Multinational companies from transition economies and their outward foreign direct investment

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Abstract

Multinational companies (MNCs) based in 26 post-communist transition economies (PTEs) emerged during the 1990s. Their outward foreign direct investment (OFDI) boomed dramatically from 2000 to 2007 in these countries, and then muddled through the financial crisis and great recession at difference paces on different paths. This difference is revealed in a sample of 15 PTEs for which data are available from 2000 to 2015. Most of these economies appear to be on the brink of moving from the second to the third stage of Dunning's investment development path. The geographical distribution of their OFDI favors host countries located in other PTEs, developed market economies, and tax havens while their industrial structure is more concentrated on services rather than on manufacturing and the primary sector. PTE-based MNCs primarily adopt a strategy of market-seeking OFDI.

Econometric testing shows that push factors are major determinants of OFDI. The results demonstrate that OFDI is determined by the home country's level of economic development, the size of its home market, and its rate of growth as well as technological variables: OFDI decreases with an increase in the number of scientists in the home economy and with an increase in the share of high-tech products in overall exports, exhibiting a negative technological gap. A lagged relationship between OFDI and previous inward FDI suggests that Mathews' linkage-leverage-learning theory is relevant in the case of PTEs.
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1. Introduction

Multinational companies (MNCs) based in 26 post-communist transition economies (PTEs) emerged about twenty-five years ago in the wake of the transition to a market economy. This study attempts to analyze the emergence, development, major features, and determinants of outward foreign direct investment (OFDI) by MNCs originating from PTEs. While the scope should cover all 26 PTEs, this study focuses on a sample of only 15 countries due to non-comprehensive data and rather small OFDI flowing from 11 PTEs. OFDI from PTEs decreased due to the financial crisis and great recession after 2007. This study analyzes the emergence of their OFDI, MNCs, and characteristics; they vary markedly depending on the PTEs' OFDI home countries. Their major strategy is market-seeking, while a significant part of MNCs' expansion from PTEs occurred through cross-border mergers and acquisitions (M&As).

The theoretical background in this study is John Dunning's (Dunning, 1981; Dunning and Narula, 1998) well-known and thoroughly analyzed investment development path (IDP) model, a part of which the OFDI literature in PTEs dwells upon[1]. However, when it comes to testing this model, since Duran and Ubeda (2001), most authors not only commonly used the net inward-outward (NIO) FDI stock balance or position as the dependent variable, but also adopted both inward FDI and OFDI as variables *per se*. Insofar as the present study focuses on PTEs' OFDI exclusively, it is enough to have OFDI as the dependent variable, following Andreff's (2003) method of econometric testing to verify that push factors are IDP explanatory variables, while variables indicating PTEs' attractiveness as host countries for inward FDI can be ignored. This approach enables to check whether the current push explanatory variables are similar to those that pushed PTEs' investment abroad in the 1990s and whether they are in tune with the push determinants of OFDI from new-wave emerging countries (Andreff, 2017).

2. Sampling PTEs in terms of outward foreign direct investment

During the 1980s, 14 countries were centrally planned economies with a communist regime: Bulgaria, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, Mongolia, Poland, Romania, the USSR (15 republics), and Vietnam as CMEA (Council for Mutual Economic Assistance) members, and Albania, China, North Korea, and Yugoslavia (6 republics) as non-CMEA members. Usually, the so-called socialist-orientated developing countries[2] (Andreff, 1989) were not considered in samples of communist centrally-planned economies. At the beginning of the transition toward a market economy and given the break-up of Czechoslovakia, the USSR, and Yugoslavia, and German reunification, the world economy was left with 33 PTEs. All 33 muddled through a stage of communist centrally planned economies in their past history, though not all appear in the current study's sample of PTEs. For one, North Korea and Cuba are not yet clearly

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[1] In the literature on Poland's OFDI, Dunning's IDP model is very much popular—Gorynia et al. (2009, 2010, 2012), Radlo and Sass (2012), Radlo (2012), Buczkowski (2013), Zimny (2013), Ciesielka (2014), as well as in Masca and Vaidean (2010) for Romania, and Ferenčiková and Pappová (2010) for Slovakia.

[2] Afghanistan, Algeria, Angola, Benin, Burma, Congo, Ethiopia, Guinea, Iraq, Madagascar, Mozambique, Nicaragua, South Yemen, Syria, and Tanzania.

'post'-communist. Regarding Mongolia and Vietnam, knowledge is rather scarce about their OFDI because OFDI from Mongolia is nearly non-existent while Vietnamese OFDI emerged only recently in 2014. China and Russia are usually dealt with as two of the BRICs nations in studies of their OFDI (Andreff, 2014, 2015, 2016a). Since Russia is a significant economic neighbor and partner for nearly all other PTEs, it is retained in the sample. For China, interested readers should refer to the aforementioned studies following a similar methodology to compare the OFDI from China with other PTEs.

Consequently, the PTE sample comprises of 26 countries, Russia and Vietnam including (Appendix) 10 PTEs that joined the EU in 2004 and 2007, 9 former Soviet Union republics,[3] 5 former Yugoslavia republics (with Croatia as the last PTE having joined the EU), Albania, and Vietnam. However, for the remaining 11 PTEs, the value of OFDI stock is zero for several or all years 2000–2015, which were retained for data collection and treatment. They were eventually excluded from the PTE sample in terms of OFDI and MNCs. These countries include Armenia, Belarus, Bosnia-Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Macedonia, Moldova, Montenegro, Serbia, and Vietnam. Consequently, the operational sample contains 15 countries: 11 EU members (Croatia included), 3 former Soviet republics (Russia, Ukraine, Azerbaijan), and Albania. The zeros appearing in the Appendix for some years and countries may have one of the two following meanings: either the country had not invested at all abroad in the form of OFDI (possibly Kyrgyzstan) or its OFDI stock never reached $100 million, a threshold below which UNCTAD data collection is not always feasible or complete.

Finally, all 15 countries kept in the sample held OFDI stock of at least $300 million in 2015 (Albania with the lowest), with a maximum of $252 billion for Russia in the same year. The second check is that data for all 15 countries are available for all variables considered in the econometric testing.

3. The emergence of PTE-based multinationals

The prehistory of OFDI from future PTEs began in the 19th century with Russia and some Central European countries, from which companies like the Czechoslovak Bata or the Hungarian Tungsram and Medicor started investing abroad in the interwar period. OFDI from Soviet and Central Eastern European countries never entirely vanished during the communist era, even though it remained quantitatively limited, as assessed below.

