Poland's Investment Development Path: in search of a synthesis

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Abstract: This study is a synthesis of the authors' research on the application of the Investment Development Path (IDP) concept to Poland. The IDP is investigated from the point of view of its general trajectory as well as its geographic and industry/sector idiosyncrasies. Collected data cover a time span ranging from the beginning of the country's transition to a market-led system until 2006. The general IDP analysis approach followed by geographic and industry/sector patterns provide grounds for specific economic policy recommendations. The major challenge for the economic policy is to sustain substantial Foreign Direct Investment (FDI) inflows while, at the same time, spurring faster growth of FDI outflows.

Keywords: FDI; foreign direct investment; IDP; investment development path; geographic, sector and industry composition of FDI; Poland.

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1 Introduction

This paper is an attempt to develop a synthesis of the authors' multistage research conducted over the last three years. It began with a study of Poland's IDP, covering the period of 1990–2003 (Gorynia et al., 2005, 2007a). This was followed by a study of geographic patterns of Poland's FDI in the context of the IDP model (Gorynia et al., 2006). The last part of the research was focused on cross-industry analysis of Poland's Net Outward Investment Position (NOIP) (Gorynia et al., 2007b, 2008).

The main premise of this paper is that an analysis of the overall IDP of a country should be supplemented by specific studies focusing on the geographic and sectoral/industrial patterns of FDI to reveal the relationships between the overall NOIP and NOIPs with respect to individual countries or groups of countries, as well as within individual sectors and industries of the said country. Such a holistic treatment of the IDP issue allows for a deeper understanding of the underpinnings of a given IDP trajectory and allows for the formulation of more meaningful and workable policy recommendations. Thus, the purpose of this synthesis is to provide findings and conclusions based on a multifaceted analysis of Poland's FDI situation, within the framework of Dunning's IDP paradigm, and to use those findings and conclusions to both refine Dunning's model and offer policy recommendations.

The first part of the paper lays out the theoretical framework, which is based on a comprehensive review of Dunning's model and relevant literature. This part also pinpoints certain limitations of Dunning's model. The conceptual part is followed by posing main research questions and objectives to guide the subsequent analysis. The analytical part starts with an examination of Poland's IDP, covering a longer period than in the previous study and using additional analytical tools. On the basis of Dunning's model description and Poland's current IDP stage positioning, the authors formulate certain hypotheses regarding the possible patterns in both geographic and sectoral/industrial structure of FDI and the NOIP. In this context, an analysis according to geographic and sectoral/industrial criteria is the subject of two subsequent sections of the paper. Thereafter, the economic policy considerations section offers several essential guidelines for economic policy measures to follow. Finally, in the concluding section, the authors summarise the findings and link them with policy recommendations.

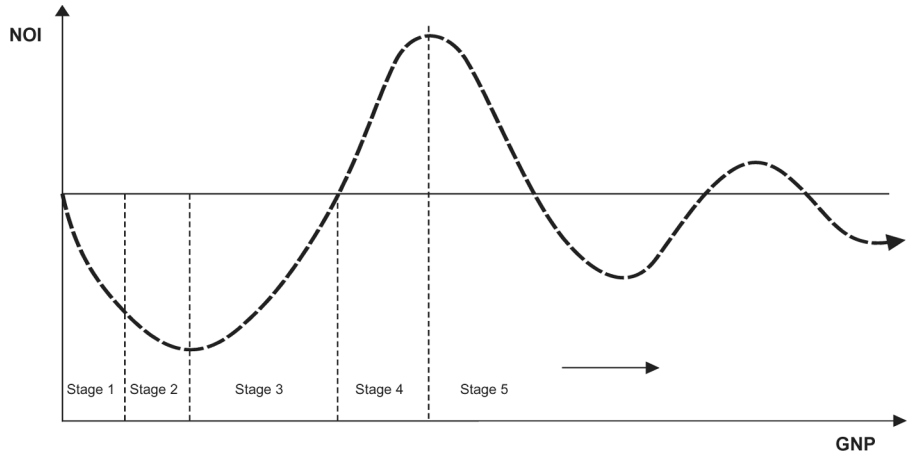
2 Conceptual framework

2.1 The IDP model and its limitations

The concept of IDP was first proposed by J. Dunning in the early 1980s (Dunning, 1981). Since then, it has been refined and extended several times, with most significant modifications contained in Dunning (1986) and Dunning and Narula (1994, 1996, 2002). Several other authors have made contributions to the development of this concept, including Lall (1996) and Durán and Úbeda (2001, 2005).

According to the basic IDP proposition, the inward and outward investment position of a country is tied with its economic development. Changes in the volume and structure of FDI lead to different values in the country's 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 five stages intrinsically related to the country's economic development, measured by its GNP.

Figure 1 The pattern of the Investment Development Path



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 is close to zero and later on assumes negative, and rapidly growing, negative 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 or to enter into non-equity relationships with local firms. Stage 2 is characterised by an increased inflow of FDI with outward FDI remaining still low but larger than in the previous stage. 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 owing 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.

Parallel to its conceptual development, numerous empirical studies have been undertaken to test the validity of the IDP model. The literature review reveals two main strands in these empirical studies. One strand represents multi-country studies using cross-section analysis. The other strand of studies focuses on one country's NOIP either vis-à-vis all countries of the world or countries (world regions) that represent the main destinations for FDI as well as the main source of FDI. The latter studies are longitudinal in nature (see Gorynia et al., 2006 for a succinct review of the two strands of IDP studies). Dunning and Narula (1996, pp.22, 24, 25) argue that a cross-sectional analysis across countries has severe limitations and can only be treated as a surrogate for longitudinal studies. As the IDP is essentially a dynamic concept and every IDP is idiosyncratic and country specific, it can be best analysed on a country-by-country basis. This view is echoed by Durán and Úbeda (2001). They argue that

> "the speed and direction of movements along the various phases of IDP depend on a set of factors that influence the economic structure of a country and the type of investment it makes and receives." (Durán and Úbeda, 2001, p.9)

Clearly, the IDP paradigm should not be treated as a normative model. As Lall (1996, p.439) points out, "[…] it simply describes systematic relationship between development and pattern of ownership and locational advantages". Nevertheless, one can argue that the influence of both inward and outward FDI exerts on the development of the location and ownership advantages when countries tend to (sic!) go through the five stages of the IDP is largely positive. In particular, the presence of MNEs has a potential to benefit host countries, by contributing to an improvement of both location and ownership advantages, provided spillover effects occur and local firms acquire or strengthen their ownership advantages as a result of inward FDI. However, there are studies that find (especially in developing countries) no clear-cut relationship between inward FDI and growth (Moran et al., 2005).

