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## Foreign Direct Investment in Central and Eastern Europe: The IDP trajectories of selected countries

**Abstract:** This study attempts to investigate the timing and factors involved in the development and internationalisation of six Central and East European (CEE) economies from the perspective of advancing along the investment development path (IDP) model/paradigm. It also strives to identify the differences and similarities between the individual countries' IDP trajectories and to arrive at conclusions and policy recommendations designed not only for the analysed countries but which might serve or be of interest to other European states as well.

The dominating empirical part of this study is based on data derived from the UNCTAD World Investment Reports and Handbook of Statistics. The analysis covers the entire period of the six countries' transition process to the market led economic system (with the exception of the Czech Republic and Slovakia, for which data do not include the years 1990–1992 when both were functioning as Czechoslovakia) up to 2006, the last year for which the relevant data for all countries were available.

The first part of the study outlines the principal components of the IDP model and presents a review of empirical studies applying and/or relating to, the IDP model in CEE. The following section compares IDP trajectories of the six selected CEE countries. The analysis is concentrated on three key issues: the timeframe and conditions of moving from IDP stage 1 to stage 2; the problems of determining the advance towards IDP stage 3 and the significance in this context of the outward foreign direct investment (FDI) performance index. The concluding section summarizes the main findings and policy implications, draws attention to their limitations and delineates future research options.

**Keywords:** foreign direct investment, transition countries, investment development path, net outward investment position, inward FDI, outward FDI.

**JEL codes:** F21, F23.

## Introduction

Central and Eastern Europe has been for many years an attractive region for FDI. The six CEE countries selected for this study – Poland, the Czech Republic, Slovakia, Hungary, Bulgaria and Romania by 2006 attracted 2.96% of the total world FDI stock. All the selected countries generated outward FDI as well. In 2006 they collectively accounted for 0.24% of the world outward FDI stock (UNCTAD, 2007).

The interface and interplay between inward and outward FDI coupled with development constitutes the essence of the IDP paradigm, the central theoretical model in this study. In the context of this model/construct, a comparative analysis is conducted of IDPs of the six CEE countries identified above. They embrace two sub-groups: Poland, Hungary, the Czech Republic and Slovakia constituting the first, and Bulgaria and Romania the second one. Both groups show relative internal homogeneity in terms of geographical proximity, generally the same stage in establishing and developing a market economy, common experience and time frame in acceding to the European Union (EU), with the first group joining the EU in 2004 whereas the second in 2007, and even many similar components of culture. The general perception of those CEE countries is that the first group is more developed and consists of leaders in the transition process whereas the second group, located in the Balkans, comprises two “follower” states with a considerable development gap separating them from the said leaders. The study tries to determine how these factors of internal homogeneity and group differences influence the individual countries’ IDP trajectories.

Furthermore, the aim of the present investigation is to determine the timing and explore the factors that have influenced the movement of the selected CEE countries through their IDP stages. Finally, conclusions and policy recommendations are proposed, designed and applicable not only to the analysed countries but which might be used, serve as guidelines or simply be of interest to other European states as well.

The data sets used in this study have been derived from UNCTAD’s World Investment Reports and Handbook of Statistics. All the calculations of indicators, ratios and indices based on those data sets were conducted to match those in the original IDP model and its later applications in academic research. The data collected cover the entire period of the six countries’ transition process to the market led economic system (with the exception of the Czech Republic and Slovakia, for which data do not include the years 1990–1992 when both were functioning as Czechoslovakia) up to 2006, the last year for which the relevant data for all countries were available.

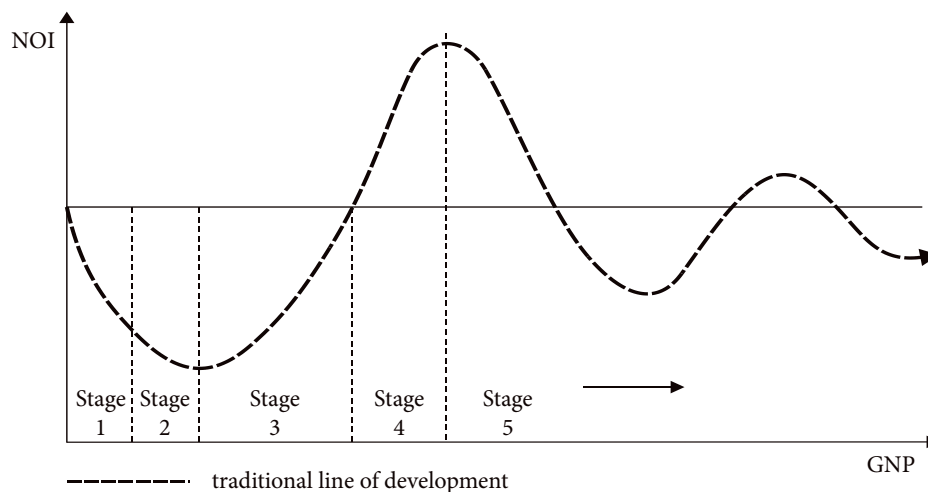
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## The IDP concept and its application to the CEE countries

The concept of IDP was first proposed by J. Dunning in the early eighties (Dunning, 1981). Since then it has been refined and extended several times, with most significant modifications contained in Dunning (1986), Dunning (1997), Dunning and Narula (1994, 1996 and 2002), and Narula and Dunning (2000). Several other authors have made contributions to the development of this concept, including Lall (1996), and Durán and Úbeda (2001 and 2005).