From 1881 to 1914, Russia was a FDI net importer, as it was not developed enough as an economy to significantly invest abroad. In 1913, inward FDI amounted to 553 million RUB and was markedly larger than the OFDI in the balance of payments (Andreff, 2016b). Nevertheless, Russian enterprises began to invest in China, Persia, and Mongolia in the last two decades of the 19th century (Bulatov, 1998, 2001). In 1914, the current value of Russian OFDI stock reached $3.8 billion (Wilkins, 1990). During the interwar period, the USSR withdrew its OFDI, though not all of it. Trading subsidiaries were established in Afghanistan, Iran, Mongolia,

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[3] Tajikistan, Turkmenistan and Uzbekistan are not mentioned as actual or significant investors abroad in any kind of published document whereas the three Baltic States are counted with PTEs that are EU members as well as Slovenia (the sixth former Yugoslav republic).

and Turkey to sustain foreign trade. Some Soviet companies invested in the West, such as the Russian Wood Agency in London (1923), Anglo-Soviet Shipping in London (1923), Amtorg in New York (1924), Moscow Narodny Bank in London, and Eurobank in Paris.

In the wake of Brezhnev's economic reforms, central foreign trade organizations were allowed to invest abroad from the USSR and other CMEA countries. An accepted estimate of OFDI by all CMEA countries (Zaleski, 1983) was $724 million in 1978, excluding OFDI in banking, which was assessed at another $325 million. The overall amount was slightly over $1 billion, that is, 0.3% of worldwide OFDI stock in 1978 (Andreff, 1987). Various estimates of OFDI from CMEA countries were published (McMillan, 1987), the last one for 1990 in a United Nations study (UNTCMD, 1992); of Eastern Europe's OFDI stock amounting to $1,226 million, $699 million was held by Soviet enterprises in industrial subsidiaries and $13 million by Soviet banks. Parent companies of so-called "red multinationals" from CMEA countries (Hamilton, 1986) were state-owned enterprises (SOEs) involved in foreign trade and business with the West. They invested in trade, banking, finance, and other services rather than in manufacturing. In developing countries, red multinationals were more concentrated in raw materials and power consumption. Specific to red multinationals compared to other MNCs was a slower growth in their OFDI during the 1980s, since centrally planned economies systemically hindered OFDI by SOEs until Gorbachev's perestroika.

A 1987 decree adopted by the Council of Ministers of the USSR re-opened the country to joint-ventures with foreign partners, allowing them to take a maximum 49% share in Soviet firms, followed with another decree (1989) and a law (1991) that definitely allowed inward FDI by foreign investors without restriction. This legislation, kept by the Russian Federation, was a preliminary condition for foreign countries to accept OFDI from Russian firms. The same process emerged in Central and Eastern Europe with earlier opening to inward FDI in Yugoslavia (1967), Romania (1971), Hungary (1972), Poland (1976), and all other CMEA countries between 1986 and 1992. In a sense, this was a launch pad for their coming OFDI.

From 1990 to 1993, two opposite series of facts emerged. The first was the disintegration of the CMEA and the break-up of the former Soviet Union. OFDI from Central and Eastern European countries (CEECs) and from the newly independent states (the Commonwealth of Independent States (CIS) countries) was reduced to practically nothing in 1991–1993, according to UNCTAD data that exclude capital flight. Former red multinationals faced constraints that dried up their liquidity and their capacity to finance their subsidiaries abroad; the latter, which were under-capitalized, could not survive without new capital transfers from parent companies between 1990 and 1993. In its early years, the transition process boiled down to attracting foreign investors (not with much success), while legislation was even less favorable toward outward FDI for fear of "crown jewels" being transferred under foreigners' control through OFDI and due to balance of payments concerns. Public opinion was hostile to OFDI associated with capital flight. The expansion of PTE firms abroad was often interpreted as capital runaway, if not an exodus, toward more friendly and stable, less risky foreign investment climates than the one prevailing during the so-called transitional re-

cession in PTEs (Kornai, 1994). Round-tripping OFDI[4] was exemplary of such a strategy, in particular from Russia (Kalotay, 2004a; Vahtra and Liuhto, 2004).

A second observed fact was that various companies spontaneously emerged as new multinationals, the so-called "born multinationals" (Liuhto, 2001). The break-up of the Soviet Union, Yugoslavia, and Czechoslovakia into new independent states generated a number of firms whose assets were divided among two or more successor states. For instance, an inherited division of labor across former Soviet republics organized by nation-wide SOEs gave rise to MNCs overnight. Belonging to various successor states made many MNCs at the outset of the USSR's disintegration, most having their parent's headquarters in Moscow. Of course, these firms continued producing and investing away from Russia in other CIS countries after 1991. To quite a lesser extent, the same process emerged in other countries that broke up (the former Czechoslovakia and Yugoslavia), where firms were much less focused on—and less centralized from—Prague and Belgrade than Soviet firms were on Moscow. For example, Slovenia lost about 50% of the Yugoslav domestic market following its secession in 1991, but kept export capabilities through its network of newly 'foreign' subsidiaries located in former Yugoslav republics.

Then, OFDI from PTEs actually started spreading abroad after 1993 (Andreff, 2002) and skyrocketed between 2000 and 2007. From 1994 to 2000, among the PTEs, the biggest OFDI stock was held by MNCs from Russia, then Hungary, Poland, Croatia, the Czech Republic, and Slovenia. A technical note must be made here. Among the OFDI stock/flow from one country, say Hungary, some can be a direct investment by Hungarian MNCs abroad and part can be defined as indirect investment abroad when it is a 'relocation' by Hungarian subsidiaries of foreign (Western) MNCs that previously invested in Hungary. Surely, the second part inflates the OFDI data reported by UNCTAD, but it is no less sure that it does not represent the most significant share of overall OFDI in PTEs, namely in the case of Hungary (Antalóczy and Sass, 2008). This simply means that foreign investors eager to invest in other CEECs used Hungary as a hub. Slovenia played a similar role as a hub for investors in former Yugoslav republics, and Estonia as a hub vis-à-vis other Baltic states (Andreff, 2003). This process transformed some Hungarian, Slovene, and Estonian subsidiaries of foreign firms into genuine MNCs.

4. From the roaring 2000–2007 to muddling through the crisis

Despite fast growth in the early 2000s, the global share of PTEs' OFDI, or even its share in European OFDI stock, remained modest (Jaklic, 2007). In 2007, the total OFDI stock from all 26 PTEs was 2.1% of overall worldwide OFDI stock and 3.8% of Europe's overall OFDI stock. These figures changed to 2.4% and 5.0% in 2011, and 1.7% and 4.0% in 2015, respectively.[5] Moreover, deep disparities occur across the PTE sample: Russia alone represents between 60% and 80% of overall OFDI stock from PTEs, depending on the year, between 2000 and 2015. From this observation derives a frequent joke about Russia being

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[4] Round-tripping OFDI refers to a circular investment such as, for instance, Russian enterprises and citizens investing in offshore companies, in particular in Cyprus and the Virgin Islands, to reinvest the corresponding capital later on in Russia.

[5] OFDI stock from the PTEs is also quite smaller than OFDI stock from the BRICs, or from a sample of 13 New Wave Emerging Countries (Andreff, 2016a).

a giant[6] in a world of dwarfs—other PTEs—as far as investing abroad is con-
cerned. However, Russia is a "small giant" when its OFDI stock is compared to
some of biggest investors abroad worldwide; only 2.7% of OFDI stock from the US,
4.5% of OFDI from the UK, 5.5% of OFDI from France, and 6.2% of OFDI from
Germany in 2007, and 1.0%, 3.8%, 4.5%, and 3.2%, respectively, in 2015.