Perhaps, the biggest limitation of the IDP model lies in its overreliance on one indicator of economic development and the only explanatory variable used in the model, i.e., the GDP or GNP. GDP/GNP is in essence an incomplete indicator of a country's level of development and therefore may not underlie all the main structural variables that are in fact at work when the country moves from one stage of its IDP to the other. This limits the predictive power of the model as well as its usefulness as a basis for economic policy recommendations. In the first instance, it is not justified to always expect countries with similar income levels to be at similar stages of the IDP, simply because other than GDP factors, and not captured by this indicator, may shape the juxtaposition of inward and outward FDI, and hence the NOIP. In the second instance, policy choices may be considered as one of the explanatory variables behind a particular IDP trajectory, although, at the same time, that trajectory may imply and lead to the adoption of certain policy measures. Therefore, it should be widely expected that individual countries will exhibit rather idiosyncratic trajectories of their IDPs. Likewise, countries clustered according to their income level may not overlap clusters constructed according to these countries' IDP stages.

There is yet another important limitation of Dunning's model to be borne in mind when using the model as a conceptual framework. Its dependent variable, the NOIP, combines two investment stocks, inbound and outbound. Therefore, the same NOIP may be a result of a combination of different levels of inward and outward stocks, and indeed, different FDI flows, which in turn underlie these stocks. To overcome this potentially misleading limitation, one needs to supplement an analysis of the NOIP with that of inward and outward FDI respectively, to be able to reveal the true nature of the IDP. This also affects policy implications, as recommendations that are valid for one type of FDI flow or stock may not be valid for the other.

2.2 The IDP model and geographic and industry composition of FDI

Although the classic analysis of IDP concentrates on examining the relationship between a country's GNP or GDP and its NOIP to determine and predict the IDP stages, it is apparent that parallel to the IDP dynamics there are important changes occurring in both the geographic and the industrial composition of inward and outward FDI when the country moves through its IDP stages. Therefore, the two aspects of the IDP – geographic and industrial – seem to deserve more attention. And yet, it is difficult to derive prescriptions or predictions regarding the relationships between the IDP stages and the geographic and industrial composition of FDI from either Dunning's model or empirical studies that have been undertaken to test that model. Here, the authors attempt to highlight those relationships, based on rather scarce information that could be derived from the literature review.

Dunning's model is largely silent on the geographic patterns of inward and outward FDI in relation to the IDP. There seems to be a tacit agreement in the existing literature that a country according to the IDP model is at a given point in time at only one stage of its IDP. However, it may be, at the same time, at quite different stages of its NOIP with respect to individual countries or regions. Thus, it is possible to identify separate NOIP paths with different geographic destinations and sources of FDI, with different NOIPs indicating different stages on those paths. Those propositions have of course a significant bearing on the geographic implications of existing and desirable economic policy policies and instruments.

In Stage 1, the geographic patterns of FDI are straightforward. Obviously, inward FDI comes from countries at higher stages in their IDP and outward FDI is virtually non-existent. In Stage 2, the relevance and importance of the geographic patterns of FDI increase. According to Dunning and Narula,

> "Outward direct investment emerges at this stage. This may be either of a market-seeking or trade related type in adjacent territories, or of a strategic asset-seeking type in developed countries. The former will be characteristically undertaken in countries that are either further back on their IDP than the home country, or, when the acquisition of created assets is the prime motive, these are likely to be directed towards countries further along the path." (Dunning and Narula, 2002, p.241)

Although these two authors are silent on the geographic patterns of inward FDI in Stage 2, it can be implied that such investment will continue to originate mostly in countries at higher stages of their IDP. In Stage 3, it is predicted that outward FDI will be directed more towards countries at lower stages in their IDP than those ahead of the home country (Dunning and Narula, 2002). When a country moves to Stage 4 of its IDP,

the nature and geographic patterns of FDI change quite substantially. Inward FDI is "[…] increasingly sequential and directed towards rationalised and asset-seeking investment by firms from other Stage 4 countries" (Dunning and Narula, 2002, p.143). Outward FDI, on the other hand, is increasingly directed to countries at lower stages and to a large degree takes the form of moving operations, which domestically lose competitiveness, to off-shore locations (Dunning and Narula, 2002, p.143). It is noteworthy at this juncture that in Stage 4 more and more FDI will be conducted within multinational corporations. Finally, a country being in Stage 5 will receive FDI from both countries at lower stages in their IDP and countries being in the same Stage 5. The former will be of market-seeking and knowledge-seeking nature and the latter will be associated with the rationalisation of value-adding chains among the Triad countries and will reflect a high propensity for cross-border alliances, mergers and acquisitions. By the same token, outward investment will be directed to both groups of countries. Also, inbound and outbound investment will be complementary to each other (Dunning and Narula, 2002).

The few empirical studies that examined the geographic patterns of the IDP, include those of Clegg (1996), Bellak (2001) and Barry et al. (2003). Clegg's work represents a comprehensive and detailed analysis of the geographic and sectoral patterns of FDI in the context of the IDP model as applied to the UK economy. In the geographic aspect, Clegg investigates UK's position with the developed regions, singling out Europe, and the impact of market integration in this region, then moving to North America, Asia, Africa and finally South America. In the following step, he goes deeper into UK's bilateral positions with only the developed countries, including in this more detailed analysis also Australia and New Zealand. Bellak (2001), on the other hand, looks at bilateral NOIPs between Austria and Germany as well as Austria and USA. Barry et al. (2003) investigate the bilateral Ireland–US FDI position.

Similar to geographic patterns, certain general predictions regarding the shifts in sector/industry composition and nature of FDI parallel to the IDP stages can be derived from Dunning (1997) and Dunning and Narula (2002). In Stage 1, inflows of FDI are directed towards labour-intensive manufacturing and the primary product sectors, such as mining and agriculture. Outward FDI is negligible or non-existent because "the O-specific advantages of domestic firms are few and far between" (Dunning and Narula, 2002, p.140).[1] In Stage 2, inward FDI is predicted to remain largely in natural-resource-intensive sectors. However, it is supplemented by forward vertical integration into labour-intensive production in light, relatively low-technology manufacturing. Outward FDI, fuelled by the newly acquired O-specific advantages of domestic firms, will be concentrated mostly in the production of semi-skilled and moderately knowledge-intensive consumer goods. As mentioned before, it will be either of a market-seeking or trade-related type, undertaken in adjacent territories, particularly in countries at lower stages in their IDP. In Stage 3, the comparative advantage of labour-intensive production will deteriorate as a result of rising domestic wages. This, in turn, will stimulate inward FDI to flow to technology-intensive manufacturing and other industries capable of delivering higher value added locally. Motives for such inward FDI will shift towards efficiency-seeking production and, to some extent, towards strategic-asset acquisition. Outbound FDI will be driven by market-seeking strategies (directed more to countries at lower stages in their IDP) and strategic asset pursuit in other Stage 3 or Stage 4 countries to protect or upgrade advantages of domestic (investing) firms. In a country entering Stage 4, production processes and products will be state of the art and foreign investment will be made in capital-rather than

