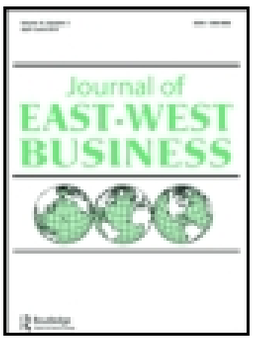


Journal of East-West Business

ISSN: 1066-9868 (Print) 1528-6959 (Online) Journal homepage: http://www.tandfonline.com/loi/wjeb20

Poland's Investment Development Path and Industry Structure of FDI Inflows and Outflows

Marian Gorynia , Jan Nowak & Radoslaw Wolniak

To cite this article: Marian Gorynia , Jan Nowak & Radoslaw Wolniak (2008) Poland's Investment Development Path and Industry Structure of FDI Inflows and Outflows, Journal of East-West Business, 14:2, 189-212, DOI: 10.1080/10669860802050318

To link to this article: https://doi.org/10.1080/10669860802050318

Poland's Investment Development Path and Industry Structure of FDI Inflows and Outflows

Marian Gorynia
Jan Nowak
Radoslaw Wolniak

ABSTRACT. This study explores changes in industry composition of FDI inflows to and outflows from Poland, using the conceptual framework of J. Dunning's model of the investment development path (IDP). The data time frame used (from 1996 to 2005) allows for identification of significant changes in FDI structure as Poland moves through stage 2 of her IDP. The leading position of the manufacturing sector in both FDI inflows and outflows is replaced by services (especially financial and trade). The last section presents policy implications focused on measures designed to redress the imbalance between the still much larger inflows than outflows of FDI.

KEYWORDS. Investment development path (IDP), Poland, sector and industry composition of FDI inflows and outflows

Address correspondence to Marian Gorynia, Poznan University of Economics, al. Niepodleglosci 10, 60-967 Poznan, Poland. E-mail: m.gorynia@ae.poznan.pl

Jan Nowak, Central European University Business School, 1023 Budapest, Frankel Leó út 30-34, Hungary.

Radoslaw Wolniak, Faculty of Economics, Warsaw University, ul. Dluga 44/50, 00-241 Warsaw, Poland.

Journal of East-West Business, Vol. 14(2) 2008
Available online at http://jeb.haworthpress.com

doi: 10.1080/10669860802050318

The present study is a continuation of the authors' previous work on Poland's investment development path (IDP) and its geographic patterns (Gorynia, Nowak and Wolniak, 2005b and 2006). This time, the authors undertake a dynamic analysis of the sector and industry structure of Poland's inward and outward FDI in reference to J. Dunning's IDP model. The purpose of the study is to identify patterns of changes in that sector and industry structure over the period during which Poland was in stage 2 and moving towards stage 3 of her IDP, and to confront the observed patterns with the hypotheses or predictions derived from Dunning's model.

The data sets used in this study have been compiled from the database of the National Bank of Poland, which in 1997 started to collect FDI inflow and outflow information broken-down by sectors and industries (earlier only aggregate FDI information was collected by the Bank). This in turn determined the period covered by the present study: the years from 1996 to 2005. Although the authors' previous study of Poland's IDP covered a period starting from 1990, a convenient coincidence is that, according to the said study, 1996 marks Poland's transition to stage 2 of her IDP. Thus the present study focuses on stage 2 and supplements the previously delineated overall characteristics of stage 2 with a comprehensive analysis of the shifts in sector and industry composition of both inward and outward FDI.

The paper starts with a literature review, in which the authors refer to those publications that have contributed to the development and refinement of the IDP model used here as a theoretical framework. In addition, a number of relevant studies that deal with the issue of sectoral and/or industrial composition of FDI in the context of IDP are reviewed. The literature review section is followed by an analysis of the structure of FDI inflows into Poland and FDI outflows from Poland in the period of 1996–2005. The two last sections of the paper present conclusions and policy implications respectively.

LITERATURE REVIEW AND METHODOLOGICAL FOUNDATIONS

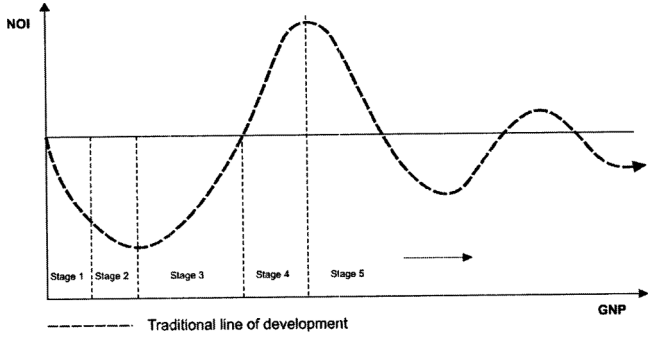
The concept of IDP was first proposed by J. Dunning in the early eighties (Dunning, 1981). Since then it has been refined and extended several times, with most significant modifications contained in Dunning (1986), and Dunning and Narula (1994, 1996 and 2002). Several other authors have made contributions 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 tied with its economic development. Changes in the volume and structure of FDI lead to different values in the country's net outward investment (NOI) position, defined as the difference between gross outward direct investment stock and gross inward direct investment stock. As illustrated in Figure 1, the changing NOI position passes through five stages intrinsically related to the country's economic development, typically measured by the GNP.

In stage 1 of the IDP the NOI position is usually close to zero, although can be slightly negative. Inward FDI is negligible and flowing mostly to take advantage of the country's natural assets. Outward FDI is also negligible or non-existent, as foreign firms prefer to export and import as well as 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 NOI position decreases, although towards the latter part of stage 2, the rate of 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 NOI position 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

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.

one and the country's NOI position 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 NOI position first falls and thereafter demonstrates a tendency to fluctuate around the 0 level but usually with both inward and outward FDI increasing.