The idea of the roaring 2000-2007s regarding PTEs' OFDI relies on two series
of statistics. First, Russia's OFDI exhibited the swiftest growth internationally,
even swifter than other BRICs' OFDI (Andreff, 2016b) over this time; this is con-
firmed in Table 1, where Russia's OFDI stock multiplied by nearly 21 between
2000 and 2007. Second, on average, PTEs' OFDI stock grew by 17 times from
2000 to 2007, with Estonia, Poland, and Ukraine ahead of other PTEs with mark-
edly higher figures than this average growth, while Azeri, Hungarian, Czech,
Romanian, and Slovenian OFDI stock grew faster than overall worldwide OFDI
stock. Benefiting from such growth, in 2007, Russia, Poland, and Hungary were
the leading investors abroad among the PTEs, and to a lesser extent, the Czech
Republic, Slovenia, Ukraine, Estonia, Azerbaijan, and Croatia.

With the financial crisis and great recession in 2008 and later on, the trend
changed dramatically. Russia's OFDI stock fluctuated around a stagnating trend
and was nearly of the same magnitude in 2015 as in 2007 (99% of its 2007 value),

Table 1
Outward foreign direct investment stock from transition economies: home country distribution.

Country	Distribution (%)					Increase (times)	
	2000	2004	2007	2011	2015	2007/2000	2015/2007
Albania	0.5	0.1	0	0	0.1	0	n.s.
Armenia	0	0	0	0	0.1	0	n.s.
Azerbaijan	0.5	2.5	1.4	1.2	3.6	9.4	3.3
Belarus	0	0	0	0.1	0.2	0	n.s.
Bosnia-Herzegovina	0	0	0	0	0.1	0	n.s.
Bulgaria	0.5	0.1	0.2	0.3	0.7	6	5.2
Croatia	4.5	2.3	1.0	0.9	1.3	3.9	1.6
Czech Republic	3.5	3.0	2.1	3.0	4.3	10	2.6
Estonia	1.5	1.4	1.8	0.9	1.4	19.7	1.03
Georgia	0	0	0	0.1	0.4	n.s.	17
Hungary	10.6	4.4	5.5	4.6	9.0	8.7	2.1
Kazakhstan	0	n.a.	0.6	3.8	5.6	n.s.	11.4
Kyrgyzstan	0	0	0	0	0	0	0
Latvia	1.0	0.2	0.2	0.2	0.3	4	1.5
Lithuania	0	0.4	0.5	0.4	0.5	n.s.	1.4
Macedonia	0	0	0	0	0	n.s.	1
Moldova	0	0	0	0	0	0	n.s.
Montenegro	0	0	0.1	0.1	0.1	n.s.	2
Poland	5.1	2.6	5.9	9.6	6.5	19.6	1.4
Romania	0.5	0.3	0.3	0.3	0.1	9	0.67
Serbia	0	0	0	0.8	0.7	0	n.s.
Slovakia	2.0	0.6	0.5	0.8	0.6	4	1.6
Slovenia	4.0	2.4	1.8	1.4	1.3	7.6	0.9
Ukraine	1.0	0.2	1.8	1.6	2.2	30.5	1.6
Vietnam	0	0	0	0	2.0	0	n.s.
Russia	62.6	79.5	76.3	69.8	58.9	20.6	0.99
Total ($ billion)	19.8	103.0	334.5	518.6	428.0	16.9	1.3

Source: UNCTAD.

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[6] Dura and Driga (2012) discussed Russian giants that invest in the Romanian economy.

displaying practically no growth. PTEs' OFDI stock only multiplied by 1.3 from 2007 to 2015. However, the crisis shock on OFDI is quite different across the PTEs. The most affected, with a slight decrease in their OFDI stock between 2007 and 2015, are Romania, Slovenia, and Russia. Then, the growth of OFDI stock from Estonia and Poland exhibited a marked slowdown. Buczkowski's (2013) claim that Polish OFDI has been only slightly affected by the crisis, and the economic crisis may help Polish entrepreneurs gain entry to foreign markets, even developed markets, in view of boosting their investment abroad, is not incorrect, but more of an overstatement. The same applies to the statement that the impact of the economic and financial crisis on the Ukrainian economy did not prevent Ukrainian firms from making several large investments abroad (Kononov, 2010). Those PTEs that performed best during the crisis in terms of OFDI growth are Kazakhstan, Bulgaria, Azerbaijan, and the Czech Republic, not Poland and Ukraine.

Throughout the crisis, the next biggest investor abroad after Russia is Hungary, with 9% of total PTEs' OFDI in 2015 followed by Poland with (6.5%), Kazakhstan (5.6%), and the Czech Republic (4.3%), then Azerbaijan, Ukraine, Vietnam, Estonia, Slovenia, and Croatia, while most PTEs have a share below 1% of overall PTE OFDI. In 2015, some PTEs maintain an insignificant OFDI stock: Albania, Armenia, Bosnia-Herzegovina, Montenegro, Romania — or even non-existent (below $100 million) OFDI, such as Kyrgyzstan, Macedonia, and Moldova.

The following examples show that the impact of the crisis on OFDI varies across the PTEs. Starting with Russia, and compared with other BRICs, its OFDI stock was by far the most unstable and the most affected by the crisis, suffering a 20% decrease in 2008, and down again 17% in 2011. However, its recovery was the strongest in the world, with the highest growth rate (74%) in 2010; the 2012–2013 recovery was milder. Russian OFDI was harshly affected by the crisis with a reduction in its stock value (not only a fall in outflows), due to both divestments from abroad and foreign asset depreciation in 2008. Russian MNCs have been stifled by a lack of external finance. Russian OFDI stock grew again in 2010, fueled by new investments abroad, foreign asset appreciation, and capital flight. These figures show that the crisis entailed a much higher instability in Russia than in other BRICs' OFDI. The Ruble depreciation since 2014 has brought bad news for further OFDI expansion and partly explains its continuous decline after its peak value in 2013 (Appendix). Russia's sanctions do not target Russian OFDI *per se*, but in practice, Russia's state-owned enterprises (SOEs) have to account for a country's sanction policy. Western sanctions, in turn, are targeted at roughly 200 Russian citizens and a few dozen firms, including Rosneft, Lukoil, Gazprom, and Novatek and banks such as Sberbank, Gazprombank, and VEB. The indirect impact of sanctions such as a deteriorating Ruble exchange rate and increasing interest rates (that hinder Russian OFDI) could be more significant than a direct effect on Russian firms' capability to invest abroad (Liuhto, 2015). The future of Russian OFDI in the West is bleak and shadowed with uncertainty.