labour-intensive production by firms seeking strategic assets and rationalising their value-adding activities across national borders. Accordingly, a country's L-specific advantages[2] will be mostly or entirely based on created assets. Outward FDI will be motivated by the necessity to maintain firms' competitive advantage by moving operations, which lose competitiveness domestically, to countries in lower stages in their IDP. Finally, in Stage 5, which attracts most of Dunning's (1997) and Dunning and Narula's (2002) attention and analysis, indications of industry or sector preferences of inbound or outbound FDI are mostly concealed in assertions that Stage 5 highly developed, Triad countries show a marked convergence of their economic structures and that FDI in both directions is increasingly of created asset and efficiency-seeking nature, with greater emphasis on growth via strategic alliances, and mergers and acquisitions.

Only a handful of studies were identified that devote more than cursory attention to the evolving industrial/sectoral structure of FDI in the context of IDP. Several of them are contained in the book edited by Dunning and Narula (1996), including contributions by: Clegg, Graham, Akoorie, Calderón, Mortimore and Peres, van Hoesel, Kumar, and Zhang and Van Den Bulcke. Some sectoral analysis of inbound and outbound FDI is also found in the studies by Twomey (2000) of the Canadian experience with the IDP, by Bellak (2001) of Austria's IDP and by Barry et al. (2003) on Irish IDP. Twomey's study is noteworthy, as it takes a very long-term view, investigating Canada's IDP over the 20th century and compares the Canadian experience with that of several other countries, both developed and developing.

Summing up, the empirical studies mentioned earlier point to certain important shifts in sectoral and industrial composition of inward and outward investment taking place when a country progresses from one stage of its IDP to another. However, it is evident that these shifts are far from being uniform across countries. Clearly, country-specific factors play an important role in shaping the sectoral and industrial patterns of FDI.

For example, in the case of New Zealand, the historic reforms initiated by the government in 1984 led to a dramatic increase in the inflows of non-resource-based FDI, particularly into the banking sector (Akoorie, 1996). Likewise, India's and China's economic liberalisation policies induced the changing structure of inward and outward FDI (Kumar, 1996; Zhang and van Den Bulcke, 1996). And, Taiwan's dramatically changing sectoral distribution of inward and outward FDI can be linked to the country's rapid industrialisation (van Hoesel, 1996). Some studies point even to paradoxes, such as the 'renaissance' of the manufacturing sector as an FDI destination in the USA observed by Graham (1996, p.91). Similarly, the Canadian IDP study reveals the dominance of manufacturing in the sectoral distribution of inward FDI over most of the last century, in spite of the growing importance of the services sector. It can, therefore, be argued that Dunning's predictions regarding sectoral investment patterns in relation to a country's IDP may not always find full confirmation in the referenced empirical studies.

One of the shortcomings of Dunning's model is the lack of clear indication of the changes in relative importance of services vs. manufacturing sectors when a country moves along its IDP. Also, a general conclusion from the empirical studies is that the manufacturing sector remains strong, and in many cases dominant, particularly in FDI inflows, throughout Stages 2–4, although there is a clear shift from resource-intensive to labour-intensive to technology- and knowledge-intensive manufacturing.

3 Research questions and objectives

In spite of the above-mentioned limitations, the authors find the IDP model a useful and, indeed, quite a powerful concept for framing their research questions. Has Poland progressed through the consecutive stages of the IDP, as can generally be predicted according to the model of Dunning? In what stage of the IDP is Poland now and when, if at all, is the country likely to enter the next stage? What is the effect of Poland's EU membership on her IDP? What are other idiosyncrasies of Poland's IDP? How does the geographic and industry/sector composition of FDI change when the country moves along its IDP? Is the observed change of that composition in Poland consistent with predictions derived from Dunning's model? What are the implications of the observed trends and patterns for economic policy? These are the main research themes that guide the analysis of Poland's IDP in this study. By addressing these issues, the authors attempt to achieve three main objectives. First, the analysis of Poland's IDP experience adds a new case to the body of literature outlined earlier that covers individual countries IDPs, thus providing additional evidence and test of the applicability of Dunning's model, in this case its applicability to a transitional economy. Second, the authors aim at enriching the original IDP model by supplementing the traditional analysis of the general IDP and its determinants with an in-depth analysis of the changing patterns of geographic and sectoral/industrial composition of FDI parallel to the IDP. Third, in the context of the above objectives, the said model is intended to offer meaningful recommendations to policy-makers responsible for influencing Poland's FDI, keeping in mind the mutual interdependence of the IDP and the existing and recommended policy measures.

4 The trajectory of Poland's IDP, 1990–2006

To identify the stages of Poland's IDP since the beginning of the country's transition to a market economy, data presented in Table 1, as well as in Figure 2, are examined. The most important indicator of the nature of IDP trajectory is the NOIP. It is important to bear in mind that the starting point at the beginning of the transition process in 1990 was influenced by policy choices from the previous socialist, centrally planned economic system, which generated very little inward FDI and practically no outward FDI. Then, for the entire transition period under study, starting from 1990, the NOIP was negative and constantly deteriorating.[3] This change in the NOIP is typical of Stage 1 and also, up to a point, of Stage 2. However, another important indicator is the absolute amount of both FDI inflows and outflows. Taking into account both indicators, one can conclude that Poland was in Stage 1 roughly in the first half of the 1990s and entered Stage 2 in the second part of that decade. Clear indicators of entering the latter stage were:

- a substantial increase in FDI inflows
- a slowdown of the NOIP deterioration.

When a country approaches Stage 3, the growth of FDI inflows slows down and that of FDI outflows accelerates, thus the two FDI stocks, inward and outward, start to converge. Dunning's model, as shown in the previous section, uses the relationship between Net Outward Investment (NOI) and GNP to draw the IDP trajectory. During the first two stages, the NOI falls, in Stage 2 at a slower rate, then it levels out and a country enters

Stage 3. Several researchers (see for e.g., Bellak, 2001) have used NOI per capita and GNP/GDP per capita instead of these two variables' absolute values to plot the IDP. Among other reasons, using per capita figures allows for making more meaningful comparisons between countries.