Although, as Barry, Goerg and McDowell (2003) note, the IDP model is largely silent on the sectoral destinations of FDI inflows and outflows (ibid., p. 347), general predictions re: 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 mostly in the production of semi-skilled and moderately knowledge-intensive consumer goods, will be either of a market-seeking or trade-related type, undertaken in adjacent territories, especially those further back in their IDP position, or of a strategic asset-seeking type, directed to developed countries. In stage 3, the comparative advantage of labour-intensive production will deteriorate as a result of an increase in 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, this 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 losing competitiveness to countries in lower stages of 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 as well as mergers and acquisitions.

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 NOI position 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, Nowak and Wolniak, 2006 for a succinct review of the two strands of IDP studies).

Dunning and Narula (1996, p. 22 and 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" (ibid, p. 9). These factors include: presence of natural resources; geographic and cultural distance; size of a country; its economic system or development model, and its government policy. Furthermore, the use of GDP as a proxy for development does not take into account the changes of the economic structure of a country that progresses through the consecutive stages of the IDP. In particular, the IDP model implies systematic changes in the industry structure that parallel the changes in the net outward investment position. And yet, in both the conceptual and empirical studies, the issue of the industry structure of FDI that evolves when a country moves from one stage

of the IDP to another is rarely investigated, and even in these rare cases the sector/industry structure analysis is only supplementary to the main topic. The authors of this paper were able to identify only a handful of studies 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 (eds.,1996), including contributions by:

- Clegg (1996) examining the UK's IDP and looking at the country's IDP position in three industry groups;
- Graham (1996) focusing on the 5th stage of the US IDP;
- Akoorie (1996) investigating the sectoral patterns of inward and outward FDI in New Zealand;
- Calderón, Mortimore and Peres (1996) analysing, among other things, the impact of FDI on the production structure of the Mexican economy;
- van Hoesel (1996) investigating Taiwan's FDI and its impact on the country's industrialisation;
- Kumar, (1996) analysing India's industrialisation, liberalisation as well as inward and outward FDI during this country's distinct development stages related to FDI;
- Zhang and Van Den Bulcke (1996) examining the IDP of China and focusing on the changing government policy during the country's 15 years of transition to a market economy.

Also the studies by Twomey (2000) of the Canadian experience with the IDP, by Bellak (2001) of Austria's IDP and by Barry, Georg and McDowell (2003) of the Irish IDP contain some sectoral analysis of inbound and outbound FDI. Twomey's study is noteworthy, as it takes a very long-term view, investigating Canada's IDP over the twentieth century, and compares the Canadian experience with that of several other countries, both developed and developing.

There are also studies that, although not using the IDP concept, investigate the effects of FDI on industry structure. Noteworthy in this respect are studies of Barry (1999), and Barry and Kearney (2006). The former investigates the FDI and industry structure in Ireland in comparison to Spain, Portugal and the UK, and finds important differences in the effects of FDI on industry structure between these countries, whereas the latter focuses on the role of FDI in fostering the phenomenal growth of Ireland's high-tech sectors.

Among the very few studies that investigate IDPs of Central and Eastern European countries, the work of Antalóczy and Éltető (2003) on Hungary's FDI provides an interesting point of comparison due to the two countries, Hungary and Poland, being at a similar stage of their IDPs (although Hungary is positioned slightly ahead of Poland in this respect). However, the Hungarian study focuses on outward FDI and captures only two years (1999 and 2000) when it comes to sectoral distribution of OFDI and, therefore, has a limited comparative value. Nevertheless, it reveals the dominance of manufacturing, which accounts for over 60% of Hungary's OFDI, with refined petroleum being the most important investing industry (largely due to MOL's investments). Among the service sector's industries, trade and repairs represent the most important destination of Hungary's outward investment.

Summing up, the empirical studies mentioned above point to certain important shifts in sector and industry composition of both inward and outward investment taking place when a country progresses from one stage of the IDP to another. However, it is evident that these shifts are far from being uniform across countries. Clearly country-specific factors (idiosyncrasies) 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 US observed by Graham (1996, p. 91). Similarly, the Canadian IDP study reveals the dominance of manufacturing in the sectoral distribution of IFDI over the most part of the last century, in spite of the growing importance of the service 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.

In the following sections, the idiosyncrasies of Poland's sector and industry composition of FDI inflows and outflows are analysed

in the context of her IDP. In contrast to the empirical studies reviewed, in which the issue of sector/industry structure of FDI inflows and outflows is basically viewed as supplementary to the main topic of a country's IDP, the present paper is entirely devoted to the analysis of such structure and its policy implications.

FDI INFLOWS

Since the whole period under investigation in the present study (1996–2005) has been identified in previous research as representing stage 2 of Poland's IDP, the sector/industry analysis of FDI inflows and outflows which follows, reflects the degree of their concurrence with that stage in J. Dunning's original IDP model.

The data breakdown of the Polish economy made by the National Bank of Poland and considered by the authors as the most reliable source creates nonetheless a certain problem relating to the terminology and level of aggregation employed. Nominally the country's economic potential and in this case the target of FDI inflows is split into sectors (kinds of economic activities). However with the exception of one entry, that of ''manufacturing'', which does indeed represent a full fledged sector and (as the sole entry) is thus broken down into its constituent components: different industries. Such approach complicates economic analysis and drawing conclusions since the units of analysis are of unequal content and composition and therefore may be difficult to compare. This reservation then should be taken into account in interpreting the results that follow.