In Hungary, the global crisis affected OFDI relatively quickly. In 2008, FDI outflows declined by 56%, followed by a modest recovery (5%) in 2009 (Sass and Kalotay, 2010). The drop in 2008 was related to a halt in large cross-border M&A deals that year. In 2008, the decline in outflows was larger than the world average, but its recovery in 2009 was in contrast with a global decline in worldwide OFDI. OFDI stock grew until 2007, and then declined over two years, as

Hungarian assets abroad depreciated. However, such OFDI stock depreciation was relatively mild and exhibited a relative resilience compared to the sharp drop in Hungarian GDP (–6.3% in 2009) and manufacturing production (–17.7%). Decreasing home country revenues reduced the scope of equity and other investments by Hungarian MNCs. The latter had to postpone or reduce projects abroad due to difficulties with financing. Some were under threat of takeovers by foreign investors, such as the attempt by Surgutneftegaz to acquire 26% of the MOL shares in 2009. The growth of Hungarian OFDI stock recovered in 2010–2013, stagnated in 2014, and was negative in 2015.

In Slovenia, most OFDI was concentrated in geographically close markets that were hit severely by the recession. Countries of former Yugoslavia hosted 70% of Slovene OFDI stock (Jaklic, 2016). The number of Slovene outward investors reached its peak in 2008, but started to fall afterwards. Major changes were seen in the list of top Slovene MNCs accounting for approximately 80% of Slovene OFDI stock. Initially, MNCs on the list were mainly large and old manufacturing firms, established before the transition or in the early 1990s. They had international networks, capacities, know-how, and political support, but faced several changes with the economic and financial crisis. Some were targets of M&As and some—often state-owned or politically influenced firms—did not adjust to the new, more competitive business environment or had no internationalization strategy, while a few reacted with increased internationalization and foreign investment. The total assets, sales, and employment of the top 25 Slovene MNCs decreased after 2008 since they have been divesting and downsizing. Small and medium-sized enterprises (SMEs) increased their internationalization and now represent a majority share among foreign direct investors, especially in high-tech activities.

In Ukraine, some of the previous foreign acquisitions together with unfavorable steel prices on world markets caused trouble for Ukrainian investors. In 2009, ISD could not cope with the debts of its foreign subsidiaries; consequently, rather than divert indebted foreign assets, ultimate ISD owners had to sell their controlling stake to a Russian investor. Similarly, Pryvat decided to sell the Alapaevsk steel mill in Russia. The global financial crisis forced Soyuz-Viktan to initiate bankruptcy proceedings both in Ukraine and Russia, where the company held two large distilleries.

These examples show that, since each PTE muddled through the crisis on its own path at its own pace, the crisis' impact on OFDI is highly scattered in magnitude and variety. In fact, to go further, the analysis should focus on each country, one by one, which is not the purpose of this study. However, Sass (2017) reminds us that theoretically, OFDI growth compared to the growth rate of inward FDI must be in a catch-up phase for countries in IDP stage 3.[7] The crisis inverted the NIO to GDP positions of individual CEECs, which reinforces Boudier-Bensebaa's (2008) previous conclusion—drawn before the crisis—that CEECs proceeded rather slowly in their IDP, particularly compared to Russia.

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[7] In a nutshell, the stages of the IDP model are as follows. In a first stage, a country hosts very little FDI and does not invest at all abroad. In the second stage, it becomes attractive to inward FDI and achieves its very first OFDI, being a net FDI importer. In the third stage, due to its new technological competences and low unit labor cost, the country attracts very significant inward FDI and its MNCs start to invest substantially abroad, though the country remains a net FDI importer. In the fourth stage, a country is developed and invests more OFDI than it receives in inward FDI; its FDI balance becomes positive. In the fifth and last stage, the now post-industrial country roughly reaches a balance between its inward and outward FDI.

5. Major features of OFDI from PTEs

Differences among PTEs are noticeable with respect to where their OFDI stands in reference to the aforementioned IDP model, although they are not striking in terms of geographical distribution and industrial structure.

5.1. IDP stages

A country moves from one IDP stage to the next when it breaks through some representative threshold. On the OFDI side of IDP, it is sometimes assumed that an OFDI/GDP ratio higher than 5% and an OFDI stock/inward FDI stock ratio higher than 25% are the hypothetical qualifiers for the third stage of the IDP model (Andreff, 2003), which is supposed to characterize emerging-market economies. With this reference in mind, Russia reached the first threshold in the early 2000s and met the second one even before 1999. Russia is definitely in the third stage of the IDP model, though its OFDI stock decreased after 2013; however, its GDP and inward FDI stock decreased, so the OFDI/GDP ratio was close to 20% and the inward/outward FDI stock ratio was close to 100% in 2015 (Table 2).

Before 2007, Russia, Hungary, and Slovenia were ahead of the other PTEs regarding OFDI and MNCs according to Kalotay (2007). Though Hungary had a leading position among the CEECs in the 1990s in its OFDI/GDP and OFDI/inward FDI ratios (Antalóczy and Sass, 2008), it reached the first threshold during the 2000–2007 OFDI boom and the second one during the crisis, partly due to a slowdown in inward FDI. Azerbaijan and Estonia reached the third stage of the IDP model before 2007, and Croatia, the Czech Republic, and Slovenia before 2015. Bulgaria, Lithuania, Poland, and Ukraine just met one of the two criteria before 2015, and are thus still stuck in the second stage, while Slovakia is lagging in the two ratios.

With the crisis, Azerbaijan, Estonia, Poland, Romania, and Ukraine regressed according to one of the two criteria. The global crisis, though it affected PTEs

Table 2
Comparative features of OFDI from post-communist transition economies (%).

PTEs	Outward FDI stock / GDP			Outward / inward FDI stock		
	2000	2007	2015	2000	2007	2015
Albania	2.7	0.9	2.6	20.0	4.3	6.3
Azerbaijan	9.4	14.2	2.9	11.1	71.2	69.4
Bulgaria	0.8	1.3	6.3	2.9	1.6	7.4
Croatia	4.1	5.8	11.3	18.4	7.8	20.8
Czech Republic	1.1	3.7	10.2	3.3	6.9	16.4
Estonia	5.1	26.6	26.9	10.7	35.5	32.3
Hungary	4.4	13.2	31.9	10.6	18.8	41.8
Latvia	2.5	2.6	4.4	9.5	7.6	8.3
Lithuania	0	4.0	5.3	0	10.9	15.3
Poland	0.6	4.6	5.9	2.7	13.8	13.0
Romania	0.3	0.5	0.3	1.6	1.5	0.9
Slovakia	1.4	1.9	3.0	8.2	3.9	5.4
Slovenia	4.0	12.7	12.9	27.6	5.9	46.6
Ukraine	0.6	4.3	10.6	5.3	16.0	15.5
Russia	4.8	19.6	19.0	64.6	78.7	97.5

Source: Calculated from UNCTAD data.

unevenly, has been and is still a hindrance to reaching the third stage of IDP model for a sub-sample of 15 PTEs. As Kalotay (2004b, p. 141) put it: "in the terminology of the investment–development path, with the notable exception of the Russian Federation, the region is in stage 2, whereby inward flows are still growing faster than outward flows." Then, he argued that a combination of the latecomer status of the region's MNCs and the transition shock could explain most of that laggard situation. Additionally, he hypothesized that EU enlargement would give a major push to OFDI from the CEECs, conditional on adequate government policies to promote such investments. The hypothesis was more than slightly jeopardized by the emergence of the global crisis, through which OFDI from only 6 out of 15 PTEs (as of 2015) muddled through successfully to reach IDP stage 3. With NOI indicators, Kuzel (2017) concluded that the four Visegrad Group countries (the Czech Republic, Hungary, Poland, and Slovakia) are only on the verge of IDP stage 3 due to crisis-related perturbations in global markets.

