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The Investment Development Path for Poland in the Period 1994-2016

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Abstract: The aim of the paper is to analyze theoretical premises and their implications for empirical research in the field of the theory of the investment position development by J. H. Dunning for Poland in the years 1994-2016. The main conclusions from this analysis are as follows: we do not observe a definite change in the net outward investment and economic development stage from Stage 2 to 3, i.e., J. H. Dunning's investment development path (IDP). However, we can confirm that some changes occur that prove that economy is at the beginning of Stage 3 as the following symptoms are observed: a drop in the levels of: FDI outward stock net (NOI), net outward FDI stock per capita and an increase in Outward Performance Index (OPI). Nevertheless the GDP growth rate in the examined period reveals a declining trend which weakens the GDP growth rate per capita, and consequently economic growth which accompanies changes in investment position.

Key words: FDI; GDP; Investment Development Path (IDP); J. H. Dunning; NOI; OPI (OND)
JEL codes: C50, F21, F37, F43, O11, O47

1. Introduction

The aim of the paper is to analyze theoretical premises and their implications for empirical research in the field of the theory of the international investment position development by J. H. Dunning for Poland in the years 1994-2016. Analysis of theoretical premises allowed us to raise the following research questions: (1) Has Poland experienced a decline to the negative investment position significant enough to confirm its entering Stage 3 of IDP? (2) Have the changes in outward stock (NOI) been accompanied by GDP growth and GDP per capita growth? In this article, we use methods from literature used in international economics and international finance, and econometric methods of regression analysis. Empirical analysis was carried out with the use of the OECD, UNCTAD, GUS (Central Statistical Office, CSO) and NBP (National Bank of Poland) databases and index analysis.

2. Main Assumptions of Investment Development Path

The model of investment development path (IDP) introduced by Dunning (1981, 1991)[1] explains the

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[1] One should notice that the IDP concept has been developed by many authors. 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 1997), Dunning and Narula (1994, 1996 and 2002), and Narula and Dunning (2000). Several other authors have made contributions to the development of this concept, including Lall (1996), and Durán and Úbeda (2001 and 2005). The copyright development of the research is presented in more detail in Kosztowniak (2018).

relationship between the net outward investment (NOI or NOIP) position of a country (i.e., the gross outward FDI stock minus the gross inward FDI stock) and its path of economic development. The IDP traces a J-curve for the first four stages plus a wiggle or "random walk" for Stage 5 in which beyond a certain point in the IDP, the absolute size of Gross National Product (GNP) is no longer a reliable guide of a country's competitiveness; neither indeed is the NOI position (Narula, 1996, p. 11; Gorynia, Nowak, Wolniak, 2010, p. 68).

Moreover, the IDP is implicitly built on the notion that the global economy is necessarily in terms of the various stages of economic development in which its diverse constituent nations are situated. This path is framed in terms of Dunning's eclectic paradigm of international production. The IDP suggests that countries tend to go through main stages of development and these stages can be usefully classified according to the propensity if those countries to be outward/or inward direct investors.

It is very important that the IDP essentially traces out the net cross-border flows of industrial knowledge, the flows of industrial knowledge, the flows that are internalized in FDI and that restructure and upgrade the global economy, although there is also the non-equity type knowledge transfer such as licensing, subcontracting, and the like. That is why, the IDP can thus be interpreted as a cross-border net learning curve exhibited by a nation that successfully moves up the stages of development by acquiring industrial knowledge from its more advanced "neighbors". A move from the J-shaped bottom or the negative NOI (NOIP) segment to the "wiggle" segment of the IDP indicates an equilibrium in knowledge dissemination — that is, a narrowing of the industrial knowledge gap between the advanced and the catching-up countries. What is more, the IDP theory is quite similar to the Flying Geese Paradigm (FG) of Catch-up Growth developed by Ozawa. They both emphasize the hierarchical nature of external commercial relations, especially when the IDP theory is viewed from the perspective of developing countries (Ozawa, 2005, pp. 108-109).