As shown in Tables 1 and 2, out of the ten sectors of the Polish economy having been the object of significant FDI inflows from abroad, i.e. having received at least 0.1% of the cumulative total FDI in 2005, only three (manufacturing, construction plus mining and quarrying) have revealed a diminishing absorption pattern in the studied time period. The greatest decrease was observed in manufacturing, from 40.4% in 1996 to 30.6% in 2005, with a marked sub-period of decline to 27.5% in 2001 and then of growth up to 31% in 2004. But in absolute terms FDI in manufacturing grew uninterruptedly almost 12 times from over 1.8 billion USD in 1996 to more than 21.5 billion USD in 2005.

Available data allow for a deeper probe into the industry components of manufacturing. The sharpest drop, from 13.3% in 1996

TABLE 1. Industry Structure of Accumulated FDI Inflows in Poland, 1996–2005, in mln USD at Current Prices

Sector/Industry	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Manufacturing of which:	1800.4	3255.3	5522.3	7172.9	9277.1	10465.2	11930.5	14012.9	19016.3	21539.2
Motor vehicles and transport equipment	347.0	537.2	1003.2	1294.8	1597.2	1693.7	2102.0	2844.6	3980.1	4376.8
Chemical and rubber products	258.9	545.4	853.0	1171.6	1477.1	1665.5	2184.2	2482.1	3263.0	3579.7
Food, beverages and tobacco	591.6	944.0	1693.3	1859.4	2270.0	2379.3	2546.3	2708.9	2910.9	3402.7
Financial intermediation	603.2	1479.1	2539.8	4749.1	6738.8	8794.6	10462.2	11025.8	13544.3	16534.5
Trade and repairs	606.7	1029.7	1844.2	2630.4	3385.8	4198.6	5040.9	6486.1	8125.8	10567.0
Transports, communication	149.0	197.3	201.7	1931.6	5583.7	6617.2	5761.4	5589.3	8020.1	7600.1
Real estate, IT, R&D, equipment lease	156.0	395.4	609.9	879.5	1327.7	1426.3	1895.8	2523.3	3571.7	4899.0
Electricity, gas and water	4.8	3.1	32.4	73.9	426.9	714.5	1489.0	1870.5	2727.2	2942.0
Construction	47.8	67.1	159.2	160.0	317.9	434.5	499.1	430.3	609.0	686.5
Agriculture and fishing	4.4	9.3	17.9	71.7	82.7	91.7	101.6	142.8	233.5	280.0
Hotels and restaurants	2.6	−11.3	−5.5	20.0	104.6	76.2	109.7	147.7	131.9	162.4
Mining and quarrying	7.8	24.9	43.3	46.3	72.1	73.4	61.4	59.1	80.2	84.4
Other services and not allocated	1078.8	2809.1	4922.5	5010.5	5042.1	5096.4	5215.2	5502.4	5346.6	5187.0
TOTAL	4461.4	9259.0	15887.7	22745.7	32359.1	37988.6	42566.6	47790.1	61406.4	70482.0

Source: National Bank of Poland. 1997–2006.

TABLE 2. Industry Structure of Accumulated Percentage Shares of FDI Inflows in Poland, 1996–2005

Sector/Industry	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Manufacturing, of which:	40.4	35.2	34.8	31.5	28.7	27.5	28.0	29.3	31.0	30.6
Motor vehicles & Transport equipement	7.8	5.8	6.3	5.7	4.9	4.5	4.9	6.0	6.5	6.2
Chemical and rubber products	5.8	5.9	5.3	5.2	4.6	4.4	5.2	5.1	5.3	5.1
Food, beverages and tobacco	13.3	10.2	10.7	8.2	7.0	6.3	6.0	5.7	4.7	4.8
Financial intermediation	13.5	16.0	16.0	20.9	20.8	23.2	24.6	23.1	22.1	23.5
Trade and repairs	13.6	11.1	11.6	11.6	10.5	11.1	11.8	13.6	13.2	15.0
Transports, communication	3.3	2.1	1.3	8.5	17.3	17.4	13.5	11.7	13.1	10.8
Real estate, IT, R&D, equipment lease	3.5	4.3	3.8	3.9	4.1	3.8	4.5	5.3	5.8	7.0
Electricity, gas and water	0.1	0.0	0.2	0.3	1.3	1.9	3.5	3.9	4.4	4.2
Construction	1.1	0.7	1.0	0.7	1.0	1.1	1.2	0.9	1.0	1.0
Agriculture and fishing	0.1	0.1	0.1	0.3	0.3	0.2	0.2	0.3	0.4	0.4
Hotels and restaurants	0.1	−0.1	−0.0	0.1	0.3	0.2	0.3	0.3	0.2	0.2
Mining and quarrying	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1
Other services and not allocated	24.2	30.3	31.0	22.1	15.5	13.4	12.3	11.5	8.7	7.3
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Minus (−) sign signifies disinvestment/withdrawal of capital to investor's home country. Percentage shares may not add up to 100 because of rounding.

Source: National Bank of Poland. 1997–2006.

to 4.8% in 2005, occurred in food, beverages and tobacco industries combined, followed by much smaller decreases in motor vehicles and transport equipment (from 7.8% in 1996 to 6.2% in 2005) and chemical and rubber products (from 5.8% to 5.1% respectively). However there was one industry pool on the rise (wood, paper, publishing and printing), starting with only a 0.2% share of the total in 1996 and reaching 3% in 2005. In nominal terms and at current prices all those industries showed dramatic increases during the studied decade: the largest (over 56.5 times) observed in wood, paper, publishing and printing, followed by chemical and rubber products (13.8 times), the motor industry (12.6 times) and finally food, beverages and tobacco ("only" 5.8 times).