5.2. Indirect or direct foreign investment?

Indirect OFDI is an investment abroad undertaken by a subsidiary of a foreign MNC established in a given host country. Rugraff (2010) highlighted the specificity of OFDI from CEECs, which stems from the fact that there are a small number of foreign (Western) MNCs located there that invest in neighboring countries. He then mentioned about indirect FDI by majority foreign-owned rather than foreign-controlled domestic MNCs[8] such as the Hungarian companies MOL, OTP, and Gedeon Richter (Sass et al., 2014). These companies were privatized in the Budapest stock exchange in tranches, which resulted in a dispersed majority foreign ownership, with no foreign ownership above 10% shareholding (or voting power). According to Rugraff, investment by such companies, such as that of the Hungarian majority-owned subsidiary of Deutsche Telekom in Macedonia, is considered as "genuine" indirect investment. Such empirical evidence must be clearly distinguished from cases where a Hungarian company has a foreign investor who alone holds more than 10% of equity. The latter is sometimes coined a "virtual indirect" foreign investment (Sass et al., 2014) as many of its characteristics resemble direct rather than indirect investment, given that majority foreign ownership is not synonymous to foreign control. In the three aforementioned MNCs (MOL, OTP, and Gedeon), majority foreign ownership coexists with domestic control by Hungarian resident owners who make all strategic decisions.

In Hungary, a handful of mainly foreign majority owned, but Hungarian-controlled firms are responsible for the overwhelming majority of OFDI (Antalóczy and Éltető, 2003; Szalavetz, 2010; Sass and Kovács, 2013). However, Sass (2017) studied intra-CEECs cross-investments by accounting for both investments undertaken by indigenous CEEC-MNCs and those executed by local subsidiaries of foreign (non-CEEC) MNCs in another CEEC. In Slovenia (Jaklic and Svetlicic, 2009) and Poland (Kaliszuk and Wancio, 2013), it is mainly indigenous firms that venture abroad with direct investments, and not foreign-owned subsidiaries.

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[8] Rugraff showed differences between Visegrad countries' OFDI in this respect. Among the four countries, foreign-controlled multinational subsidiaries dominate the OFDI process in the Czech Republic and Hungary, but not in Poland and Slovenia. No general conclusion can be drawn from such a result.

Given the available statistical data, it is not always possible to distinguish between direct and indirect intra-CEEC investments. Thus, one of the most important results of empirical studies concerning intra-CEEC FDI links in the region emphasized country differences regarding development in regional FDI and the strength of regional FDI connections, as well as different compositions of indirect and direct OFDI.

5.3. Geographical distribution and industrial structure of OFDI

The available data (Table 3) suggests a sort of standard geographical distribution of PTEs' OFDI stock. MNCs from PTEs invest in three privileged geographical areas: other PTEs; developed marked economies (DMEs), namely in EU countries; and offshore and tax havens (OTHs). Except Russia, and to a lesser extent Hungary, they do not invest much in emerging and developing countries (EDCs). Thus, PTEs share a common characteristic with emerging countries in the third IDP stage (Andreff, 2016a, 2016b) in that they primarily invest in neighboring countries (other PTEs, and then the EU); and, as shown below, some PTEs are evolving toward investing mainly in developed countries, which occurs for emerging countries that are the most advanced in the third IDP stage. Beyond this first overall scheme, there are three different structures in CEECs' OFDI geographical distribution.

The Czech Republic, Slovakia, and Slovenia most significantly invest in other PTEs, then in DMEs, and finally in OTHs. This distribution seems to be stable over time and was not much disturbed during the crisis. A second stylized fact pertains to PTEs that invest primarily in other PTEs, then OTHs, and finally DMEs, which are Hungary, Estonia and Ukraine. A third case is different: Poland, Latvia, and possibly Lithuania[9] basically invest in DMEs, then in either OTHs or PTEs. The major destination of Polish FDI is Europe, especially EU countries, where 93% of Polish capital is located, among which Luxembourg and Cyprus are most common destinations (Jasiniak, 2014 and Table 3).

However, during the crisis, some signs of convergence appeared toward a standard OFDI geographical distribution: 1/ DMEs, 2/ OTHs, and 3/ other PTEs. For instance, Czech OFDI partly switched from PTEs to DMEs between 2007 and 2014, while the share of Hungarian OFDI located in DMEs increased, which was detrimental to the share invested in PTEs from 2008 to 2014.

In contrast, Russia's OFDI is more concentrated on OTHs, including a significant proportion of round tripping investment—where, for example, a Russian MNC invests in Cyprus and invests back home in Russia.[10] In 2009, OTHs became predominant host countries in the distribution of Ukrainian investment abroad. After OTHs, Russian MNCs invest in DMEs, followed by PTEs and EDCs, where Russia's OFDI stock is not that significant; the latter's share decreased from 2009 to 2011, but recovered in 2015. The share of OTHs in the geographical distribution of Russia's OFDI sharply decreased in 2015, while the share of DMEs significantly increased. Such a switch might be due to the war in East

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[9] In a sample of Lithuanian companies, 77 % of respondents contend that they develop their activities first in EU countries, then in CIS countries, and finally in Asia and America (Miecinskien and Jurevicien, 2010). However, the OFDI stock data so far does not reflect this.

[10] A more detailed analysis of Russian round tripping OFDI can be found in Andreff (2015).

Table 3
Geographical distribution of OFDI stock from post-communist economies in transition (%).