According to the basic IDP proposition, the inward and outward investment position of a country is connected with its economic development. Changes in the volume and structure of FDI lead to different values in the country's net outward investment position (NOIP), defined as the difference between gross outward direct investment stock and gross inward direct investment stock. As illustrated in Figure 1, the changing NOIP passes through 5 stages intrinsically related to the country's economic development, measured by its GNP.



**Figure 1. The Pattern of the Investment Development Path**

Note: Not drawn to scale – for illustrative purposes only

Source: Dunning and Narula, 2002, p. 139

At the beginning of stage 1 of the IDP, the NOIP – reflecting the difference between outward and inward FDI stocks – is close to zero and later on assumes negative, and rapidly growing, values. Inward FDI, negligible or low in absolute values, flows in mostly to take advantage of the country's natural assets. Outward FDI is also negligible or non-existent, as foreign firms prefer to export, import and/or to enter into non-equity relationships with local firms. Stage 2 is characterized by an increased inflow of FDI with outward FDI remaining still low although larger than in the previous stage. Therefore, the NOIP continues to decrease, although towards the latter part of stage 2, the rate of the decrease slows down as the growth of outward FDI converges with that of inward FDI. Countries in stage 3 are said to exhibit a growing NOIP due to an increased rate of growth of outward FDI and a gradual slowdown in inward FDI, geared in this case more towards efficiency-seeking motives. In stage 4 outward FDI stock continues to rise faster than the inward one and the country's NOIP crosses the 0 level and becomes positive. Country location advantages are now mostly derived from created assets. This stage, as well as the last (5th) one, is typical of the most developed countries. In stage 5 the NOIP first falls and thereafter demonstrates a tendency to fluctuate around the 0 level but usually with both inward and outward FDI increasing.

The IDP model has been used as a framework in numerous empirical studies, which by and large attempted to validate it by either employing cross-sectional or longitudinal data sets<sup>1</sup>. However, a relatively small number of studies could be identified that directly or indirectly deal with IDPs of CEE countries, of which only two represent cross-nation comparative analysis.

Boudier-Bensebaa (2008) undertakes a comparative analysis of the IDP in the whole region of Central and Eastern Europe (including the former Soviet Republics) and the European Union of 15 member states. The “Eastern” countries concerned are classified into 4 distinct groups according to their per capita level of GDP and NOIP. The NOIP of the “Eastern” countries places them in stages 1 or 2 of the IDP, while that of the EU countries points to stages 4 or 5. The first most advanced group of the “Eastern” countries consists of the Czech Republic, Estonia, Slovenia, Hungary, Slovakia, Poland, Latvia, Lithuania and Croatia. The group is identified as moving towards the end of stage 2 of their IDP or even towards the beginning of stage 3. Within the “Eastern” countries groups and sub-groups their NOIP reveals a tendency to converge. But as far as income levels are concerned, no convergence is found either inside the “Eastern” countries or between them and the EU. Finally, the author draws attention to the fact that data on FDI stocks and GDP do not cover all the factors affecting FDI and development. In the FDI sphere, left out are the non-equity forms of investment. As for the effect on FDI, besides GDP, elements such as EU accession, globalisation and the transformation process per se should

<sup>1</sup> A succinct review of the two types of IDP empirical studies, cross-sectional and longitudinal, can be found in Gorynia, Nowak and Wolniak (2006).

also be taken into account. Boudier-Bensebaa focuses on cross-sectional analysis across countries and does not attempt to assess and explain the individual countries' IDP trajectories. And yet, the individual countries' IDP idiosyncrasies can provide a deeper understanding and more insightful explanation of the varying IDPs and their convergence or divergence within groups of countries.

In the second cross-nation study focused on Central and Eastern Europe, Kottaridi, Filippaios and Papanastassiou (2004) attempt to integrate Dunning's IDP model with Vernon's Product Life Cycle and Hirsch's International Trade and Investment Theory of the Firm. These authors analyze the location determinants of inward FDI and the interrelationship between inward FDI and imports during the years 1992–2000 in eight new EU member states from CEE and two candidate countries – Bulgaria and Romania. They find evidence of the ten CEE countries going through the second stage of the IDP and gradually moving towards the third stage, which corroborates the findings of Boudier-Bensebaa (2008) with respect to the most advanced CEE countries, labelled CEECs1.

Although focused on outward FDI only and not using the IDP concept as a framework, the study of Svetličič and Jaklič (2003) is worth mentioning in the context of this review as it also represents a comparative analysis of several CEE countries (the Czech Republic, Estonia, Hungary, Poland and Slovenia). The analysis clearly demonstrates that major increase of FDI outflows started in the latter part of the 1990s. This is yet another indication of the Central European countries entering Stage 2 of the IDP during that time. At the same time, Svetličič and Jaklič find positive correlation between a country's level of development and its rate of investment abroad and observe that outward FDI of the five countries under study tends to be geographically concentrated in the countries with close historical or cultural ties.

Several studies focus on individual CEE countries' IDP. In particular, Poland's IDP has attracted notable attention on the part of researchers. The studies of Kubiela (1996), Rosati and Wilinski (2003), and Gorynia, Nowak and Wolniak (2007 and 2008) provide empirical findings and interpretative insights into Poland's IDP trajectory, identifying and explaining the stages of the IDP the country has gone through. According to the most recent of these studies (Gorynia, Nowak and Wolniak, 2008), Poland entered the second stage of her IDP in the mid-1990s and by 2006 had been advancing to the end of that stage. This finding is consistent with the results of the multi-nation studies mentioned above.