Dunning (1997, p. 237) indicates that at the beginning of stage 2 FDI inflows are attracted by the manufacturing industries with advantage of foreign investors residing in technology, trademarks and managerial skills. In the case of Poland the order of importance of the said advantage was first and foremost in branding (trademarks), then in superior managerial competencies and lastly in technology, though usually not of the state of the art category. This sequence reflected the development gap separating domestic Polish firms from their foreign competitors which was perceived by the latter as evidence of weak domestic competition thus allowing the exploitation of advantages related in the first place to strong international brands and managerial know how and only secondarily to technology which was standard and moving towards becoming obsolete.

In 1996 and at the beginning of IDP stage 2 there was a clear dominance of light, relatively low-technology manufacturing of mass consumer goods (food, beverages and tobacco) with an FDI value of 591.6 million USD. This fact supported the leading role in those industries of foreign brands and managerial expertise, specified above, as key determinants of FDI inflows. Then followed a 5.5 percentage point gap separating these industries from motor vehicles and transport equipment (also with a consumer, non-industrial focus), receiving 347 million USD in foreign investment. The industrial goods sector was represented by a sizable share of technology intensive chemical and rubber industries (258.9 million USD).

In 2005, at the projected ending phase of stage 2 of Poland's IDP, the industry ranking had changed radically. The motor industry became the leader with over 4.4 billion USD in FDI, followed closely by chemicals and rubber (3.6 billion USD). Thereafter came the

losing industries of food, beverages and tobacco with 3.4 billion USD plus the gaining industries of wood, paper, publishing and printing (2.3 billion USD). The overall tendency was to move towards more technology intensive manufacturing and higher value added locally which Dunning characterised as the starting profile of stage 3 FDI inflows (Dunning, 1997, p. 237).

Besides manufacturing, the other two declining sectors were construction plus location bound, resource based mining and quarrying. Both showed throughout the analysed time period relatively small fluctuations of their shares in total FDI inflows with the end results being only slightly worse than at the beginning and both their shares (but especially that of mining and quarrying) indicating a very marginal role in the said inflows. However, in nominal USD FDI in construction rose 14.4 times to a level of 686.5 million USD and in mining and quarrying 10.8 times to 84.4 million USD.

The seven FDI growth oriented inflow sectors of the Polish economy were led by financial intermediation, a term which covers banking, insurance and investment services. This sector's share rose by a startling 10 percentage points to reach the level of 23.5% in 2005, and an FDI investment level of over 16.5 billion USD, 27.4 times larger than in 1996. The next fast growth sector was transports and communication, going up from 3.3% to 10.8% and from 149 million USD to 7.6 billion USD between 1996 and 2005, and the utilities-electricity, gas and water-rising from a mere 0.1% (4.8 million USD) to 4.2% (over 2.9 billion USD), giving an increase of 613 times) over the studied period. In the former sector the key role could be attributed to international logistics firms and foreign telecom companies. A smaller growth rate was observed for the combination of real estate, IT, R&D and equipment lease (from 3.5% to 7%) but in absolute numbers growth reached 31.4 times the initial value of 156 million USD going up to 4.9 billion USD in 2005. A still smaller increase occurred in trade and repairs: from 13.6% to only 15% and from 606.7 million USD to 10.6 billion USD between 1996 and 2005 (up 17.4 times).

If the three leading share sectors in 2005 for inflowing FDI (i.e. financial intermediation plus trade and repairs plus transports and communication) are added up and treated as one service sector (which includes of course also other industries, such as hotels and restaurants) its cumulative share (49.3%) and FDI of over 34.7 billion USD elevates it to the most important sector for FDI inflows.

Its composition can be viewed as being compatible in size with that of manufacturing and thus one principal conclusion can be made that as Poland was moving through stage 2 of her IDP a visible shift occurred in the relative focus and preferences of FDI: away from hard core manufacturing and more towards a diversified service base. In the case of banking, insurance and telecoms, the observed increasing absorption of FDI was in line with Dunning's projection that foreign firms would target as strategic asset acquisitions domestic firms that have a competitive advantage on the local market. In the case of Poland such advantage resided often in having well developed domestic distribution networks, especially at the retail level. But this trend, according to Dunning was bound to happen only in stage 3 in his IDP model (Dunning, 1997, p. 238–239). This then can be construed as yet another indication that Poland was at the juncture of stage 2 and 3 of her IDP, systematically acquiring more visible attributes of the latter one.

FDI OUTFLOWS

The evolution of sector/industry composition of FDI outflows from Poland may be derived from Table 3 and that of its relative importance from Table 4. Both show that the sector of financial intermediation recorded the highest increase in FDI outflows from Poland during the whole period under investigation, starting in nominal USD from 7 million and going to over 1409 million, with its cumulative market share rising 28 percentage points to 41.2% in 2005. As previously noted this entry was in reality composed mainly of banks and insurance firms and represented their dynamic expansion into foreign markets, especially in 2005 when financial intermediation overtook manufacturing with 582.7 million USD in FDI outflows. It is worth noting that this rise in importance occurred in the year following Poland's accession into the European Union. Moreover, taking into consideration the significant role of this sector in inflowing FDI as evidenced above, it is quite likely that the outflowing FDI was of the indirect category (i.e., undertaken by Polish subsidiaries of foreign banks and financial firms). The expansion into Ukraine of Kredyt Bank may serve as an example here, since this bank was owned by the Belgian Kredietbank. The strategic aims of FDI outflows were believed to be of the market seeking and strategic asset

TABLE 3. Industry Structure of Accumulated FDI Outflows from Poland, 1996–2005, in mln USD at Current Prices