Home country	Host countries				
	OTHs	DMEs	PTEs	EDCs	Other
Czech Republic 2007	7.4	38.5	45.0	n.a.	9.1
Czech Republic 2014	9.7	50.8	21.8	n.a.	17.7
Estonia 2001	10.3	5.6	84.1	0	
Hungary 2008	30.5	16.8	49.5	3.2	
Hungary 2014	47.3	26.8	22.9	3.0	
Poland 2012	32.0	52.5	15.1	0.4	
Russia 2009	63.0	25.3	9.0	2.7	
Russia 2011	58.6	32.2	7.4	1.8	
Russia 2013	66.5	23.2	8.0	2.3	
Russia 2015	47.5	44.2	5.9	2.4	
Slovakia 2007	22.0	27.2	50.8	0	
Slovakia 2008	15.7	26.1	57.6	0.6	
Slovenia 2000	0.2	36.2	63.1	0.5	
Slovenia 2009	0.3	28.0	71.3	0.6	
Slovenia 2012	0.8	16.1	79.6	3.5	
Ukraine 2004*	17.6	9.9	72.5	0	
Ukraine 2009	93.2	n.a.	6.8	0	
Latvia 2001	6.8	78.4	13.0	1.8	

	Switzerland	Lithuania	Estonia	Poland	Cyprus	Luxembourg
Latvia 2012	18.0	17.0	10.0	6.0	6.0	
Latvia 2013	16.0	18.0	10.0		6.0	12.0

In 2015	Major host countries				
Croatia	Netherlands	Austria	Germany	Hungary	Luxembourg
	47.3	16.2	11.7	11.4	3.2
Estonia	Sweden	Finland	Netherlands	Russia	Norway
	22.0	22.0	18.0	7.0	5.0
Latvia	Sweden	Netherlands	Cyprus	Russia	Germany
	27.0	14.0	10.0	8.0	7.0
Poland	Cyprus	Luxembourg	Switzerland	Netherlands	Czech Rep.
	32.0	27.0	12.0	10.0	6.0
Slovakia	Czech Rep.	Cyprus	Luxembourg	Poland	Turkey
	31.0	25.0	14.0	7.0	5.0
Slovenia	Croatia	Serbia	Bosnia & H.	Macedonia	Russia
	28.0	22.0	9.0	7.0	6.0
Ukraine	Cyprus	Netherlands	Latvia	Virgin Isl.	Poland
	93.7	2.0	1.1	0.8	0.8

* Rough estimation, many data unavailable namely for OTHs.
Source: Central banks' data.

Ukraine, which was followed by EU (financial) sanctions against Russia, but this should be checked in a further study.

Having a high share of OFDI located in other PTEs confirms that Slovenia and Estonia are hub countries for Western MNCs targeting former Yugoslav countries and the Baltic States, respectively. Sweden and Finland are inclined to indirectly invest through Estonia and usually target the Baltic States and some CIS countries (Ginevicius and Tvaronaviviene, 2005). Though Estonian firms are important foreign investors in Latvia and Lithuania, the real reason for this situation is mostly the geographical closeness of Estonia to Finnish and Swedish capital. The final goal of Finnish and Swedish firms is not to operate only in Estonia, but to move forward to the south. Estonia is simply the first step for

Baltic (Kilvits and Purju, 2003). For Slovenia, geographical diversification came slowly. In 2012, over 65% of its OFDI stock was still in the former Yugoslav markets (Jaklic, 2016); in fact, the share neared 80%. On the contrary, the share of PTEs in Hungarian OFDI's host countries substantially decreased from 2008 to 2014, suggesting that Hungary's role as a hub for Western OFDI to CEECs was becoming less important, a point that remains to be checked in further studies.

Kazakhstan's OFDI has spread in a number of CIS economies and Western countries. The inclination to invest in the CIS region is partly due to the greater familiarity with business practices, and some cultural similarities with CIS neighbors. Furthermore, CIS countries share the same recent history of Soviet rule. Studies suggest that developing economies such as Kazakhstan tend to invest in other countries that share similar consumer markets or social and cultural backgrounds (Amagoh and Markus, 2010).

Consistent with the third IDP stage of development, some major host countries for CEECs' OFDI are other PTEs, first being other CEECs. Thus, intra-CEEC bilateral FDI flows deserve some focus. Sass (2017) did so recently. Seen from the view of a host country that received inward FDI from other CEECs in 2012, the three major CEECs that invest in other CEECs are Hungary, the Czech Republic, and Poland. Hungary is the most important foreign investor in Bulgaria, Croatia, and Poland; the Czech Republic in Romania and Slovakia; Poland in Hungary and Lithuania; Croatia in Slovenia; Estonia in Latvia; Lithuania in Estonia; and Slovakia in the Czech Republic.

Seen from the standpoint of a home country investing in other CEECs, in 2012, OFDI flows first from Hungary to other CEECs, then from Poland and the Czech Republic, and then Slovakia, Estonia, and Slovenia, while Lithuania, Croatia, Latvia, Romania and Bulgaria lag behind as foreign investors in other CEECs. The most important CEE host countries for other CEECs' OFDI are the Czech Republic, Slovakia, and Lithuania. The Czech Republic is the first host for Poland and Slovakia's OFDI, Lithuania for Estonia and Latvia's OFDI, Estonia for Lithuania's OFDI, Croatia for Hungary and Slovenia's OFDI, Poland for Croatia's OFDI, Slovakia for Czech OFDI, Bulgaria for Romania's OFDI, and Romania for Bulgaria's OFDI. However, Sass (2017) underlined that the overall picture is not as exact one would wish due to the unreliability of some bilateral data.

The CEECs attracted less Russian investment than their economic importance would have warranted due to both some reticence in CEE host countries and Russian MNCs' strategies that do not see the CEE-region as a major priority. According to data from the Bank of Russia, the four Visegrad countries accounted for less than 1% of Russia's OFDI stock by the end of 2012 (Kalotay et al., 2014). Among these four countries, by far the Czech Republic was the most important destination of Russian capital invested directly. If one adds the other seven PTEs that are EU members (especially Bulgaria and Lithuania, in which the Russian OFDI stocks exceed $1 billion), their share in Russian OFDI reaches only 2%. In 2009–2010, Hungary was the largest CEEC recipient of Russian OFDI stock, but this was due to Surgutneftegaz's acquisition of shares in the oil and gas company MOL, which ultimately sold its share to the Hungarian State.

Data about the industrial structure of OFDI, that is, its distribution by industry, are no more reliable than those regarding OFDI geographical distribution, and even more scattered. Table 4 gathers some 'homogenized' data into the three basic

Table 4
Industrial structure of OFDI stock from post-communist economies in transition (%).

Home country	Primary sector	Manufacturing	Services of which	Banking & finance
Czech Republic 2007	5.3	10.8	83.9	14.2
Czech Republic 2014	0.5	10.9	88.6	60.6
Estonia 2001	0	15.9	84.1	40.4
Hungary 2009	12.7	22.8	64.5	17.9
Hungary 2015	8.1	23.6	68.3	21.8
Kazakhstan 2002	90.0	4.0	6.0	n.a.
Latvia 2001	0.2	15.7	84.1	16.4
Poland 2011	8.3	30.8	60.9	18.3
Poland 2012	8.1	26.4	64.5	26.6
Russia 2009	3.0	42.0	55.0	7.3
Slovakia 2007	3.8	19.9	76.3	26.5
Slovenia 2000	0	37.8	62.2	15.2
Slovenia 2009	0	23.4	76.6	21.7
Ukraine 2004	0	10.6*	89.4	5.1

* Underestimation since a part of data is kept confidential by Ukrstat.
Source: Central banks and national statistics offices.

sectors: primary, manufacturing, and tertiary (finance and banking). A common feature immediately emerges. MNCs from PTEs invest abroad first in the services industry, then in the manufacturing industry, and a minor share of OFDI flows into the primary sector (oil, gas, raw materials). A few exceptions exist. First, Kazakhstan's OFDI is hyper-concentrated (90%) in the primary sector. The weight of the manufacturing industry in OFDI is markedly the highest for Russia.