The relevant studies of other Central European countries either explicitly use the IDP model or focus on some of its elements, typically on outward FDI. Antalóczy and Éltető (2003) analyse Hungary's outward FDI and pay only a cursory attention to the country's IDP trajectory. These authors do not attempt to identify Hungary's stage on the IDP, but it can be implied from their analysis that the competitiveness of Hungarian companies investing abroad is strengthening and the empirical data presented in these authors' work clearly show a narrowing gap between inward and

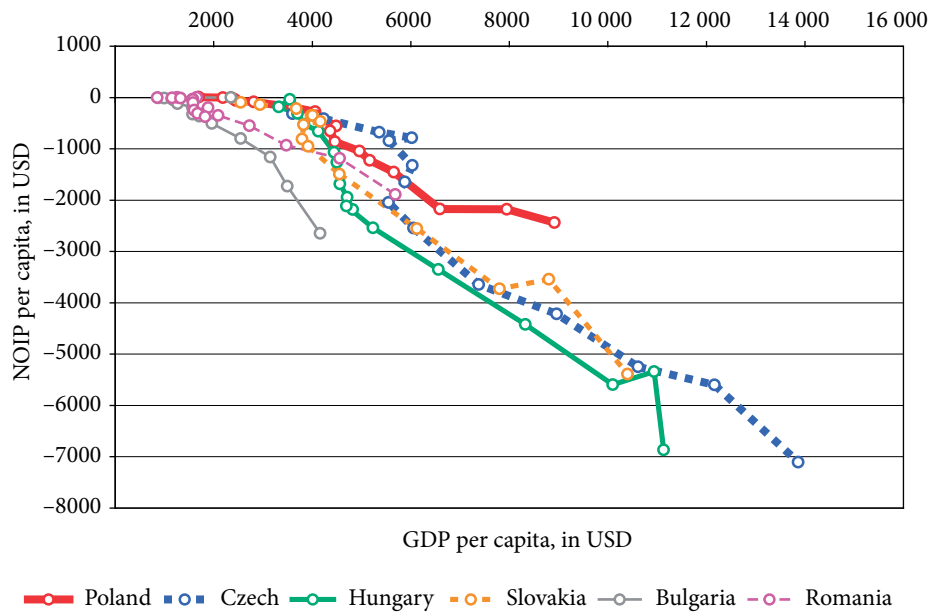
outward FDI between 1997 and 2001, which may be interpreted as an indication of Hungary's firm positioning in the latter part of IDP stage 2. Similarly, the study by Bohata and Zeplinerova (2003) on the Czech Republic's outward FDI provides evidence of an accelerated growth, although at relatively low levels, of outward FDI between 1996 and 2001. Nevertheless, these authors note that the gap between inward and outward FDI remains large in the Czech Republic at the end of the studied period. Svetličič & Bellak (2003), on the other hand, do use the IDP paradigm framework when conducting a comparative analysis of Slovenia's and Austria's NOIP. They come to the conclusion that both countries' IDP trajectory does not conform to the theoretical expectations derived from Dunning's model. According to these authors, the Slovenian IDP is highly idiosyncratic, as is Austria's IDP, but for different reasons. In Slovenia, deviations are more transition and history-related.

Also the Estonian study contained in the book edited by Svetličič and Rojec (2003) refers to the concept of IDP when analyzing specifically the role of outward FDI in the internationalization of Estonian firms (Varblane, Reiljan & Roolaht, 2003). Similarly to the other CEE countries referred to above, the Estonian case shows the emergence of outward FDI around mid-1990s, followed by a boom in 1997. Although Estonia's NOIP deteriorated in the subsequent years, the measure's rate of decline showed signs of abating in the early 2000s. That, again, can be interpreted as a sign of Estonia passing through stage 2 of her IDP.

In the context of the existing literature on IDP of CEE countries, the present study attempts to make a contribution to the development of our knowledge of CEE countries' IDP idiosyncrasies by conducting a comparative analysis of a fairly homogenous group of CE economies, using longitudinal data sets, and covering the entire transition period. It therefore fills important gaps in the hitherto undertaken research of IDP in transitional economies, which has been fragmentary and has become largely outdated when it comes to other than Poland CE countries. The advantage of comparing a small and homogenous group of countries, all being at roughly the same stage of the transition process completion and showing only moderate differences in the level of development, is that any differences in these countries' IDP trajectories can be attributed to other than the GDP and the transition stage factors, thus enriching our understanding of IDP determinants, beyond those envisioned in the classic IDP model.

## **IDP trajectories of six Central and East European countries**

Tables 1–6, containing data on GDP and NOIP for each of the six countries plus Table 7, with NOIP per capita dynamics of all six countries, presented in Appendix 1, allow for a detailed analysis of each country's relative positioning on its respec-



**Figure 2. The NOIP per capita and GDP per capita in USD\* of Poland, Czech Republic, Hungary, Slovakia, Bulgaria and Romania, 1990–2006**

\*At current prices.

Source: Derived from tables 1 to 6 in Appendix 1

tive IDP from the point of view of two issues: the movement from IDP stage 1 to stage 2 and then the movement towards IDP stage 3. Table 8, showing changes in the outward FDI performance index, included in the same appendix, is also used in the analysis of closeness of countries to IDP stage 3. In addition, Figure 2, presented below, shows the relationship between NOIP per capita and GDP per capita for the six countries under study. The dots represent the points of intersection of NOIP and GDP per capita values for each year of the analysed period.

