firms through spillovers have emerged. The aim of this paper was to investigate whether the foreign direct investment in countries of Central and Eastern Europe has affected the export performance of the host economies. An overall macroeconomic

approach was used in order to encompass the direct as well as the indirect effects. The results indicate that FDI had unambiguously positive and significant impact on the exports of these countries, for the whole sample, as well as for the two subsamples – the more advanced transition economies – new EU member states, and a group of, on average, less advanced countries comprising four Southeast European countries, Russia and Ukraine. It is found that the positive impact of FDI on exports was much stronger in the first subsample, possibly reflecting the fact that these countries have managed to attract more export-oriented FDI. Other highly significant determinants were real effective exchange rates and the development on export markets. These results were confirmed after controlling for the effects of domestic investment (except for the export markets variable for the second subsample) as well as for the trade liberalization. The findings on these last two variables are mixed for different samples and specifications.

This paper shows that attracting FDI can have powerful export-promoting effects. It is becoming relatively more important as the choice of other export-promoting instruments narrows down, as a consequence of international trade agreements, or because some of them, such as direct export subsidies to specific industries, turned out to be ineffective in many cases. This is especially important for those CEE countries, whose goal is to join the EU, and which are therefore, or are about to become, subject to even more restrictive regulations. However, since governments are aware of the various potential beneficial effects of foreign investments for the host economies, there is very vigorous international competition for FDI. This competition is also subject to some international rules. Although these are less restrictive than trade-related regulation and although there are still ways to affect the location and exporting decisions of MNEs, countries are less and less able to make some of the favorable conditions offered to foreign investors contingent upon the MNEs' export performance (except for the group of the least developed countries, UNCTAD 2002). Government agencies can still target the potential exporters, but without being able to actually condition their incentives. It can therefore be expected that the policy measures will be shifting more and more toward exploiting potential indirect effects i.e. targeting "better" FDI (from which more spillover effects are expected in terms of new technologies or skills) and/or promoting linkages between foreign and domestic firms. It is also possible to target export oriented FDI indirectly by means other than incentives, i.e. by providing specific services, infrastructure or human resources that are possibly required by the export oriented firms. Such policy would simultaneously lower the costs for the domestic firms to become exporters. One could argue that measures of this kind should be enough, i.e. that a country can create an exporter-friendly environment by itself, and thus, increase the export competitiveness of domestic firms without (1) attracting FDI at all, or (2) without investing additional efforts and resources (e.g. in form of incentives) in order to attract export oriented foreign investors. While it is likely that a

country can succeed in promoting its exports without attracting FDI, the latter can obviously help speeding up the process and magnifying the impact (as shown in this paper) and should be considered at least as a supplementary measure.¹⁶ This is probably more important in less developed host countries, lacking the resources, institutions and possibly also knowledge in providing important services for potential domestic exporters.¹⁷ In addition, only to create an exporter-friendly environment is in most cases not enough to attract a foreign investor. This may at best be supported by the empirical fact that even the rich industrialized countries offer special conditions for some foreign investors (UNCTAD 2002). A possible explanation may be that attracting FDI is a “prisoner’s dilemma” type of the game, and if others “play the game”, in sense that they choose the strategy of offering FDI incentives, then it is better for a single country to play it as well, although everybody (the “world” i.e. all countries together) could possibly be better off without offering FDI incentives.¹⁸

It should be mentioned in the context of EU accession that, as shown by Breuss et al (2001, 2003), the redistribution of structural and cohesion funds due to enlargement may affect the distribution of FDI within the enlarged European Union. Since more funds will be redirected to new member states (at the expense of old EU members), they will be able to use those in order to reduce the fixed costs of investment and in this way, to affect the location decisions of foreign investors. This allows for an optimistic view for new EU member states in promoting FDI and, in this way, improving their export performance.

While the results of this paper about the link between FDI and exports seem to be rather convincing, few remarks should be made on the potential impact of exports on growth. Although the empirical evidence on such a positive relationship between these two variables is not always very persuasive, this link can at least be regarded as a potential one. Thus, policy makers attach very high value to export promotion, regardless of the mixed evidence in the literature (UNCTAD 2002). So potentially, FDI might have been promoting the growth of the CEE countries by promoting exports. Mencinger (2003) states that this has not been the case and that FDI did not lower current account restrictions for these economies. He argues that MNEs contributed more to imports than to exports, and that, therefore, there was no positive indirect impact of FDI on growth via exports. This, however, is a superficial argument at least. If MNEs’ imports contained a significant portion of the capital goods and machinery used for later production, and/or enabled faster enterprise restructuring (in the case

¹⁶ Moreover, it is quite possible that attracting an export-oriented FDI or any FDI can be nothing but a supplementary measure in successful export promotion. It should be stressed again that the potential negative effects from FDI can occur if policy concentrates solely on foreign investors.

¹⁷ On the other hand, if the host economy is too backward in terms of human capital and technology, this may be an obstacle for exploiting the indirect effects of FDI on domestic firms (Lipsey 2002).

¹⁸ There is a large literature on competition for FDI and the welfare effects of FDI incentives, but since this is not at the focus of this paper, only this basic intuitive explanation is given. It must however be noted, that there may be conditions, under which FDI incentives are welfare increasing for the whole “world” (Fumagalli 2003).

of acquired domestic firms) allowing the firms to take advantage of the market access to EU, than this may have enhanced growth. Exactly the latter is found to be the case for some CEE countries in the study by Repkine and Walsh (1998). This finding is also reinforced by the conclusions from UN/ECE (2000). In addition, some economists argue that there is a direct positive effect of FDI on growth, but the evidence concerning this relationship for transition countries is again mixed (see for example Campos and Kinoshita 2002 or Mencinger 2003).

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