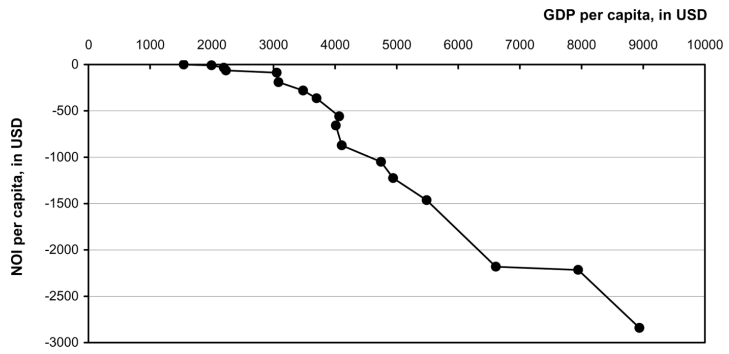
Table 1 Poland's FDI inward and outward stock, NOIP, NOIP per capita and GDP per capita, 1990–2006

Years	*FDI inward stock, millions of USD*	*FDI outward stock, millions of USD*	*NOIP, millions of USD*	*NOIP per capita, USD*	*GDP per capita[a], USD*
1990	109	95	–14	–0.4	1547
1991	425	88	–337	–8.9	1998
1992	1370	101	–1269	–33.3	2198
1993	2307	198	–2109	–63.6	2232
1994	3789	461	–3328	–87.3	3057
1995	7843	539	–7304	–191.7	3086
1996	11,463	735	–10,728	–281.6	3484
1997	14,587	678	–13,909	–365.1	3702
1998	22,461	1165	–21,296	–559.4	4068
1999	26,075	1024	–25,051	–657.5	4014
2000	34,227	1018	–33,209	–871.4	4110
2001	41,247	1156	–40,091	–1049.5	4746
2002	48,320	1457	–46,863	–1226.8	4944
2003	57,877	2145	–55,732	–1462.8	5486
2004	86,623	3274	–83,349	–2181.9	6610
2005	90,711	6279	–84,432	–2216.1	7944
2006	124,530	16,288	–108,242	–2841.0	8940

[a]According to official exchange rates.

Source: UNCTAD (2000–2007) and GUS (2000–2007) (NOIP – authors' own calculations)

Figure 2 Poland's GDP per capita and NOI per capita, in USD, 1990–2006



Source: Authors, based on UNCTAD (2000–2007) and GUS (2000–2007)

Figure 2 reveals a precipitous decline of the NOI per capita ratio, which corresponded in time to the first decade of the studied period. The continuing fall was interrupted by a brief flattening of the said ratio, which occurred in 2005. This sudden change in 2005 might have indicated an imminent transition from Stage 2 to Stage 3. However, the following year the ratio fell again. Nonetheless, there were other symptoms pointing out that Poland was approaching Stage 3. In both 2005 and 2006, there was a surge in FDI outflows from Poland and in both these years FDI outward stock doubled on average. But, on the other hand, there was also a sudden surge in FDI inflows in 2006 (amounting to almost 20 billion dollars), which prevented the analysed ratio from levelling off.

Thus, in spite of the fact that there are discernible symptoms of Poland's possible transition to Stage 3, it is premature to conclude that such a transition will occur soon. A time frame of at least three more years is necessary for making a more conclusive statement.

In light of the above analysis, conclusions reached in the authors' previous research (Gorynia et al., 2007a) stating that Poland was unquestionably at the end of Stage 2 of her IDP, moving into Stage 3, have not been confirmed by the latest available data and thereby must be revised. There are no new, clear signs showing movement towards Stage 3 yet. Thus, there appears to be a slight departure in Poland's IDP from the ideal trajectory construed in Dunning's original IDP model. Three reasons may explain this difference. First, Poland's capacity of absorbing FDI has grown owing to accession to the European Union in 2004. Second, in spite of growth in costs of labour and other FDI disincentives, the attracting pull of the large domestic market has prevailed. Third, the relatively dynamic growth of outward FDI has been generating investment levels still much below those recorded as inward FDI.

5 Hypotheses

On the basis of the literature review, presented in the 'Conceptual Framework' section, and recognising that Poland is in Stage 2 of her IDP, as determined in the preceding section, the following main hypotheses regarding the country's FDI geographic patterns in the evolving NOIP may be formulated:

H1: Inward FDI will predominantly originate in developed countries, being at higher stages on their IDP, with which Poland will have an NOIP that is negative and deteriorating, albeit at a decreasing rate.

H2: Outward FDI will be predominantly directed to adjacent territories, with market-seeking investment going to countries that are further back on their IDP and asset-seeking investment directed towards countries positioned further along their IDP.

H3: Poland will be in Stage 2 in her IDP with the developed economies, whereas at the same time she will be in Stage 4 with the countries that are at a lower level of development than Poland.

In spite of the idiosyncrasies in the situation of individual countries, the following hypotheses can be formulated with respect to Poland's IDP and sectoral/industrial composition of FDI. These hypotheses also refer to Stage 2 of the IDP.

H4: The importance of natural resource-intensive industries of the manufacturing sector in inbound FDI will be gradually eroded by the growing importance of labour-intensive production in light, relatively low-technology manufacturing.

H5: Outbound FDI will be concentrated mostly in the production of semi-skilled and moderately knowledge-intensive consumer goods.

H6: In spite of the growing importance of the services sector, the manufacturing sector will remain the dominant destination of FDI inflows and outflows.

The following two sections will focus first on geographic and then on sector and industry patterns of Poland's NOIP, thus testing the above-stated hypotheses.

6 Geographic patterns of NOIP, 1996–2006

This section attempts to incorporate the geographic analysis of FDI into the classic IDP model. The intention is to offer a better explanation of Poland's current NOIP, test the hypotheses derived from Dunning's model concerning the geographic dimension of IDP, and finally, provide a more in-depth support to certain policy recommendations.

The statistical information used in this section is derived from a different source than the data used in the section titled "The Trajectory of Poland's IDP". The reason is that neither the Central Statistical Office of Poland (GUS) nor UNCTAD provide geographic breakdowns of FDI inflows and outflows for Poland. The only source that does provide such data is the National Bank of Poland (NBP). Unfortunately, NBP started to compile geographic FDI data only in 1996. Therefore, analysis in this section covers the period from 1996 to 2006, which is partly different from the period covered in the general analysis of Poland's IDP. Coincidently though, 1996 marks Poland's transition from Stage 1 to Stage 2 of her IDP. Consequently, the focus of the subsequent analysis is on Stage 2.