### *Passing from IDP stage 1 to stage 2*

Determining and comparing the points in time of each country's passing from stage 1 to stage 2 of their respective IDPs is truly a difficult and daunting exercise, tainted to a certain extent with subjective evaluation of available data. For Poland, the authors' previous research determined the end of year of 1995 as the moment when the country moved from stage 1 to stage 2 of its IDP. An indication of that moment of change to stage 2 was firstly a marked increase in the negative NOIP per capita and secondly the growth index of that measure, relative to the previous year, reaching the value of over 219.0 and then falling to 146.8 next year. For the Czech Republic



and Hungary 1995 was also identified as the last year of stage 1 presence with the negative NOIP per capita growth index reaching 165 and then subsiding to 115.4 for the Czech Republic, and for Hungary going up to 162.4 and then dwindling to a mere 118.2. Slovakia was positioned as ending its stage 1 presence in 1996 with the said growth index attaining a level of 160.6 and being very close to those of her neighbours: Hungary and the Czech Republic, as identified above. The slide in the following year was however much steeper, remaining practically at the same level with a growth index of 100.1. Romania and Bulgaria entered stage 2 even later, i.e. in 1997, with a negative growth index of the NOIP per capita of 235.7 for the first one and 207.5 for the second one. Thus for the group of six countries there was a remarkable concentration of the time of moving from stage 1 to stage 2 of each country's IDP: for Romania and Bulgaria it was 1997, for Slovakia 1996 and for the remaining three 1995. An emerging hypothesis for transition economies of CE thus appears to be that the duration of stage 1 of their IDPs lasts from 6 to 8 years, taking the beginning of the transformation process as the starting point.

As for the absolute values of each country's NOIP and NOIP per capita, the highest (i.e. lowest in reality because of the minus sign) were recorded for Hungary (in 1995): 11026 mln USD and 1067 USD respectively. This was reached at the second highest level of GDP per capita of 4443 USD. The Czech Republic was second with a negative NOIP (also in 1995) of 7005 mln USD, NOIP per capita of 679 USD but with the highest level of GDP per capita in the group reaching 5360 USD. Slovakia followed with NOIP per capita of 347 USD and GDP per capita of 3977 USD but at the same time the NOIP itself had the negative value of 1863 mln USD in 1996. Poland (in 1995 again) was next with a NOIP per capita of 189 USD and GDP per capita of 3603 USD but with an absolute NOIP of 7304 mln USD – close to that of the Czech Republic. Then there was Bulgaria (in 1997) with a NOIP per capita at a lower level of 120 USD and the lowest in the group GDP per capita of 1265 USD. At the very end of this peculiar ranking came Romania (also in 1997) with a NOIP per capita of only 102 USD and a GDP per capita of 1583 USD, slightly higher than that for Bulgaria. Romania's absolute NOIP value of 2291 USD placed her higher than that of the much more developed Slovakia. The lowest absolute value of NOIP in the group, at the level of 985 USD, was recorded by Bulgaria.

The leading position of Hungary at the end of the IDP stage 1 reflects the existence of pull factors other than those connected to the size of the country's internal market, such as low labour costs and the quality of created assets, but also the role of economic policy, especially towards privatisation of state owned firms, which adopted a more active approach than for example in the case of Poland, steering FDI to selected sectors of the economy (Antalóczy and Éltető, 2003). The second rank of the Czech Republic with a NOIP and NOIP per capita which were both 64% of those of Hungary but with a GDP per capita being 21% higher than the Hungarian one also reflects the relative abundance of created assets in attracting FDI. At the



lower end was Slovakia with 17% of Hungary's NOIP, 33% of Hungary's NOIP per capita but almost 90% of Hungary's GDP per capita, indicating a relatively developed transition economy, however with relatively slight appeal to foreign investors. This lesser attractiveness to FDI was also reflected in the one year longer duration of stage 1 compared with the rest of the group under investigation. And then there was Poland with lower values of NOIP per capita and GDP per capita, pointing to a relatively weak interest of foreign direct investors but at the same time with the value of absolute NOIP being 66% of that for Hungary, thus revealing the compensating effect of the extensive factor attracting FDI, i.e. market size and its growth potential. At the end of the list were the two Balkan states with Bulgaria's NOIP per capita being just 11.25% of Hungary's and Romania's NOIP per capita at the bottom with 9.56% of that of Hungary. These proportions were in line with the low share of Bulgarian and Romanian GDP per capita being 28.5% and 35.6% respectively of that of Hungary. All this evidence tends to confirm the still unexploited potential for inward and outward FDI of those two countries at the end of their IDP stage 1. Overall there was no common denominator discernable in the group of six countries as to the level of NOIP per capita and GDP per capita at which transition from stage 1 to stage 2 of each country's IDP occurred.

### ***Moving towards IDP stage 3***

According to available data when applied to the IDP model, none of the countries under investigation was in its IDP stage 3. Thus it is worth determining which of those countries may be closest to that stage. Changes in the NOIP per capita are one indicator that may be used for that purpose. It has the advantage of neutralising to some extent the influence of a country's market size, thus making comparisons between the countries more plausible.