3. Empirical Analysis of the IDP

3.1 Review of Current Findings

In Polish literature dealing with this subject, attempts to verify IDP for Poland have been undertaken for the following years, e.g.:

- 1990-2006 M. Gorynia, J. Nowak, R. Wolniak (2010, pp. 66-87); they stated that Poland (like Bulgaria, Czech Republic, Romania, Hungary and Slovakia) has not reached Stage 3 of IDP yet. According to the NOIP model it is in the second part of Stage 2. It should indicate a decrease in the negative value growth rate. On the other hand, the moment at which the growth rate equals 0 will signal reaching Stage 3. Identification of this moment is difficult because periodic and random changes in the growth rate of NOIP per capita were indicative for all 6 countries examined. What is more, too low a level of foreign investment made by Polish enterprises is the element which does not let us state unambiguously whether the country entered Stage 3.
- 1995-2011 W. Lizińska, R. Marks-Bielska (2014, pp. 707-731); they identified Polish economy to be at the beginning of Stage 3. Transition through the first two stages of the IDP path may have occurred relatively quickly (especially in the countries undergoing the process of systemic and economic transformations); on the other hand, transition through subsequent stages will take longer and may have a difficult to define effect from the point of view of the impact on economic development of the

country[2].

3.2 Analysis of the IDP for Poland in the Years 1994-2016

Prior to detailed analysis of FDI states (FDI stocks) and FDI outward stock net, it is worth focusing on tendencies in these investment flows in Polish economy as ultimately these cumulated flows determine the investment position net and determine economic growth (Kosztowniak, 2013, pp. 203-2012).

In the years 1994-2016 these flows changed over time. Whereas in the years 1994-2000 (7 years) a clear trend to increase FDI outflows net was noted (corresponding to maintenance of Stage I), the following years brought about significant fluctuations in them. The years 2004 and 2007 brought about an explicit surplus in investment inflows over investment outflows. On the other hand, from 2007 a declining trend in FDI outflows net was observed (except for 2011 and 2014). Especially in the years 2012-2013 FDI outflows net decreased, yet it was not the result of expansion of Polish companies in foreign markets but a simultaneous significant drop in FDI inflows. In the years 2014-2016 also FDI outflows net decreased. However, this trend may also turn out to be short-term. A partial explanation of this situation is re-organization of transnational organizations capital which purposefully increased their direct investment abroad (withdrawing it from Poland) in connection with the changes in income tax regulations concerning investment fund societies (NBP, 2017, pp. 33-35) (Figure 1).

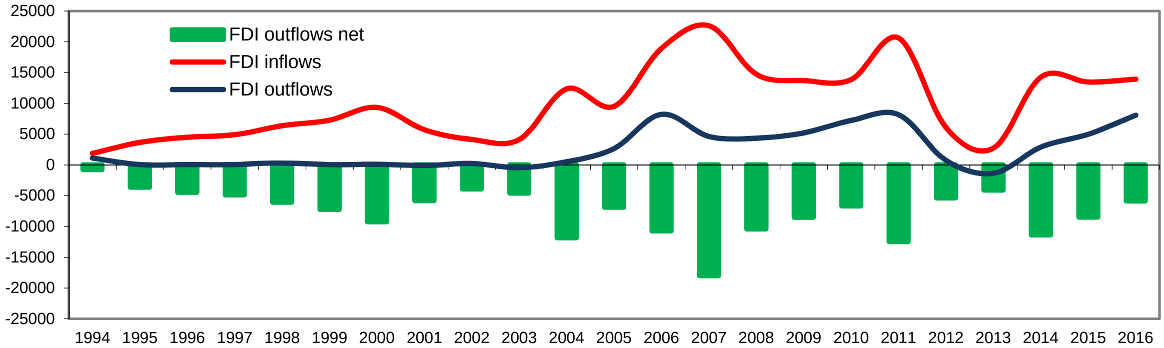

Figure 1 FDI Flows and FDI Outflows Net in Poland in Years 1994-2016 (Millions USD)

Note: FDI Outflows Net = FDI Outflows – FDI Inflows

Source: Author's own compilation on the basis: NBP.

Now, let us proceed to proper analysis of FDI states (FDI stocks) and FDI outward stock net (NOI, NOIP). Referring the IDP theoretical curve to changes in FDI net stock (not taking into account structural changes) three stages can be distinguished: Stage 1: 1994-2004, Stage 2: 2004-2013 and being now in question Stage 3: 2013-2016. To identify clearly Stage 3 of IDP, changes in decreased FDI outflows net should last at least several years in order to prove that this tendency is stable (Figure 2).

An attempt at econometric measurement of relationships occurring between outward stock net (NOI) and GDP *per capita* in Poland is determined regressions in the period 1994-2016. The highest degree of determination as well as of correlation is presented by these relationships with polynomial regression at $R^2 = 0.9759$ and at $R = 0.9879$, then with logarithmic regression at $R^2 = 0.9314$, and $R = 0.9651$ and linear regression at $R^2 = 0.5711$ and $R = 0.7557$. The trend curve for the polynomial regression allows us to conclude about the beginnings of Stage 3.