Table 2 presents the relevant information on Poland's NOIP vis-à-vis the world, the Triad countries, Poland's neighbours and her main trading partners in CEE, and China (representing here the group of large emerging markets). Table 3, on the other hand, details geographic information on Poland's NOIP with Germany and the individual CEE countries covered by this analysis.

As was evident in the preceding sections, Poland's NOIP with all countries (world total) was consistently negative, a result of the fact that in every year of the studied period FDI inflows were greater than FDI outflows. It is obvious that this global NOIP was largely determined by FDI inflows from and outflows to the Triad countries, with which Poland's NOIP was deteriorating throughout the period under investigation. Within the Triad, the highest negative NOI values were recorded for the European Union (EU), followed by USA and Japan. These data indicate that with the Triad, considered as the world's most developed economic area, Poland was firmly in the second stage of her IDP, reflecting on the one hand the pull of her large internal market and a growing economy, and on the other hand the weak competitive position of Polish firms as demonstrated by their limited outward FDI destined for the Triad region, with the exception of EU-15 member states in recent years (in 2006 more than 5 billion USD was invested by Polish firms in the EU – National Bank of Poland, 2007). In particular, Germany has traditionally been a main destination of Polish outbound FDI within

the EU-15. Poland's NOIP vis-à-vis Germany also showed slightly different dynamics compared with those for the Triad as a whole. Certainly, the rate of decline in NOIP with the Triad was higher than that for Germany. At the same time, it is discernible that the rate of NOIP decline with respect to the Triad showed some signs of abating. These findings thus largely confirm Hypothesis 1.

Table 2 NOIP of Poland with the world, Triad countries, EU, CEE transition economies and China (in millions of USD), 1996–2006

Years	*World, total*	*USA*	*Japan*	*EU-15*	*Triad, total*	*CEE neighbours*	*China*
1996	–4108.6	–450.9	–7.5	–3472.0	–3930.4	–9.5	1.4
1997	–8862.1	–1128.3	–14.0	–7083.7	–8226.0	–19.9	4.6
1998	–15,161.7	–1901.5	–117.4	–12,065.6	–14,084.5	–37.4	4.4
1999	–21,990.5	–1487.8	–115.1	–18,247.1	–19,850.0	–22.6	3.4
2000	–31,586.8	–1812.8	–153.7	–27,175.1	–29,141.6	–37.9	–1.0
2001	–37,302.4	–2387.7	–192.3	–32,555.8	–35,135.8	–55.3	–1.4
2002	–41,641.2	–2857.5	–0.4	–36,642.8	–39,500.7	–39.4	0.6
2003	–46,654.8	–3443.5	–179.5	–40,001.6	–43,624.6	140.3	–11.6
2004	–59,419.8	–3593.9	–387.1	–51,612.4	–55,593.4	832.1	–11.9
2005	–65,547.0	–4305.3	–689.6	–58,793.6	–63,788.5	1002.8	–47.9
2006	–75,600.3	–4701.3	–1000.2	–70,102.5	–75,804.0	4401.6	–57.7

Source: Authors' calculations based on NBP (1997–2007)

Table 3 NOIP of Poland with Germany and the neighbouring transitional economies of CEE (in millions of USD)

Years	*Germany*	*Belarus*	*Czech republic*	*Baltic republics*	*Hungary*	*Russia*	*Ukraine*
1996	–1080.8	–0.2	–13.4	1.3	–0.4	–2.8	6.0
1997	–2041.5	0.0	–30.0	1.3	–3.5	0.0	12.3
1998	–3466.4	0.7	–38.1	2.7	–14.2	–3.1	14.6
1999	–4631.8	1.3	–37.1	5.8	–12.0	0.6	18.8
2000	–5583.3	1.6	–31.2	5.8	–9.0	–20.3	15.2
2001	–6645.8	2.5	–23.0	8.7	–15.2	–51.8	23.5
2002	–7227.4	0.5	–10.4	9.2	–83.0	–5.6	49.9
2003	–7357.0	4.8	22.9	17.3	–124.2	107.5	112.0
2004	–8655.7	9.3	68.2	26.3	–312.0	902.1	138.2
2005	–10,615.5	13.8	603.0	41.0	–83.3	994.8	36.4
2006	–13,919.1	27.3	679.8	2396.5	–136.7	1100.8	333.9

Source: Authors' calculations based on NBP (1997–2007)

An interesting evolution of NOIP can be observed with respect to neighbouring, CEE transition countries. Between 1996 and 2002, the NOI value for this group of countries was negative, but starting from 2003 it became positive, showing rather impressive growth rates and reaching the value of 4.4 billion dollars in 2006. This clearly indicates that Poland had already entered Stage 4 of her IDP with the neighbouring transition

economies treated as a group. However, this overall trend conceals important differences between the NOIPs of Poland and the individual countries of the CEE region. The appropriate data are presented in Table 3. As evidenced by this table, currently Poland has a positive NOIP with all the CEE neighbouring countries, except Hungary. It is also important to note that Poland's NOIP has evolved from a negative to a positive one with respect to the Czech Republic and Russia. The situation vis-à-vis the Czech Republic is also interesting. The Czech Republic is considered to be more developed than Hungary and one would expect Poland to have more negative NOIP with the former than with the latter. This may indicate that Hungary is higher up the general IDP than countries with comparable level of GDP. Apparently, Hungarian companies are more competitive and more aggressive investors abroad than their regional counterparts. Thus, the above findings tend to only partially confirm Hypotheses 2 and 3.

An exceptional case is that of Poland's NOIP with the world's largest emerging market, i.e., China. After the positive, albeit rather small, values recorded between 1996 and 1999, Poland's NOIP with China systematically deteriorated and reached −60 million USD in 2006. Clearly, this trend is not consistent with Hypothesis 3 stated in the preceding section and the underlying reasons deserve a more in-depth explanation. However, it should be noted that in absolute terms both Polish investment in China and China's investment in Poland are still relatively low.

7 Sectoral and industrial patterns of the NOIP, 1996–2006

The aggregate changes in NOIP that are investigated here in the context of the IDP paradigm are outcomes of the various shifts in FDI inflows and outflows within individual sectors and industries of an economy. This section aims at revealing those shifts to test the hypotheses previously stated regarding the sectoral and industrial composition of FDI and at providing additional insights into the nature of Poland's IDP that can be used in developing policy recommendations. Appropriate data for such analysis are presented in Table 4. The table has been compiled based on the FDI data published by the NBP. It shows the NOIP for the manufacturing sector, with individual data for four most important industries constituting the sector, and 10 non-manufacturing industries, of which several represent the service sector. In addition, Figure 3 provides a visual presentation of the NOIP evolution over the period under study with respect to the main sectors of the Polish economy.