Sector/Industry	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Financial intermediation	7.0	11.8	15.0	69.0	41.1	−62.8	15.3	14.2	353.1	1941.3
Manufacturing of which:	7.0	15.8	88.7	85.4	97.0	61.6	65.0	321.0	520.3	1409.9
Refined petroleum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	141.1	197.6	582.7
Food products	3.0	4.0	4.0	4.4	4.6	5.9	8.0	10.3	59.1	195.0
Metal and mechanical products	4.0	9.8	15.1	14.0	18.0	22.5	22.2	67.9	92.0	178.8
Motor vehicle and transport equipment	0.0	1.0	67.7	64.4	65.6	12.4	10.3	37.3	104.8	154.4
Textile and apparel	0.0	0.0	0.0	0.2	0.2	1.3	0.3	18.3	39.3	53.5
Wood, publishing and printing	0.0	0.0	0.0	0.6	1.9	7.6	14.3	−66.5	−54.0	29.7
Chemical, rubber and plastic products	0.0	0.0	0.0	0.0	7.2	6.4	3.6	−8.6	−3.5	30.6
Radio, TV and communication equipment	0.0	0.0	0.0	0.0	−1.0	−1.0	−1.0	68.0	−8.9	28.6
Transports, and repairs	14.9	21.8	5.1	0.3	6.7	−17.1	−36.4	−11.9	214.2	489.2
Real estate, IT, R&D, equipment lease	0.0	1.0	15.6	3.8	14.6	27.2	33.9	129.7	206.6	159.0
Construction	2.0	6.8	3.7	−0.9	1.9	2.0	−8.9	−18.8	−17.7	167.0
Mining and quarrying	0.0	0.0	16.7	19.2	20.1	27.2	7.7	8.0	−1.8	10.7
Electricity, gas and water	0.0	0.0	−6.3	−15.1	−15.1	−12.4	−10.8	−8.8	−7.5	−7.5
Transports, communication	2.0	−1.0	7.3	15.8	27.7	36.6	40.1	−23.2	−20.6	−30.2
Remaining, unclassified	20.0	43.5	283.2	284.3	284.6	330.6	526.1	543.0	557.1	584.8
TOTAL	52.8	96.7	425.9	455.1	472.2	386.2	625.4	946.0	1797.3	4714.2

Note: Minus (−) sign signifies disinvestments/withdrawal of capital to Poland.
Source: National Bank of Poland, 1997–2006.

TABLE 4. Industry Structure of Accumulated Percentage Shares of FDI Outflows from Poland, 1996–2005

Sector/Industry	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Financial intermediation	13.2	12.2	3.5	15.2	8.7	−16.3	2.4	1.5	19.6	41.2
Manufacturing, of which:	13.2	16.3	20.8	18.8	20.5	15.9	10.4	33.9	28.9	29.9
Refined petroleum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.9	11.0	12.4
Food products	5.6	4.1	0.9	1.0	1.0	1.5	1.3	1.1	3.3	4.1
Metal products and mechanical products	7.5	10.2	3.5	3.1	3.8	5.8	3.5	7.2	5.1	3.8
Motor vehicle and transport equipment	0.0	1.0	15.9	14.1	13.9	3.2	l.6	3.9	5.8	3.3
Textiles and apparel	0.0	0.0	0.0	0.0	0.0	0.3	−0.1	1.9	2.2	1.1
Wood, publishing and printing	0.0	0.0	0.0	0.1	0.4	2.0	2.3	−7.0	−3.0	0.6
Chemical, rubber and plastic products	0.0	0.0	0.0	0.0	1.5	1.7	0.6	−0.9	−0.2	0.6
Ratio, TV and communication equipment	0.0	0.0	0.0	0.0	−0.2	−0.3	−0.2	7.2	−0.5	0.6
Trade and repairs	28.2	22.5	1.2	0.1	1.4	−4.4	−5.8	−1.3	11.9	10.4
Real estate, IT, R&D equipment lease	0.0	1.0	3.7	0.8	3.1	7.0	5.4	13.7	11.5	3.4
Construction	3.8	7.1	0.9	−0.2	0.4	0.5	−1.4	−2.0	−1.0	3.5
Mining and quarrying	0.0	0.0	3.9	4.2	4.3	7.0	1.2	0.8	−0.1	0.2
Electricity, gas and water	0.0	0.0	−1.5	−3.3	−3.2	−3.2	−1.7	−0.9	−0.4	−0.2
Transports, communication	3.8	−1.0	1.7	3.5	5.9	9.5	6.4	−2.5	−1.1	−0.6
Remaining, unclassified	37.9	45.0	66.5	62.4	60.3	85.5	84.1	57.4	31.0	12.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Minus (−) sign signifies disinvestment/withdrawal of capital to Poland. Percentage shares may not add up to 100 because of rounding.
Source: National Bank of Poland, 1997–2006.

seeking type, in line with Dunning's general predictions in stage 2 of his IDP model (Dunning, 1997). It is also worth noting that there was a steep fall in the relative share of this branch in 2001 reflecting the largest general slowdown in the annual FDI inflows and outflows registered so far.

Manufacturing was second in importance in FDI outflows, rising almost 17 percentage points in its total accumulated share and also exhibiting considerable fluctuations in this share throughout the studied time period. If its component industries are examined it appears that petroleum had the largest influence starting from 2003 with a FDI value of 141.1 million USD, being curiously absent in all the previous years and moving up to 582.7 million USD in 2005. Food products moved from 3 million USD and a 5.6% share in 1996 to a low of 0.9% in 1998 (but reaching 4 million USD) and then fluctuating somewhat, slowly climbed back to 4.1% and 195 million USD in 2005. The share of metal and mechanical products also declined, fluctuating from 7.5% to 3.8%, but rose in absolute terms from 4 to 178.8 million in 2005. Motor vehicles and transport equipment showed larger fluctuations and, as the net result, fell to a modest 3.3% in 2005 with a value of 154.4 million USD.