[2] In foreign literature the research concerning IDP was carried out for both groups of countries, like EU (Iacovoiu M. Panait, 2014, pp. 33-40) or CEE countries (Narula, Guimón, 2010, pp. 5-19) and individual countries, e.g., Portugal (Buckley & Castro, 1998, pp. 1-15).

While the IDP research for Poland carried out so far (Gorynia, Nowak, Wolniak oraz Lizińska and Marks-Bielska) postulated that Stage 2 was successfully reached or that there are symptom of the beginnings of Stage 2, this study prolonged to 2016 confirms the previous theses (Figure 3).

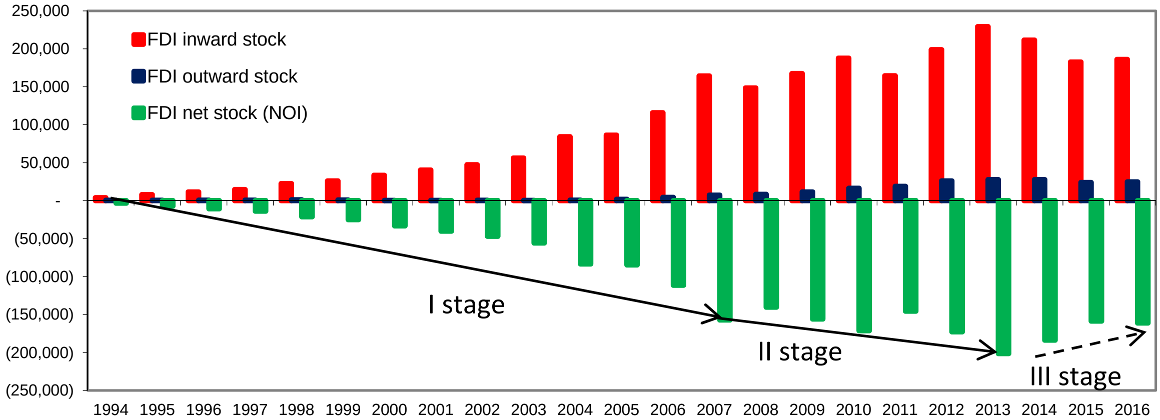

Figure 2 FDI Stock and FDI Outward Stock Net in Poland in Years 1994-2016 (Millions USD)

Note: FDI Outward Stock Net (NOI) = FDI Outward Stock – FDI Inward Stock

Source: Author's own compilation on the basis of: NBP.