It is evident from Table 4 that in the whole period for which the NOIP values have been calculated only during two years (1997 and 1998) and in one industry (hotels and restaurants) did this measure have a positive sign (but very low absolute values). In all remaining years and industries, the NOIP values were always negative. The manufacturing sector had the highest negative values of NOIP throughout the studied time period, ending with a level of over −21.8 billion USD in 2006. This reflects the sector's importance and leading position in FDI flows in the Polish economy. At the same time, the calculations of the yearly growth rates demonstrate that the rate of negative growth of NOIP was decreasing, with a small counter trend registered in 2003 and 2004, thus providing another piece of evidence that Poland was at the end of stage 2 of her IDP.

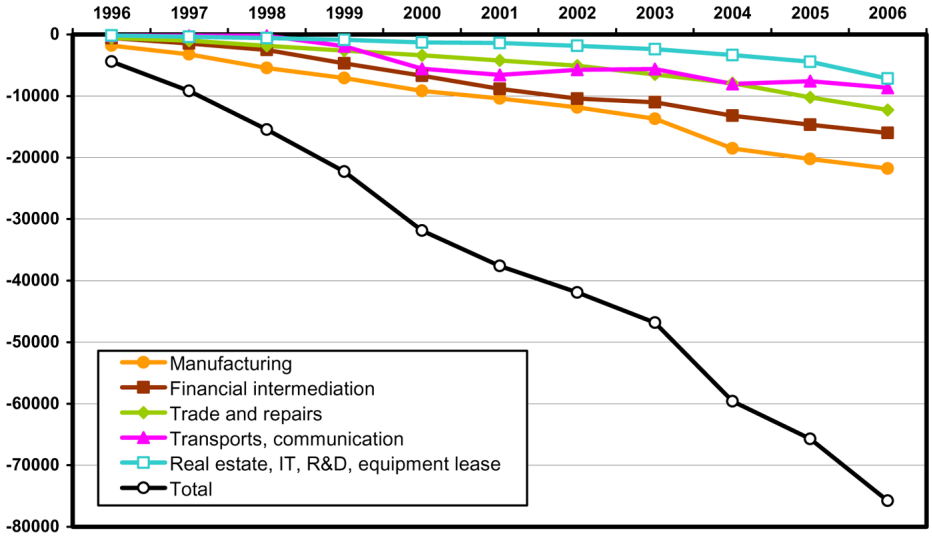
Table 4 The sector/industry NOIP of Poland, 1996–2006 (in millions of USD)

Sector/industry	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*	*2005*	*2006*
Manufacturing, of which	–1793.5	–3239.5	–5433.7	–7087.6	–9180.1	–10,403.7	–11,865.5	–13,691.9	–18,496.0	–20,239.4	–21,796.9
Motor vehicles and transport equipment	–347.0	–536.2	–935.5	–1230.5	–1531.7	–1681.3	–2091.7	–2807.3	–3875.3	–4224.6	–4982.9
Chemical and rubber products	–258.9	–545.4	–853.0	–1171.6	–1469.9	–1659.0	–2180.6	–2490.6	–3266.6	–3560.4	–4750.7
Food, beverages and tobacco	–588.6	–940.0	–1689.3	–1855.0	–2265.5	–2373.6	–2538.3	–2698.6	–2851.8	–3218.8	–3570.8
Wood, paper, publishing and printing	–9.6	–226.2	–387.7	–626.6	–910.8	–993.9	–1119.4	–1318.1	–2127.4	–2101.6	–2524.3
Financial intermediation	–596.2	–1467.3	–2524.8	–4680.0	–6697.7	–8857.3	–10,446.9	–11,011.6	–13,191.2	–14,653.6	–15,997.2
Trade and repairs	–591.8	–1007.9	–1839.1	–2630.1	–3379.0	–4215.7	–5077.3	–6498.0	–7911.5	–10,217.3	–12,267.8
Transports, communication	–149.0	–198.3	–194.4	–1915.8	–5555.9	–6580.6	–5721.2	–5612.5	–8040.7	–7589.1	–8664.5
Real estate, IT, R&D, equipment lease	–156.0	–394.4	–594.3	–875.7	–1313.1	–1399.1	–1861.9	–2393.6	–3365.1	–4452.1	–7170.1
Electricity, gas and water	–4.8	–3.1	–38.7	–88.9	–442.0	–726.9	–1499.8	–1879.2	–2734.7	–2957.1	–3052.1
Construction	–45.8	–60.2	–155.5	–160.9	–316.0	–432.6	–508.0	–449.1	–626.7	–513.6	–925.1
Agriculture and fishing	–4.4	–9.3	–17.9	–76.3	–87.3	–96.2	–106.1	–147.9	–240.5	–292.7	–345.2
Hotels and restaurants	–2.6	8.3	2.5	–22.2	–106.5	–78.3	–111.8	–149.8	–131.9	–165.9	–211.8
Mining and quarrying	–7.8	–24.9	–26.6	–27.1	–52.0	–46.2	–53.7	–51.1	–82.1	–72.6	–53.8
Other services and not allocated	–1058.8	–2765.6	–4639.3	–4726.2	–4757.4	–4765.8	–4689.1	–4959.4	–4788.8	–4617.5	–4230.9
Total	*–4408.6*	*–9162.2*	*–15,461.8*	*–22,290.6*	*–31,886.9*	*–37,602.4*	*–41,941.2*	*–46,844.1*	*–59,609.1*	*–65,736.3*	*–75,789.6*

Source: Authors' calculations based on NBP (1997–2007)

Within the manufacturing sector, to keep the analysis more focused, the NOIP values were calculated for just the four main industry groupings. Up to the end of 2002, the highest NOIP values were registered for food, beverages and tobacco, all falling into the light industry, relatively low technology and low knowledge-intensive classification category. Thereafter came, with slight differences between them, motor vehicles and transport equipment as one grouping plus chemical and rubber products as the other, both in the relatively high technology, capital and knowledge-intensive classification category. From 2003 on, one year before Poland's entry into the EU, a shift occurred with motor vehicles taking the lead and retaining it till the end (i.e., 2006), followed by chemical and rubber products, and the food, beverages and tobacco grouping. The lowest NOIP values were observed in wood, paper, publishing and printing – a branch falling also into the light industry category. The said negative NOIP values increased until the end of 2004, decreased in 2005 and again increased in 2006.