Among OFDI in services, a more significant share has been invested in finance and banking from the Czech Republic and Estonia, possibly including some Western indirect investment since foreign banks are dominant in these two countries. *A contrario*, Polish OFDI (2011) in the services industry splits into scientific and technical services (24.0% of overall OFDI), finance and insurance (18.3%), and real estate (4.6%). The share of banking-finance in overall OFDI is low for Russia, Ukraine, and Kazakhstan.

As a few examples of OFDI distributions across the different industries of the manufacturing sector, Russia's OFDI was concentrated (2009) first in iron and steel (16.7% of overall OFDI), then in non-ferrous metals (15.8%), and in petroleum product refinery (7.3%), which appears to follow the pattern of the former Soviet industrialization. Polish OFDI (2011) in the manufacturing industry is more scattered across the automobile industry (5.9% of overall OFDI), food and beverages (5.6%), metallurgy (4.5%), rubber and plastic products (2.8%), chemicals (2.5%), electronic and optical products (2.4%), textiles and wood (1.2%), telecom (1.1%), and machinery and equipment (1.0%) (Buczkowski, 2013).

6. Multinational companies based in PTEs

Looking at the micro (enterprise) level, an unknown number—probably less than 1,000—of Russian firms[11] invested abroad. Despite their growing size, no Russian

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[11] The exact number of Russian multinational parent companies is not well known; UNCTAD reckoned 1,176 foreign subsidiaries of Russian companies in 2004. This is rather few compared to the 3,429 parent companies of Chinese MNCs that established about 28,000 foreign subsidiaries (Andreff, 2016b).

MNC has yet entered the list of the top 100 biggest non-financial MNCs ranked by UNCTAD according to the value of their foreign assets. In Hungary, 1,187 legal entities were registered as investing abroad in 1999 (Antalóczy and Éltető, 2002), a number which must have grown since then. In 2010, 1,443 Polish entities located their capital in 2,988 foreign units in 96 countries; 2,512 by acquiring shares, 358 by setting up branches, 84 setting up plants, and 34 in other forms (Buczkowski, 2013). The top 30 Polish MNCs controlled nearly 500 foreign subsidiaries in more than 60 countries, mostly in Europe (Éltető et al., 2015). The number of Polish firms with branches and subsidiaries abroad increased from 1,313 to 1,501 during the 2009–2011 period, while the number of foreign entities themselves increased from 2,747 to 3,178 (Klysik-Uryszek and Kuna-Marszalek, 2014). OFDI strengthened the competitiveness of Slovene outward investors; by 2004, 2,402 firms invested abroad as against 1,610 in 1995 (Svetlicic, 2007). Compared to other PTEs, Slovenia had relatively more homegrown MNCs because the country adopted an open economic policy before the transition period and had a strong export orientation, while its enterprises started investing abroad earlier. However, the share of firms with direct investments abroad remains below 2.5% of all Slovene firms (Jaklic, 2016).

6.1. Variety of multinationals: Listed companies and SOEs

Beyond the number of MNCs *per se*, their ownership structure and size actually do matter (Ciesielska-Maciągowska and Radło, 2016): "The increased foreign equity interests of Polish companies means that many of them have begun to transform into emerging MNCs with a strong regional position. Such path was followed by, for example, Maspex, a fruit juice producer, or IT firm Asseco. Others, such as state controlled copper miner KGHM, have also invested on a global scale."

A study revealed no statistically significant relationship between ownership concentration and internationalization of firms in Poland; however, the relationship is significant for ownership category and internationalization (Wasowska, 2013). One outcome of the initial privatization drive in PTEs was to plant the seeds for the internationalization of privately-owned companies. Consequently, it has been verified that since then, privatized firms benefitted from specific ownership advantages with links to their heritage from the pre-transition period (Antalóczy et al., 2014). Among them, some are listed on a stock market, such as all 25 top non-financial Polish MNCs in 2011, which collectively have 381 foreign subsidiaries in 65 different countries (Kaliszuk et al., 2012). Another study tested two hypotheses about the impact of internationalization on the performance of Polish companies listed on the Warsaw Stock Exchange in terms of their return on assets and return on equity (Radlo and Ciesielka, 2015). The first hypothesis assumes a linear relationship between the level of firms' internationalization and profitability, while a second is that this relationship is U-shaped. The econometric results confirm the U-shaped relationship, meaning that internationalization in an initial phase may lead to a fall in profitability, but with further internationalization, an increase in the profitability ratios is expected.

Another variety of MNCs in PTEs are SOEs that invest abroad. While most major Chinese MNCs are SOEs,[12] a number of big MNCs are still (partly or

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[12] In China, 160 Chinese SOE-MNCs account for about 84% of overall OFDI. The CEOs of the largest 53 Chinese state-owned MNCs are directly appointed by the Communist Party (Andreff, 2016b).

fully) state-owned in PTEs such as Gazprom, Rosneft, Alrosa, Inter RAO UES, or OMZ in Russia. Two of the top 25 Polish MNCs are majority-owned by the state, PGNiG and Lotos; and in three other firms, the state has minority controlling stakes. The privatization of Lotos launched in 2011 failed due to its high level of debt. After an unsuccessful attempt to find a foreign strategic investor, the state considered a potential merger of Lotos with another SOE, PKN Orlen to establish a strong regional player in the fuel market (Kaliszuk et al., 2012). Some state-owned or state-controlled MNCs are still found in all PTEs, in particular in industries based on natural resources and energy: SOCAR, SOFAZ, Hrvatska Elektroprivreda, Moravske Naftove Doly, PPF, MAL Hungarian Aluminum, MOL, Kazakh Gold Group, Kazkommertsbank, Kazmunaigaz, Kaztransgaz, KGHM Polska Miedź, PGE, PGNiG, PKN Orlen, Petrom National Oil, Slovnaft, Železiarne Podbrezová, Petrol, Naftogaz, Ukrprominvest, UPEC, and UTECH are cases in point. For example, regarding OFDI, Kazmunaigaz focused on energy assets, while Kazakh private companies entered the banking, construction, and tourism industries.

Finally, after some years of transition, PTE MNCs indeed emerged, but contrary to some initial euphoric expectations, they remained 'multinational dwarfs' when compared to MNCs in emerging markets such as Brazil, India, China, or South Africa. The only clear exception to this statement is the biggest Russian MNCs. A disappointment with this outcome of the transition may explain the switch in focus to SMEs' internationalization in the CEEC business literature during the 2000s, in particular after the OFDI trend in some PTEs was altered after the 2007 crisis. As Szalavetz (2010) stated, it is especially difficult to invest abroad in a PTE context where local entrepreneurs have little chance of becoming global players. Powerful corporate networks that would enhance internationalizing firms' resources are lacking and support institutions are somewhat inefficient.