The dynamics of the NOIP per capita of all six countries is presented in Table 7. Percentage points (pps) changes of these NOIP per capita growth rates were calculated from the beginning of IDP stage 2, i.e. starting with the year 1997. According to the original model, the NOIP in the latter part of stage 2 should exhibit falling growth rates of negative values. The moment when the said growth rates would reach "0" level would signal entering IDP stage 3. This phenomenon however is difficult to discern from the analysis of available data. Periodic and haphazard changes, rising and slowing down the NOIP per capita growth rates, are symptomatic for all the six countries investigated. Nevertheless, if an approximation is undertaken in a somewhat subjective and arbitrary form of considering the net changes in the NOIP per capita growth rates for only the last two years of the studied period, the following ranking of proximity to the said stage 3 emerges: the leader is Poland with a falling growth rate of -38 pps followed by Slovakia with -30 pps. Then comes Romania also with a falling rate of -10.52 pps. Hungary follows but with a net growth in the

said changes of +2.01 pps, thereafter the Czech Republic with a net growth of +2.51 pps. At the end is Bulgaria with a net increase of 7.76 pps. The closest position of Poland is also visible in Figure 2, which clearly shows that Poland's IDP trajectory is generally flatter, whereas the trajectories of all the other five countries exhibit a marked continuing stretching down tendency. However, it should be noted that Poland's low level of NOIP was an outcome of relatively low levels of both inward and outward FDI per capita.

Those numbers point to a certain paradox. If the two Balkan countries are set aside then Poland, being the least developed among the remaining four relatively developed CEE countries according to GDP per capita data, appears to be closest to the point of evolution into the more advanced stage 3 of the IDP. It should be recalled at this point that one of the basic assumptions of the IDP model stipulates that a country moves through the five stages of its IDP as a consequence of overall development and wealth accumulation. Slovakia, Hungary and the Czech Republic are all lined up according to increasing GDP per capita and their values being at the same time higher than those for Poland thus offer contradictory evidence to received theory<sup>2</sup>. This striking observation is reinforced when Romania (third closest to IDP stage 3) is included with her much lower GDP per capita of 5684 USD in 2006. But at the same time it is contested by including Bulgaria which complies with the original IDP model, being situated farthest from her IDP stage 3 and, as expected, having the lowest per capita GDP in 2006 of 4160 USD.

The analysis of the outward FDI performance index provides an indication as to magnitude of outward FDI which a country generates relative to the size of its economic potential, thus indirectly pointing out which country has the capacity to reach the border of stage 3 of its IDP. The values of the said index less than 1 signify that outward FDI is less than proportional to the size of the home country economy's as measured by its participation in the global economy as such. If, on the other hand, the values of the said index are higher than 1 then the outward FDI generated is more than proportional relative to the aforementioned size of the home economy. From the point of view of positioning on the IDP the closer the index to 1 or higher than 1, the more predisposed is a given country to advance on its IDP trajectory or in this case reach stage 3 of its IDP faster than others.

In this context the values of the outward FDI performance index (OPI) as applied to the six countries in this study are presented in Table 8. Among those countries Hungary was the unquestioned leader recording the highest OPI values in 1991, 1995, 1997 and from 1999 onwards, surpassing in 2003, 2005 and 2006 the threshold value of 1, reflecting the highest relative effectiveness in outward FDI ex-

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<sup>2</sup> For example, this finding is inconsistent with Dunning's and Narula's assertion that in smaller countries the lack of economies of scale inhibits inward FDI and stimulates outward FDI in earlier stages of IDP, thus making such countries reach a positive NOIP at a considerable earlier stage of their development than is the case with large countries (Dunning and Narula, 2002, p. 159).

pansion, which in turn was perceived as the key factor in upgrading the country's international competitiveness. No other country in the group recorded OPI values higher than 1. From this point of view Hungary showed the greatest propensity to be capable of being the first to move into her IDP stage 3.

In the previous decade three other countries, Romania, the Czech Republic and Slovakia, occupied the leading position, but only for two years each: Romania in 1990 and 1992, the Czech Republic in 1993 and 1994, and Slovakia in 1996 and 1998. It is worth noting that all of them, except Slovakia in 1998, were in those years stage one of their IDPs.

In 2006, the last year for which data were available, Poland with its largest internal market, recorded the second highest OPI value of 0.508 in the group, which indicated pursuit of outward expansion considerably below this large country's potential. The Czech Republic occupied the third position with the OPI value of 0.44, also pointing to a larger gap (than in the case of Poland) in exploiting the capacity for outward FDI relative to a much smaller internal market but a larger size of the economy, when measured by GDP per capita. Then came Slovakia with an OPI of 0.267 and the ranking closed with Bulgaria (OPI of 0.195) and Romania (OPI of 0.012). The two Balkan states' performance was in line with their lowest GDP per capita levels for the whole group of countries under investigation and in essence was a confirmation of their companies' paucity of significant competitive advantages that could be successfully exploited via FDI in foreign markets. This observation which contests the credibility of Romania's third rank in the projections of closeness to the IDP stage 3, as presented above, may be interpreted however as evidence of the idiosyncratic nature of Romania's IDP. On the other hand, Bulgaria did confirm the pattern by being classified as the country farthest away from her IDP stage 3.