Trade and repairs showed an overall declining trend from 28.2% to 10.4%, countered only by three annual periods when their share had improved. This still gave the sector a firm third place behind manufacturing in the share of FDI outflows with investment for 489.2 million USD in 2005, reflecting either the competitive advantage of low technology, labour intensive Polish service firms or the preference of such firms to use exports as the main venue of expanding into foreign markets.

The somewhat strange grouping of real estate, IT, R&D plus equipment lease started with a 1% share and 1 million in FDI, in 1997, rising with fluctuations to a peak of 13.7% in 2003 to settle down on a low 3.4%, being equivalent however to 159 million USD in 2005. These sectors generally required from Polish firms high capital inputs and competitive, advanced technological capacities and competences indicating a desired, increased generation of these ownership advantages for use in foreign markets.

Construction can be associated with Polish firms abroad as a relatively labour intensive sector and as such did not change much its share in the period under study, going down from 3.8% in 1996 to 3.5% in 2005 but at the same time going up from 2 to 167 million

USD. However in between it had four years of disinvestments associated most likely with the fact that it was primarily market seeking and that the targeted foreign markets showed considerable volatility of demand.

Among the remaining sectors of some significance in outward FDI were, in the material goods category, mining and quarrying and, in services, transports and communication. Although the former had a share of only 0.2% and 10.7 million USD of FDI in 2005 it experienced a period of growth from 3.9% in 1998 to 7% in 2001 reaching a peak of 27.2 million USD. In case of the latter, growth occurred in the same years but was stronger (from 1.7% or 7.3 million USD to 9.5% or 36.6 million USD) but then decreased more dramatically, ending with a disinvestment of 1.1% in 2004 and 0.6% (−30.2 million USD) in 2005.

The last three sectors for which data are available, i.e. hotels and restaurants, agriculture and fishing, and electricity, gas and water, showed throughout the whole time period disinvestments and thus indicated that Polish firms in these areas of economic activity were either too weak financially or did not have sufficient competitive advantage to enter foreign markets via FDI. It is also worth noting that these sectors were generally characterised by relatively low capital intensity and technology absorption and thus, contrary to reported data, could have been conceived as offering more opportunities and easier access to the said competitive advantage for firms from an emerging market such as Poland.

The final entry for accumulated FDI outflows bears the rather mysterious label ''remaining and unclassified''. One could aptly quote in this case the cliché expression: ''last but not least'', since, except the year 2005, the FDI shares in this case have been the largest (reaching 557.1 million USD in 2004) and exceeded those for financial intermediation (353.1 million USD in 2004) or manufacturing (520 million USD in 2004). From 1998 to 2003 the cumulative shares in this category surpassed 50% of total FDI reaching, in 2001, the level of 85.5% or 330 million USD. What is hidden behind those surprisingly high percentages and absolute values is unclear. One possible explanation is that taking into account for example the geographic structure of FDI outflows from Poland for the year 2004, where two countries, Switzerland and Holland, dominate with a combined share of 53.2% (Wolniak, 2006), the motive might have been capital flight and subsequent formation in those two locations of financial entities

for further FDI without Polish identity and various accompanying "cumbersome" obligations (for example in the sphere of reporting or taxation).

CONCLUSIONS

Departing from the assumption that Poland is a mature transition economy, the following observations can be made regarding the sector/industry cross section of inflowing FDI, as the country moved through stage 2 of its IDP:

1. Throughout the decade under investigation the accumulated value of FDI outflows was by far smaller than that of FDI inflows, ranging from 1.2% (the share of accumulated FDI outflows in accumulated FDI inflows) in 1996 to 6.7% in 2005. This asymmetry reflected the continuing, albeit decreasing, disparity between the overall competitiveness of domestic Polish firms and their foreign/multinational rivals.[3]
2. From 1996 to 2005 accumulated FDI inflows rose 15.8 times reaching the value of over 70.5 billion USD, indicating that Poland, with her large internal market and a growing pool of created assets, offered attractive investment opportunities.
3. In FDI inflows the dominance of manufacturing was systematically eroded by growth of the service sector, led by such industries as banking, trade, transport and communications. In trade the most prominent and visible role was attributed to large, international, especially French and German retail distribution chains such as Carrefour, Auchan and Lidl.
4. Starting from 1999, the entire service sector became the new leader in absorbing incoming FDI, replicating a similar trend in more developed countries.
5. Managing to defend their positions with relatively small losses in the share of FDI inflows were those industries within manufacturing that are technology and capital intensive, focused both on consumer and industrial markets. Best examples in the Polish case have been motor vehicles (with investing firms such as General Motors, Volkswagen, Toyota and Fiat) and chemical as well as rubber products, illustrated by the increasing presence of firms like

Procter & Gamble, Henkel and Benckiser, as well as Bridgestone, Michelin and Goodyear.

6. A change occurred within the light manufacturing sector: the gap left by the demise of food, beverages and tobacco was filled by wood, paper, publishing and printing. Or looking from a behavioural/needs perspective: once basic needs had been satisfied by the food et al group of industries they were substituted by the more sophisticated ones, catered to by companies from the print media industry, such as the German Bauer und Jahr or the Swiss Mediapresse.
7. The market seeking motive was prevalent in the growth of real estate and the utilities, whereas the drive to improve efficiency was visible in FDI in IT as well as R&D activities.
8. The remaining sectors, consisting of a wide assortment raging from agriculture and fishing, through construction to services like hotels and restaurants and ending with the extractive sector, played a negligible role, mainly due to lack of sufficient location advantages and local assets, both natural and created.