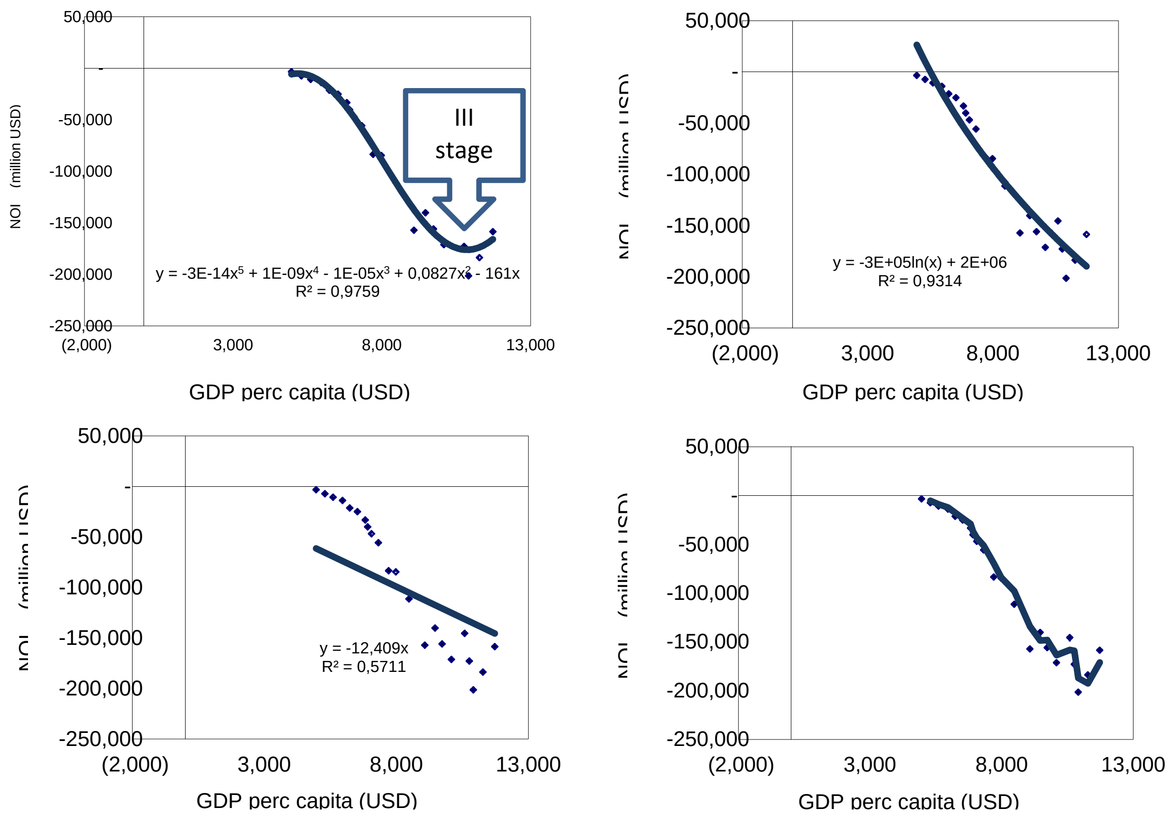

Figure 3 The Relationship between FDI Outward Stock Net (NOI) and GDP *per capita* in Poland in Years 1994-2016 (million USD)

Source: Author's own compilation on the basis of: NBP and UNCTAD.

An additional indicator — Outward Performance Index (OPI) can be used to identify more thoroughly the moment of transition to another IDP stage, especially from Stage 2 to Stage 3. UNCTAD describes this index by the equivalent symbol OND.

What is the OPI? The Outward FDI Performance Index captures a country's relative success in investing elsewhere in the global economy via FDI. If a country's share of global outward FDI matches its relative share in global GDP, the country's Outward FDI Performance Index is equal to one (1.0). A value greater than one indicates a larger share of FDI relative to GDP; a value less than one indicates a smaller share of FDI relative to GDP. A negative value means a country disinvested elsewhere in that period.

From the point of view of positioning on IDP path, the index value of a given country close to 1.0 or higher than 1.0 means that this country is more predisposed to reach on its IDP trajectory a subsequent stage of development and in this case reach Stage 3. The OPI_t index is calculated following the formula:

$$Outward\ Performance\ Index\ (OPI_i) =$$

$$= \frac{Outward\ FDI\ flows_{\ i-country}}{Outward\ FDI\ flows_{\ world}} : \frac{GDP_{\ i-country}}{GDP_{world}}$$

This means that:

$$OPI_i > 1.0 \implies +NOIP_i \text{ and } OPI_i < 1.0 \implies -NOIP_i$$

In the examined period, in the years 1994-2000, the OPI index revealed low levels. After 2000 the index fluctuated more and more. It reached the highest levels in 2006 (0.284), 2010 (0.443) and in 2016 (0.443). The highest levels (0.443) reached so far are nearly a half of the threshold which is 1.0, which is targeted by Poland to clearly enter Stage 3 (Figure 4).

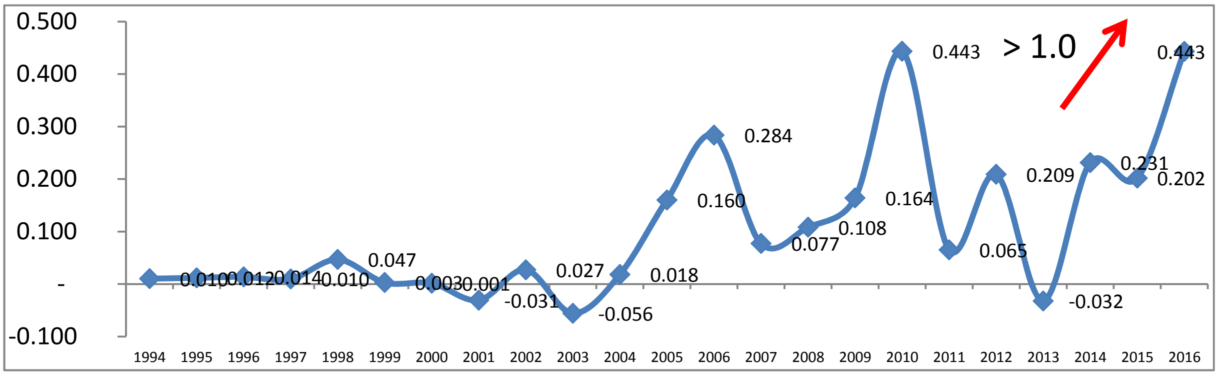

Figure 4 Outward Performance Index (OPI) in Poland in the years 1994-2016

Source: Author's own compilation on the basis of: NBP and UNCTAD.