## Conclusions

The study revealed that the four analysed countries, commonly identified as the CEE leaders in the transformation process to a market-led economy plus the two less advanced followers from the Balkans, needed from 6 to 8 years from the initiation of their transformation reforms to reach the end of stage 1 on their respective IDPs. Then they required almost twice as long, i.e. from 11 to 13 years, to reach the point close to the end of their IDP stage 2. The passing from stage 1 to stage 2 coincided with reaching negative NOIP per capita and positive GDP per capita levels which, synthesised for the developed group of four CEE countries (thus excluding the two Balkan states), allow for a general conclusion that CEE countries with relatively small domestic markets must be more developed and have a larger influx of or a higher saturation with inward FDI per capita than their larger neighbour to be able to pass to stage 2 of their IDPs. Thus, on the other side of the spectrum, for

countries with large internal markets, such as Poland in this study, it is sufficient to record lower negative NOIP per capita values and GDP per capita levels to be able to pass to the said IDP stage 2. This also has implications for economic policy which in the case of large economies and large domestic markets does not have to focus on selectivity towards incoming FDI and its quality, but instead a liberal open door policy will be sufficient to attract foreign investors. Romania and Bulgaria can also be classified in this context in the same category as Poland but their idiosyncratic quality rests in the fact that Romania had and still has a mid sized internal market (measured by population) and Bulgaria a market smaller than Hungary but their GDPs per capita were considerably smaller than the Polish one, and NOIPs per capita somewhat smaller than their Polish equivalent.

That latest positioning on their IDPs of all the six countries shows no palpable signs and no convincing and firm evidence of passage into stage 3 of the IDP model. Therefore, it is very likely that all of them will remain there for some time to come. But the present study does show that if the NOIP per capita measure is applied as the criterion, which has the quality of being best suited for comparative evaluation, it is Poland's economy that is closest to that stage. This implies that, paradoxically, the country which with the "least effort", due mainly to its main natural asset – a large domestic market – passed from stage 1 to stage 2, will also be the first to advance into IDP stage 3, pointing to a gradual extensive (vs. intensive) switch to an outward investment orientation. The remaining five countries thus far show few signs of undisputable transition to the beginning of stage 3.

A slightly different picture emerges if the OPI index is taken into consideration. In this case Hungary, ranked fourth under the former criterion, is elevated to the leading position, holding it continuously for the last eight years. This coupled with the second (to the Czech Republic) highest (negative) NOIP per capita and GDP per capita create the perception of a country best endowed to move to IDP stage 3 according to the covenants of the original model. The country deemed to have the weakest capacity to advance to that stage is Romania with the smallest OPI in the group, equal to only 1.15% of that of Hungary. And Romania's position also fits the original IDP model with her second lowest GDP per capita and lowest (absolute) value of NOIP per capita in 2006.

All of those findings constitute with varying intensity a challenge to economic policymakers, since in the long run only full participation in the economic globalisation process offers a reasonable guarantee of sustained GDP growth and economic and social development. One major venue to achieve these lofty objectives lies in outward internationalisation of national economies via primarily greater outward FDI. This in turn requires firms located in the analysed countries to have real and sustainable competitive advantages which will prove to be superior to those of competitors in a given industry and the creation and/or development of which should be supported by the existing and advocated economic policy measures.

All the findings and conclusions of this study should be treated as exploratory and requiring more elaborate verification and testing, also in a comparative framework with other countries, for example, in the European Union. Moreover, more information should be collected and interpreted concerning the country specific and sector or industry specific economic policy measures that influenced the overall performance of each of the six countries in the context of the IDP model. The current approach has been conducted primarily from a macro perspective, leaving aside important micro-economic factors, such as cost based competencies or other location-based advantages. A viable solution in overcoming those limitations and providing additional valuable insights could include the study of geographic and sector-specific aspects of the positioning of each CEE country versus other countries in that region.

## Appendix 1

**Table 1. GDP and NOIP of Poland in 1990–2006**

Year	NOIP millions US Dollars	GDP <sub>a</sub> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1990	299	64550	0.01	8	1694	100.00	100.00
1991	-24	83705	0.00	-1	2189	-8.00	129.22
1992	-956	92326	-0.01	-25	2406	3970.56	109.91
1993	-2189	94122	-0.02	-57	2446	228.35	101.66
1994	-3328	108425	-0.03	-86	2813	151.73	115.00
1995	-7304	139062	-0.05	-189	3603	219.22	128.08
1996	-10728	156684	-0.07	-278	4059	146.84	112.66
1997	-13909	157154	-0.09	-361	4073	129.73	100.35
1998	-21296	172902	-0.12	-553	4487	153.28	110.16
1999	-25051	167958	-0.15	-651	4364	117.79	97.26
2000	-33209	171332	-0.19	-864	4458	132.75	102.15
2001	-40091	190333	-0.21	-1044	4959	120.88	111.24
2002	-46863	198003	-0.24	-1222	5165	117.03	104.15
2003	-55731	216535	-0.26	-1455	5655	119.06	109.49
2004	-83143	252118	-0.33	-2174	6592	149.37	116.70
2005	-83255	302641	-0.28	-2180	7923	100.27	120.19
2006	-92911	335675	-0.28	-2436	8801	111.76	111.08

\* According to official exchange rate.

Source: UNCTAD (2007).