As for outflowing FDI the following tendencies emerged in stage 2 of Poland's IDP:

1. During the studied period, the accumulated FDI outflows rose 89.3 times, growing much faster than FDI inflows, and reached the value of over 4.7 billion USD in 2005.
2. Throughout the studied period, but only up to the end of 2003, manufacturing appeared as the leading sector for FDI flowing out of Poland. Thereafter the service sector took over, dominated by banks and other financial institutions (financial intermediation) plus trade and repairs. The coincidence here with Poland's accession to the EU as full member in 2004 may offer an explanation to this change in leadership. In these services market and strategic asset seeking motives seem to be the prevailing ones. Thus a similar trend has been observed in FDI inflows and outflows with the difference lying in the definite, dominating foreign provenance of firms investing in Poland and the unknown real proportions of the origin of firms investing out of Poland, i.e. whether they were Polish owned or MNC subsidiaries operating in Poland.
3. Within manufacturing, capital intensive and technology oriented industries such as metal and mechanical products, plus the motor

industry, were observed as being in the lead until 2003 but then giving in to petroleum as the new leader. In the case of the latter, FDI can be practically traced to expansion, via acquisitions of strategic assets, of Orlen, Poland's largest petroleum company by annual revenue. A similar situation was reported earlier with respect to the Hungarian petroleum giant–MOL.

4. The meaningful share of construction was mainly related to the ownership advantages of Polish firms, stemming from the possession of highly skilled and relatively cheap workers and engineers, while the observed (share) fluctuations could be partly explained by the sector's sensitivity to changes in the business cycles in the foreign markets.
5. Thus it can be observed that in stage 2 of the IDP there has been a very limited spread/profile of sectors/industries generating FDI out of Poland, reflecting mainly Polish firms' still relatively weak competitive advantages and/or their embedded preference to still consider exporting as the ultimate method of sustaining market presence abroad (Gorynia and Wolniak, 2003).

The dynamics and sector/industry distribution of FDI inflows and outflows seem to be pointing to an evolving structure of the Polish economy which to a high degree reflects and replicates such structural change which the highly developed countries have already gone through in the past. Thus far the general assumptions of the original Dunning IDP model seem to be holding quite well. But there is also the idiosyncratic aspect of this model in its ''Polish edition'' which is seen in the extended length (time wise) of stage 2. The match of the succeeding stages of Poland's IDP with Dunning's model is yet to be seen and investigated. This then sets out the key avenues for future research in both the geographical and industry composition of Poland's IDP. Comparative studies with other economies of similar potential (e.g. Spain) or similar positioning on the IDP in other transition countries (e.g. Hungary) should also yield more insight, understanding and applicability of the IDP concept.

POLICY IMPLICATIONS

Policy recommendations offered by Dunning in his IDP model are rather scant (Dunning 1997, p. 237–238). In stage 1 government

intervention, in order to stimulate FDI inflows, takes the form of providing basic infrastructure and upgrading human capital via education and training. Economic policies are supposed to focus on import protection via domestic content regulations and export subsidies. There is also limited government involvement in upgrading domestic created assets via innovatory capacity stimulation (Dunning, ibid.).

In stage 2 of the ideal IDP, the main trends of government policy toward inflowing FDI do not differ from those identified in stage 1. Import protection embraces now also tariff and non-tariff barriers and stress is on development of domestic firms' technological capabilities. Outward FDI is influenced by government-induced push factors, very similar to those recommended for FDI inflows: export subsidies and technology development or acquisition (Dunning, ibid.).

Poland has only partially followed those prescriptions in her economic policies so far. Extensive import protection measures were applied in stage 1, but were falling in stage 2, especially in trade with the EU countries as the 2004 entry into the EU drew closer. Infrastructure development, both in stage 1 and 2, has been quite visible but still much lies ahead, especially in creating a network of motorways compatible with EU standards. The most visible advances so far have been in telecommunications, education and training.

A redirection of attention is necessary to focus more on outward rather than on inward FDI. In strengthening competition of Polish vis-à-vis foreign firms, and in stimulating outward FDI, the weakest point however has been the practical absence of a comprehensive and coherent government program of technological upgrading and development oriented towards domestic firms. This weakness is turning gradually into a pressing need as Poland attempts to pass into stage 3 of her IDP and Polish firms are beset by this technological gap which hinders their competitiveness in foreign markets, especially in countries positioned in more advanced stages of their IDP.

An alternative solution lies of course in providing those firms with funds for which they could develop or secure access to new technologies and products without or with minimal direct government assistance. Such support could take the form of government induced financial and fiscal measures as well as fostering and promoting mergers and acquisitions or business alliance formation, the notion of which is still quite alien to most small and medium sized Polish firms.

The market alternative for funding technology development should include state encouragement of venture capital and/or private equity investments via privatisation of state holdings in large companies in R&D intensive industries.

Also in order to reinforce the identified trend of the growth in importance of the service industries, the above measures should have such sectoral focus clearly delineated. Nevertheless the manufacturing sector requires more technology upgrading as well, directed towards the identified industry leaders: mechanical and metal products, the motor industry and petroleum. And lastly, more effort on the part of government promotion programs is needed to investigate and change the negative country image effects afflicting sales of Polish products abroad, especially in the services and industrial product categories, attempting to compete with local and global players with well known and established brands.

END NOTES

1. O-specific advantages denote ownership advantages of firms, such as brand name, ownership of proprietary technology, or lower costs due to economies of scale.
2. L-specific advantages denote a country's advantages as a locus for investment vis-à-vis other countries. Such advantages may include large markets, low input costs, tax and financial incentives, or strategic geographic location.
3. For a comprehensive analysis of Poland's competitiveness, see Weresa (2007).