Figure 3 NOIP of Poland's main sectors/industries and of the whole Polish economy, 1996–2006, in millions of USD (see online version for colours)



Source: Authors' calculations based on NBP (1997–2007)

As Table 4 indicates, the leading industries in the service sector were financial intermediation (in reality: banks and other financial institutions) and trade and repairs (meaning mainly investment by large distribution companies, especially on the retail level). Both those industries started with practically the same level of negative NOIP in 1996 and ended in 2006 with an NOIP of nearly –16 billion USD for financial intermediation and over −12 billion USD for trade and repairs, exhibiting consistent growth of their negative values.

However, noteworthy was the overall falling trend in these service industries NOIP year-to-year growth rate, arguably indicating strengthening of the competitive advantage of Polish firms investing abroad. For another service industry – transports and communication – the negative NOIP values showed considerable fluctuations with an overall tendency to increase. For the industry grouping with the curious composition of real estate, IT, R&D plus equipment lease the negative NOIP values grew consistently

during the analysed time period, although their growth rates fluctuated widely. Apart from the years of 1996 and 1997, the utilities sector (electricity, gas and water) showed a rise in negative NOIP values but to a relatively low level of just over −3 billion USD in 2006. The annual increases in this sector fluctuated as well and for the last year the increase was only 3.2%, being lower than in the previous years and thus pointing to imminent levelling off the NOIP for this industry. The remaining four industries: construction, agriculture and fishing, hotels and restaurants, and finally mining and quarrying could be considered as being of relatively low interest for FDI in and out of Poland. Agriculture and fishing, plus mining and quarrying, showed an uninterrupted record of negative NOIP growth, whereas construction plus hotels and restaurants had periods of improved NOIP, reflecting more investment activity abroad of firms based in Poland. Also, all these industries exhibited high fluctuations in the annual growth rates of their respective NOIP values.

Concluding, one can refer to the three hypotheses stated before by observing that the first of them (Hypothesis 4) was only partly confirmed by the above analysis. Indeed, there was a shift away from resource-intensive, light industries, such as food, beverages and wood. However, it was not to give way to labour-intensive, relatively low-technology manufacturing, such as garments. Instead, the manufacturing industries that emerged as the dominant ones in Poland's FDI, with the highest values of NOIP, were relatively high technology, capital and knowledge-intensive: motor vehicles, transport equipment and chemicals. As for Hypothesis 5, one needs to glean the appropriate data on outbound FDI's sector/industry structure from statistics compiled by the NBP (not presented in this paper owing to the length limitations). It is evident from these data that the dominant position among the manufacturing industries' outbound FDI was held by refined petroleum products, followed by metal and mechanical products and food products. Therefore, Hypothesis 5 cannot really be confirmed. It is important to note in this context that relatively large amounts of outbound FDI have come from the financial intermediation sub-sector (until 2005, that sector's investment exceeded the manufacturing sector's investment abroad). Finally, Hypothesis 6 is not confirmed by the above analysis either. Although the manufacturing sector's position has remained relatively strong, the sector is not in a leading position any more, neither in FDI inflows nor in FDI outflows. It is the services sector (including financial intermediation, trade and repairs, transports and communication, and real estate, R&D, IT and equipment lease) that accounts for the largest part of Poland's FDI.

8 Economic policy considerations

Economic policy implications constitute the backbone of the IDP concept and the ultimate rationale for its observation and analysis. All three approaches summarised in this study have underlined some essential guidelines for economic policy measures to follow.

First, an important venue for improving country competitiveness lies in stimulating and accelerating the growth of small- and medium-sized firms in Poland since larger entities will have the resources, especially financial and technology based, necessary to effectively compete with foreign entrants domestically and engage in risk-fraught foreign expansion. In this context, mergers and acquisitions as well as business alliances should be encouraged via, for example, fiscal instruments and a relaxation of antimonopoly legislation.

Firms, both domestic and foreign owned, should be allowed to receive support in expanding into foreign markets by outward FDI. This calls for indirect and direct financial state assistance in innovating and developing core company competencies, which embedded in new products and technologies, would facilitate them in generating sustainable firm-specific ownership advantages abroad. Such assistance should of course not diverge from the boundaries imposed in this respect by EU competition policy and state aids limitations. The main intent here is to redress the imbalance between existing and extensive inward FDI-oriented fiscal and financial incentives, and the paucity of such measures designed to encourage outward FDI. A country's international competitiveness is ultimately built and confirmed not so much by the ability to confront foreign competition only on the domestic turf but much more by companies located in that country being able to produce and distribute products on an increasing number of foreign markets.

Stimulating outward FDI and thus moving to bridge the considerable gap between inward and outward FDI in Poland requires overcoming the idiosyncratic and somewhat short-sighted nature of the strategy of most domestic Polish firms of focusing in their internationalisation objectives uniquely on exporting and neglecting outward FDI. Their success in using exporting in many cases reduces or halts the move towards the next, higher stage in the internationalisation process, i.e., that of outward FDI, leaving the foreign market open to other competitors' entry via such FDI. Of course, from a macroeconomic, home country perspective, foreign expansion by exporting has a benefit of keeping more jobs at home but prevents domestic companies from reaping other benefits, accruing from foreign presence via FDI, such as cost reduction.

Economic policy stimuli supporting outward FDI should include and address the following issues:

- the risk associated with cultural and institutional differences separating foreign markets from their Polish counterpart, determined by the length of psychic and institutional distance
- the lack or paucity of financial, material, human capital and other knowledge-intensive resources so prevalent in most Polish-owned SMEs
- the now pressing need to educate Polish entrepreneurs/managers about the advantages of moving beyond the stage of exporting in their foreign market expansion, as well as about the costs and benefits of different forms of cooperation, especially business alliance formation
- the necessity, via government promotion programmes, to at least decrease the negative country of origin effect accompanying marketing efforts of many Polish products in foreign markets, especially in the services and industrial product categories, attempting to compete with local and global players with well known and established brands.

One inherent source of competitive weakness of domestic Polish firms lies in their difficulties in generating and absorbing new technologies and innovations. To redress this deficiency, firms must have first of all access to sufficient funds. Financial and fiscal measures in this respect call for a wider and more intensive use of government guarantees, credit insurance schemes and, for the weakest, government subsidies, conditional however on reaching specific time bound performance and efficiency targets. Furthermore, in the institutional dimension, the state should encourage formation of micro-regional clusters based on specific location bound advantages, enterprise incubators as well as technology parks for increased and easier high-tech creation and diffusion. The market alternative for funding technology development should include state encouragement of venture capital or private equity investments via privatisation of state shareholdings in large companies in R&D-intensive industries.