**Table 2. GDP and NOIP of Czech Republic in 1990–2006**

Year	NOIP millions US Dollars	GDP <sup>a</sup> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1993	-3242	37163	-0.09	-314	3603	100.00	100.00
1994	-4247	43633	-0.10	-412	4230	131.00	117.40
1995	-7005	55256	-0.13	-679	5360	165.02	126.71
1996	-8074	62011	-0.13	-784	6022	115.41	112.35
1997	-8686	57135	-0.15	-845	5559	107.77	92.31
1998	-13571	61847	-0.22	-1323	6030	156.58	108.47
1999	-16854	60192	-0.28	-1646	5880	124.43	97.51
2000	-20906	56717	-0.37	-2046	5549	124.25	94.37
2001	-25956	61843	-0.42	-2542	6058	124.29	109.17
2002	-37196	75276	-0.49	-3646	7379	143.40	121.81
2003	-43003	91358	-0.47	-4217	8959	115.67	121.41
2004	-53499	108214	-0.49	-5248	10615	124.43	118.48
2005	-57052	123981	-0.46	-5598	12165	106.67	114.60
2006	-72402	141249	-0.51	-7106	13863	126.94	113.96

\* According to official exchange rate.

Source: UNCTAD (2007).

**Table 3. GDP and NOIP of Hungary in 1990–2006**

Year	NOIP millions US Dollars	GDP <sup>a</sup> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1990	-372	36754	-0.01	-36	3546	100.00	100.00
1991	-1883	34344	-0.06	-182	3319	507.11	93.60
1992	-3200	38274	-0.08	-310	3702	170.06	111.54
1993	-5350	39652	-0.14	-518	3836	167.20	103.62
1994	-6796	42642	-0.16	-657	4125	127.04	107.53
1995	-11026	45891	-0.24	-1067	4443	162.37	107.71
1996	-13017	46399	-0.28	-1262	4499	118.23	101.26
1997	-17321	46975	-0.37	-1683	4564	133.34	101.45
1998	-19949	48337	-0.41	-1943	4708	115.46	103.16
1999	-22336	49359	-0.45	-2181	4820	112.26	102.38
2000	-21590	47958	-0.45	-2114	4695	96.91	97.41
2001	-25851	53317	-0.49	-2537	5233	120.03	111.46
2002	-34058	66710	-0.51	-3351	6563	132.07	125.42
2003	-44831	84419	-0.53	-4422	8326	131.96	126.86
2004	-56567	102159	-0.55	-5593	10101	126.50	121.32
2005	-53893	110364	-0.49	-5343	10942	95.53	108.33
2006	-69067	111990	-0.62	-6867	11134	128.51	101.76

\* According to official exchange rate.

Source: UNCTAD (2007).



**Table 4. GDP and NOIP of Slovakia in 1990–2006**

Year	NOIP millions US Dollars	GDP <sup>a</sup> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1993	-493	13584	-0.04	-93	2550	100.00	100.00
1994	-731	15716	-0.05	-137	2939	147.69	115.26
1995	-1158	19714	-0.06	-216	3676	157.94	125.08
1996	-1863	21376	-0.09	-347	3977	160.55	108.19
1997	-1867	21564	-0.09	-347	4007	100.08	100.75
1998	-2512	22423	-0.11	-466	4164	134.47	103.92
1999	-2842	20602	-0.14	-528	3825	113.10	91.86
2000	-4372	20448	-0.21	-811	3795	153.81	99.22
2001	-5133	21106	-0.24	-953	3917	117.41	103.22
2002	-8045	24522	-0.33	-1493	4552	156.73	116.21
2003	-13753	32977	-0.42	-2553	6122	170.98	134.49
2004	-20075	42015	-0.48	-3727	7800	145.97	127.41
2005	-19070	47428	-0.40	-3540	8804	94.99	112.87
2006	-29045	55072	-0.53	-5391	10221	152.28	116.10

\* According to official exchange rate.

Source: UNCTAD (2007).

**Table 5. GDP and NOIP of Bulgaria in 1990–2006**

Year	NOIP millions US Dollars	GDP <sup>a</sup> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1990	12	20726	0.00	1	2350	100.00	100.00
1991	-50	7629	-0.00	-6	873	-420.29	37.15
1992	-94	8604	-0.01	-11	995	189.98	113.98
1993	-138	10833	-0.01	-16	1267	148.54	127.34
1994	-242	9708	-0.03	-29	1149	177.46	90.69
1995	-341	13106	-0.03	-41	1568	142.48	136.47
1996	-479	9900	-0.05	-58	1197	141.91	76.34
1997	-985	10365	-0.10	-120	1265	207.54	105.68
1998	-1522	12737	-0.12	-187	1567	155.83	123.87
1999	-2392	12955	-0.20	-297	1607	158.41	102.55
2000	-2619	12600	-0.21	-327	1574	110.31	97.95
2001	-2877	13599	-0.21	-362	1711	110.64	108.70
2002	-3993	15510	-0.26	-506	1965	139.71	114.85
2003	-6268	19968	-0.31	-799	2546	157.98	129.57
2004	-9058	24536	-0.37	-1162	3148	145.42	123.65
2005	-13384	27076	-0.49	-1728	3496	148.71	111.06
2006	-20364	32002	-0.64	-2647	4160	153.18	118.99

\* According to official exchange rate.

Source: UNCTAD (2007).