REFERENCES

Antalóczy, Katalin and Éltető, Andrea (2003). Outward Foreign Direct Investment in Hungary. Motivation and Effects. In Marjan Svetlicic, and Matija Rojec (Eds.), *Facilitating Transition by Internationalization: Outward Direct Investment from Central European Economies in Transition*. Aldershot: Ashgate, 155–174.

Akoorie, M. (1996). New Zealand: The Development of a Resource-rich Economy. In J.H. Dunning, and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 174–206.

Barry, F. (1999). FDI and Industrial Structure in Ireland, Spain, Portugal and the UK: Some Preliminary Results. *Annual Conference on the European Economy*. ISEG, Lisbon, Portugal, December.

Barry, F., Goerg, H. and McDowell, A. (2003). Outward FDI and the investment development path of a late-industrializing economy: Evidence from ireland. *Regional Studies*, *37*(4), 341–349.

Barry, F. and Kearney, C. (2006). MNEs and Industrial Structure in Host Countries: A Portfolio Analysis of Irish Manufacturing. *Journal of International Business Studies*, *37*(3), 392–406.

Bellak, C. (2001). The Austrian Investment Development Path. *Transnational Corporations*, *10*(2), 68–107.

Calderón, A., Mortimore, M. and Peres, W. (1996). Mexico: Foreign Investment as a Source of International Competitiveness. In J. H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 240-279.

Clegg, J. (1996). The United Kingdom: A Par Excellence Two-Way Direct Investor. In J.H. Dunning, and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 42–77.

Dunning, J.H. (1981). Explaining the International Direct Investment Position of Countries: Towards a Dynamic or Developmental Approach. *Weltwirtschaftliches Archiv*, *117*, 30–64.

Dunning, J.H. (1986). The Investment Development Cycle Revisited. *Weltwirtschaftliches Archiv*, *122*, 667–677.

Dunning, J.H. (1997). *Alliance Capitalism and Global Business*. London and New York: Routledge.

Dunning, J.H. and Narula, R. (1994). Transpacific Direct Investment and the Investment Development Path: The Record Assessed. *Essays in International Business*, *10*, 1–69.

Dunning, J.H. and Narula, R. (1996). The Investment Development Path Revisited: Some Merging Issues. In J.H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. London and New York: Routledge, 1–41.

Dunning, J. H. and Narula, R. (Eds.) (1996). *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. London and New York: Routledge.

Dunning, J.H., and Narula, R. (2002). The Investment Development Path Revisited. In J. H. Dunning (Ed.), *Theories and Paradigms of International Business Activity. The Selected Essays of John H. Dunning, Volume 1*. Cheltenham, UK and Northhampton, MA: Edward Elgar, 138–172.

Durán, J.J. and Úbeda, F. (2001). The Investment Development Path: a New Empirical Approach. *Transnational Corporations*, *10*(2), 1–34.

Durán, J.J. and Úbeda, F. (2005). The Investment Development Path of Newly Developed Countries. *International Journal of the Economics of Business*, *12*(1), 123–137.

Gorynia, M. and Wolniak, R. (2003). Polish firms in the european union. Their internationalization projections and perspectives. *Economic Studies*, *1–2*, 31–44.

Gorynia, M., Nowak, J., and Wolniak, R. (2005a). Fostering Competitiveness of Polish Firms: Some Musings on Economic Policy and Spatial Expansion. In E. Kaynak and T.D. Harcar (Eds.), *Global Business: the Challenges and Responsibilities in a World of Shifting Alliances. Advances in Global Management Development*. Vol. XIV.

Gorynia, M., Nowak, J., and Wolniak, R. (2005b), Poland and its Investment Development Path. *Proceedings of the 31st EIBA Conference in Oslo, Norway, December 10–14*.

Gorynia, M., Nowak, J., and Wolniak, S. (2006). The Investment Development Path of Poland Re-visited: A Geographic Analysis. *Proceedings of the 32nd Annual EIBA Conference, Fribourg, December 7–9*.

Graham, E. M. (1996). The United States: Some Musings on Its Investment Development Path. In J.H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. London and New York: Routledge, 78-100.

Kumar, N. (1996). India: Industrialization, Liberalization, and Inward and Outward Foreign Direct Investment. In J.H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 348–379.

Lall, S. (1996). The Investment Development Path: Some Conclusions. In J.H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. London and New York: Routledge, 423–441.

National Bank of Poland (2000, 2001, 2002, 2003, 2004 and 2005). Inflows and Outflows of FDI by Country and Sector, Warsaw, Poland.

Twomey., M. (2000). The canadian experience with the investment development path. *Canadian Economic History Conference*, Stratfort, Ontario, 20–22 October.

Van Hoesel, R. (1996). Taiwan: Foreign Direct Investment and the Transformation of the Economy. In J.H. Dunning, and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 280–315.

Weresa, M.A. (Ed.) (2007). *Poland Competitiveness Report 2007. The Role of Foreign Direct Investment*. Warsaw: Warsaw School of Economics-Publishing.

Wolniak, R. (2006). Outward FDI from Poland. Presentation at the 32nd Annual EIBA Conference, Fribourg, Switzerland, December 7–9.

Zhang, H.-Y. and Van Den Bulcke, D. (1996). China: Rapid Changes in the Investment Development Path. In J.H. Dunning and R. Narula (Eds.), *Foreign Direct Investment and Governments*. London and New York: Routledge, 380–422.

SUBMITTED: July 2007
FIRST REVISION: September 2007
SECOND REVISION: November 2007
ACCEPTED: December 2007