An important factor in sustaining FDI, both inward and outward, lies in policy measures targeting the FDI environment with the objective of lowering transaction costs. The main contributing factors in this sphere include:

- creating an efficient legal system, especially in the sphere of contract execution and settlement of investment disputes in courts and via arbitration
- eliminating bureaucracy and 'red tape' in establishing and expanding both green-field and brown-field operations
- developing material infrastructure by financing or co-financing the country-wide network of motorways, railroads and regional airports.

The main policy recommendation arising from the geographic analysis of Poland's bilateral NOIPs with different countries and groups of countries has been to expand and sustain the competitive positions of Polish firms (i.e., investing from Poland but not necessarily Polish by equity ownership) in all foreign markets and as the net result move Poland further on her bilateral NOIP paths. In this context, economic policy should focus on outward FDI to Poland's less-developed neighbours, as there it appears to be easier or quicker to discount the acquired competitive advantages of the ownership and internalisation categories.

In a similar vein, the sectoral/industry cross-section analysis led to the logical prescription that economic policy, to develop and sustain the competitiveness of Poland in a continuously globalising environment, should support those industries that have been identified as leaders in absorbing inward FDI or generating most of the FDI outflows. Proposed measures should embrace first of all technology upgrading and enhancing financing potential of firms operating in mechanical and metal product markets, and in the motor industry and petroleum, all within the manufacturing sector, as well as in financial intermediation, trade and repairs plus real estate, within the services sector.

The geographic breakdown of the positioning of Poland on her bilateral NOI paths shows that Poland vs. certain countries may be positioned on her bilateral NOIP corresponding even to stage 4 of the general IDP model. In those cases, the identified economic policy instruments should aim at sustaining such tendencies since they clearly demonstrate and confirm the competitive potential of firms investing out of Poland.

9 Conclusions

For the entire period of Poland's transformation, the country's NOIP was negative and deteriorating. This is indicative of Stages 1 and 2 of the IDP. Taking into consideration the dynamics of the NOIP, the absolute FDI inflows and outflows, and the plotted ratio between NOI per capita and GDP per capita, the authors conclude that since the second half of the 1990s Poland has been in Stage 2 of her IDP. Although there are certain symptoms indicating that the country may be approaching Stage 3, more years of IDP evolution need to be observed in the future to make conclusive statements about transition to Stage 3. What should be remembered in this context is that the IDP model, as previously observed, is not a normative framework and that from this perspective there is no inevitable compulsion of moving into Stage 3, and subsequent stages.

The geographic analysis of the NOIP conducted with reference to Stage 2 of the IDP revealed the following developments:

a Poland has been firmly in Stage 2 of her bilateral IDP with the Triad countries. Poland's position vis-à-vis the Triad largely determines her NOIP with the entire world. However, Poland's outward investment directed towards the EU has increased substantially in recent years and this may indicate approaching Stage 3 with respect to this part of the Triad. In other parts of the Triad, Poland's investment is negligible, particularly in Japan. The dynamics of FDI relations with the Triad are largely consistent with the appropriate predictions derived from Dunning's model.

b Poland's NOIP vis-à-vis her neighbouring, CEE transition countries has been generally positive since 2002 (before it was negative). This position has been largely achieved through growing positive NOIPs with Russia, the Baltic States, the Czech Republic and Ukraine, although the absolute NOI values are usually not high. With these countries, Poland is already in Stage 4. On the other hand, Poland is in Stage 2 of her bilateral IDP with Hungary. These findings are only partially consistent with the predictions derived from Dunning's paradigm.

c Poland's NOIP with the largest emerging economy, China, changed from positive to negative and deteriorated during the period under study. However, the absolute (though negative) value of NOI is relatively low. This finding is inconsistent with the prediction based on Dunning's model.

Thus, a peculiar trade-off appears in the geographic breakdown of Poland's NOIP. Either there are high absolute values recorded of the NOIP with developed countries and unfortunately negative ones, signifying the dominance of inward vs. outward FDI flows, or there are low absolute values of the NOIP with developing countries but with a positive sign, indicating more FDI outflows than inflows into Poland. In the first case, Poland remains in a position corresponding to Stage 2 in the IDP model, and, in the second case, mainly in a position equivalent to Stage 4 in the said model. This second case also attests to the relative superiority of the Polish economy when compared with those of her less-developed partners and at the same time delineates areas for further expansion to exploit the competitive advantage of firms investing out of Poland, expansion that is easier and quicker attainable than in the more competitive and saturated markets of developed countries.

The industry structure of Poland's NOIP showed that in both inward and outward FDI the domination of the manufacturing sector was being radically eroded by the growing importance of the services sector. This is not considered by the authors as a problem but as a clear trend visible also in other countries of Central and Eastern Europe such as the Czech Republic and Hungary. Inside services on the rise were the shares of the financial intermediation sector, composed mainly of banks, insurance companies and various types of investment funds, as well as of retail trade, focused on mass distribution in supermarkets, hypermarkets, large discount stores and shopping centres. Also, in both the manufacturing and the services sectors, the most dynamic were capital and knowledge-intensive industries. In the context of industry structure, Poland's IDP revealed a certain paradox. It seems to be present in the crucial role played by the growth of the modern manufacturing and service sectors in both prolonging Poland's stay in her IDP Stage 2 and at the same time in being the main motivating factor ultimately expected to move Poland into the more advanced Stage 3. Confronting the findings regarding the sector and industry structure of Poland's NOIP with the appropriate hypotheses derived from Dunning's IDP paradigm, the authors found very little conformity between the two.

Finally, the main explanatory factors behind Poland's IDP can be identified as the size of her internal market, her evolving macroeconomic condition and her economic policy choices. These choices have been generally positioned in a neo-liberal, open door approach towards FDI, which thus implies little involvement designed to stimulate outward FDI. But, the hereby proposed role of economic policy in the IDP model, as applied to Poland, lies not in expecting or having the growth of inward FDI slow down, or even in decreasing the inward FDI stock, but rather in sustaining growth in the said inward FDI and, at the same time, securing faster growth and higher absolute levels of outward FDI. This appears to be one of the main and most challenging tasks facing Poland's economic policy-makers today and in the years to come in the domain of FDI.

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Notes

[1]O-specific advantages denote ownership advantages of firms, such as brand name, ownership of proprietary technology or lower costs owing to economies of scale.

[2]L-specific advantages denote a country's strengths, which attract investment from other countries. They include large markets, low input costs, tax and financial incentives or strategic geographic location.

[3]The negative sign of the NOIP reflects a larger amount of inward FDI when compared with outward FDI. The deteriorating nature of the NOIP, in turn, indicates a faster rate of growth of inward FDI stock than of outward FDI stock.