Analysis of net outward FDI stock *per capita* indicates that in recent years, i.e., 2013-2015 it decreased. However, 2016 noted another rise. Such a situation confirms that so far we have not seen a long-term tendency which would clearly indicate that Poland reached Stage 3 (Figure 5).

It must be added that if conditions of Poland's investment attractiveness for foreign entities as well as for Polish companies which plan their activities abroad change, transition to Stage 3 can again become difficult to identify due to sudden deepening of the negative value of FDI outward stock net. When one observes dynamic changes in global economy (especially in the European Union and USA), it seems that stable conditions for Poland in the period 1994-2004 will never come back. This may mean the occurrence of short-term changes (increases/decreases) which make unambiguous identification of the actual stage difficult. However, an indication of reaching Stage 3 of IDP will be a clear, unidirectional decreasing trend (5-7 years) in the negative investment position.

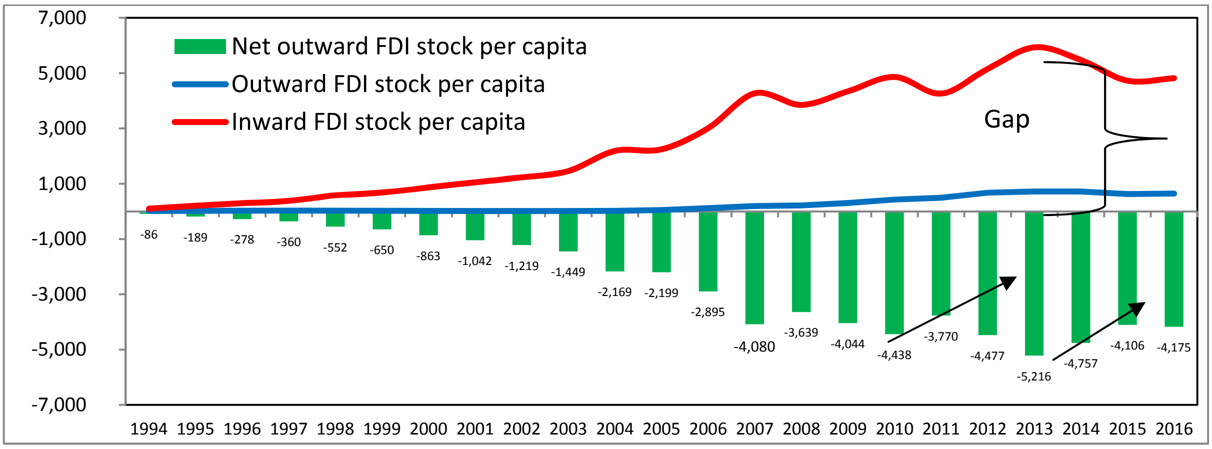

Figure 5 FDI Stock *per Capita* in Poland in Years 1994-2016 (USD)

Note: Net outward FDI stock per capita = Outward FDI stock *per capita* – Inward FDI stock *per capita*.

Source: author's own calculations on the basis of: UNCTAD.Stat.

4. Summary

In the years 1994-2016 the net investment position was unfavourable in Poland. The negative investment position deepened in the years 1994-2013. The scale of direct investment by foreign entities definitely exceeded investment by Polish entities abroad. This also means that that Polish entities revealed a low level of competitiveness and expansion in foreign markets. A more evident decline in the negative investment position occurred only in the years 2014-2016. Yet, it is too short a period to become the basis of credible assessment. Moreover, a positive tendency was the fact that the level of net outward FDI stock *per capita* lowered at the simultaneous growth of Outward Performance Index (OPI). Yet, in the years 1994-2016 we did not observe a definite change in the net outward investment and economic development stage from Stage 2 to 3 in Poland, i.e., J. H. Dunning's IDP. Still some symptoms of NOI drop and OPI growth appeared (2014-2016) which prove that entering Stage 3 is close. If the negative balance of the investment position declines in the next years, then the nearest 5-7 years can confirm the presence of Polish economy in Stage 3. However, it seems that the probable scenario of events will cover the persistent short-term fluctuations of the investment position balances. These fluctuations will make it difficult to diagnose unambiguously whether it is Stage 2 or already Stage 3.

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