**Table 6. GDP and NOIP of Romania in 1990–2006**

Year	NOIP millions US Dollars	GDP <sup>a</sup> millions US Dollars	NOIP/ GDP	NOIP per capita US Dollars	GDP* per capita US Dollars	NOIP per capita (previous year = 100)	GDP per capita (previous year = 100)
1990	66	38510	0.00	3	1659	100.00	100.00
1991	43	29054	0.00	2	1254	65.25	75.59
1992	-43	19716	0.00	-2	854	-100.39	68.10
1993	-112	26546	0.00	-5	1157	261.92	135.48
1994	-295	30284	-0.01	-13	1327	265.01	114.69
1995	-700	35726	-0.02	-31	1575	238.67	118.69
1996	-977	35563	-0.03	-43	1576	140.31	100.06
1997	-2291	35533	-0.06	-102	1583	235.65	100.44
1998	-4392	42115	-0.10	-197	1885	192.61	119.08
1999	-5527	35592	-0.16	-248	1600	126.43	84.88
2000	-6815	37025	-0.18	-308	1673	123.88	104.56
2001	-8233	40181	-0.21	-374	1824	121.39	109.03
2002	-7655	45825	-0.17	-349	2090	93.42	114.58
2003	-11980	59507	-0.20	-549	2726	157.23	130.43
2004	-20250	75489	-0.27	-932	3475	169.81	127.48
2005	-25680	98566	-0.26	-1187	4557	127.39	131.13
2006	-40723	122384	-0.33	-1891	5684	159.29	124.73

\* According to official exchange rate.

Source: UNCTAD (2007).

Table 7. NOIP per capita dynamics of Poland, the Czech Republic, Hungary, Slovakia, Romania and Bulgaria, 1990–2006

Year	PL* NOIP per capita (previous year = 100)	PL Growth rate changes in % points	CZ* NOIP per capita (previous year = 100)	CZ Growth rate changes in % points	H* NOIP per capita (previous year = 100)	H Growth rate changes in % points	SK* NOIP per capita (previous year = 100)	SK Growth rate changes in % points	BG* NOIP per capita (previous year = 100)	BG Growth rate changes in % points	R* NOIP per capita (previous year = 100)	R Growth rate changes in % points
1990	100.00		-		100.00		-		100.00		100.00	
1991	-8.00		-		507.11		-		-420.29		65.25	
1992	3970.56		-		170.06		-		189.98		-100.39	
1993	228.35		100.00		167.20		100.00		148.54		261.92	
1994	151.73		131.00		127.04		147.69		177.46		265.01	
1995	219.22		165.02		162.37		157.94		142.48		238.67	
1996	146.84		115.41		118.23		160.55		141.91		140.31	
1997	129.73	-17.11	107.77	-7.64	133.34	+15.11	100.08	-60.47	207.54	+65.63	235.65	+95.34
1998	153.28	+23.55	156.58	+48.81	115.46	-17.88	134.47	+34.39	155.83	-51.71	192.61	-43.04
1999	117.79	-35.49	124.43	-32.15	112.26	-3.20	113.10	-21.37	158.41	+2.58	126.43	-66.18
2000	132.75	+14.96	124.25	-0.18	96.91	-15.35	153.81	+40.71	110.31	-48.10	123.88	-2.55
2001	120.88	-11.87	124.29	+0.04	120.03	+23.12	117.41	-36.40	110.64	+0.33	121.39	-2.49
2002	117.03	-3.85	143.40	+19.11	132.07	+12.04	156.73	+39.32	139.71	+29.07	93.42	-27.97
2003	119.06	+2.03	115.67	-27.73	131.96	-0.11	170.98	+14.25	157.98	+18.27	157.23	+63.81
2004	149.37	+30.31	124.43	+8.76	126.50	-5.46	145.97	-25.01	145.42	-12.56	169.81	+12.58
2005	100.27	-49.10	106.67	-17.76	95.53	-30.97	94.99	-50.98	148.71	+3.29	127.39	-42.42
2006	111.76	+11.49	126.94	+20.27	128.51	+32.98	116.10	+21.11	153.18	+4.47	159.29	+31.90

\* PL = Poland, CZ = the Czech Republic, H = Hungary, SK = Slovakia, R = Romania, BG = Bulgaria.

Source: Authors' calculations based on UNCTAD (2007).

**Table 8. Outward FDI Performance Index of Six Central and East European Countries, 1990–2006**

Year	Czech Republic	Hungary	Poland	Slovakia	Bulgaria	Romania
1990	–	0.04	0.01	–	–0.01	0.05
1991	–	0.09	–0.01	–	–0.09	0.01
1992	–	0.00	0.02	–	–0.05	0.03
1993	0.26	0.03	0.02	0.10	–0.03	0.03
1994	0.27	0.11	0.03	0.11	0.00	0.00
1995	0.05	0.10	0.02	–0.17	–0.05	0.00
1996	0.19	–0.01	0.03	0.20	–0.22	0.00
1997	0.03	0.61	0.02	0.27	–0.01	–0.02
1998	0.09	0.25	0.08	0.28	0.00	–0.01
1999	0.04	0.14	0.01	–0.50	0.04	0.01
2000	0.02	0.33	0.00	0.04	0.01	–0.01
2001	0.11	0.29	–0.02	0.12	0.03	–0.02
2002	0.17	0.25	0.07	0.03	0.11	0.02
2003	0.15	1.29	0.09	0.49	0.09	0.04
2004	0.44	0.52	0.15	–0.02	–0.42	0.04
2005	–0.01	1.13	0.53	0.18	0.61	–0.02
2006	0.44	1.07	0.50	0.26	0.19	0.01

The outward FDI performance index reflects the ratio of the share of a country's outward FDI in a given year in world outward FDI, to the share of the country's GDP in a given year in world GDP.

Source: Authors' calculation based on data derived from UNCTAD (2007).

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