6.2. Strategies of PTE-based MNCs

Firms in the early stages of internationalization are usually motivated by market and resource seeking OFDI, whereas efficiency seeking (lower production costs abroad) and strategic asset seeking OFDI are significant motivators in more advanced stages of internationalization from the IDP model perspective.

After the first years of capital flight, the expansion of Russian MNCs abroad often followed the strategy of former Soviet multinationals developed to serve foreign trade purposes. With such a market-seeking OFDI, Russian MNCs are simply relaying previous exports. This strategy first pertains to traditional markets such as the CIS and CEECs; it is also the rationale for Russian OFDI in Western markets where Russian products face tough competition. The Russian MNCs that invest abroad in the mining, oil, and gas industries adopted a resource-seeking approach and attempted to take over their most needed suppliers abroad by means of M&As. Russian OFDI in the CIS is basically resource-seeking and geared towards oil, gas, and mining. The same strategy applies to the fairly recent Russian OFDI in Africa, although in this case it is also driven by the motive of accessing new consumer markets. Russian MNCs have not yet adopted an efficiency-seeking strategy, although they could have envisaged it in the CIS and developing countries with lower production costs than in Russia.

Since other PTEs have small domestic markets compared to Russia, their MNCs definitely adopted a market-seeking strategy. The motives of Polish FDI abroad are rather classic, predominantly market and resource seeking, or a mixture of the two (Kaliszuk et al., 2012). According to a survey, the primary aim of Polish investors abroad is to find new markets (60%), gain access to new technologies and attractive brands (53%), and to expand the scale of activity (19%) (Götz, 2011). For Buczkowski (2013), the main motive for the OFDI decisions of Polish firms is the size of host markets. The level of competition in target markets, geographic and cultural proximity, size of local resources, low risk, and political stability are also relatively important factors. Large geographical distance is a factor negatively influencing investment decisions. Due to the niche nature of many Polish firms investing abroad, guaranteed demand from Polish buyers is not enough. Searching for clients in new areas has become a necessity. It must be emphasized that market size as an incentive for expansion should be seen in relative terms. Götz's (2013) findings suggest that as long as Poland is seen by its residents as a stable market with growth prospects, there will be no strong incentive to internationalize. One can even assume that the presence of Polish OFDI in Western Europe aims at sustaining domestic operations.

Reducing production costs was also a factor in Polish MNCs investment in CIS countries (such as Śnieżka) with lower energy and material prices, as well as in emerging Asian countries (Ferro) with lower labor costs. Investment in EU countries was rarely driven by the labor cost factor since most EU member states have higher salaries and wages than Poland does. However, some Polish MNCs, such as Erbud, Bioton, or Relpol, developed foreign production to use the host country's labor force, and others such as KGHM did so for the host's natural resources (Ciesielska-Maciągowska and Radło, 2016).

Hungarian MNCs basically adopted a market-seeking strategy, but also an efficiency-seeking one in Bulgaria, Romania, and the CIS countries, and some adopted a resource-seeking one in ex-Soviet regions (Antalóczy and Éltető, 2002). OFDI by Hungary-based 'regional multinationals' in South East Europe is mainly motivated by the search for new markets (Majoros, 2008). Whether owned by Hungarian private persons, companies, or other investors, some Hungarian MNCs were mainly motivated to internationalize to reduce costs; thus, their main motive was efficiency-seeking alongside market-seeking motives (Antalóczy and Sass, 2008).

Using data for 90 manufacturing SMEs from 6 CEECs, Kriauciunas et al. (2010) found that low-cost manufacturing capabilities and proactive managerial orientation towards international operations are positively associated with increased internationalization. Moreover, experience in the post-communist economic transition and cultural factors create important competitive advantages for them against Western European companies having more capital and make them politically more acceptable in the PTE area.

Most Slovene OFDI is clearly market-seeking: access to new markets, proximity to customers, and competitors resulted in valuable market, marketing, and managerial experience. A small domestic market with increasing inward FDI and competition are the reasons why OFDI is predominantly market-seeking. The latter appears to be complementary to exports since it substantially affects increases in market shares, exports, and production. Medium-high and medium-low technology SMEs especially rely mostly on direct exports, which upgrade

with the establishment of a network of representatives or subsidiaries further into the internationalization process (Lejko and Bojnec, 2013). The main market-seeking motive is followed by strategic asset-seeking, efficiency-seeking, and resource-seeking (Svetlicic, 2007). The development implications of OFDI were positive in Slovenia since the early 1990s. However, further developments after EU accession changed, and the expected benefits of EU enlargement did not materialize for Slovene enterprises with direct investments abroad (Jaklic, 2016). The predominant share of high-tech SMEs among Slovene investors abroad indicates that their products are sold mostly in niche markets, whereas the small domestic market does not enable them to achieve economies of scale and forces them into internationalization.

Czech firms, contrary to their Polish counterparts, cannot take advantage of their national diasporas in distant markets; this complicates their expansion to more distant markets. In Slovakia, food industry SMEs have a market-seeking strategy with internationalization that relies on expanding exports rather than OFDI (Mura and Buleca, 2014). This possibly pertains to many other industries as well.

Empirical evidence shows that Baltic companies' operations in foreign markets first concentrated on ex-CMEA countries, especially the former USSR. Most operations abroad were related to marketing, such as founding representative offices or sales units in a foreign market (Liuhto and Jumpponen, 2003). In 2002, operations abroad were more common among Latvian firms than Lithuanian and Estonian ones. A survey by Varblane et al. (2001) revealed that market-related motives appear to be predominant factors that make Estonian firms invest abroad. The most important effects on the parent company relate to additional market share gained abroad and enhanced exports. The limited market potential and purchasing power of consumers in Lithuania posed a barrier to SMEs' development, pushing them to internationalize their activities (Mockaitis et al., 2006). Focusing on 50 Lithuanian SMEs, Casas and Dambrauskaitė (2011) found that the Lithuanian business environment is characterized by factors that promote internationalization: (a) well-developed infrastructure, (b) a lack of demand in the domestic market, (c) national cultural trait: a society with good language skills and a propensity to learn foreign languages, (d) maintaining good political relations with other countries, (e) participation in international organizations and economic and political unions that decrease international trade barriers, (f) the country's open economy and low trade barriers, and (g) intense competition in the country's business. Similar factors must prevail in most PTEs as well.

Market-seeking, tariff-jumping, and trade-barrier jumping are major drivers of Ukrainian OFDI (Kononov, 2010). Exporters of steel, the country's main export commodity, faced severe antidumping restrictions imposed by the EU and other developed countries. A study of 30 Romanian firms showed that the controllable factors that positively influence export performance, and implicitly the SMEs' internationalization process, are the characteristics of the SMEs' managers/entrepreneurs and international business competencies (Nitu, 2010). Albanian firms meet many hindrances to internationalization, even via exports due to their low-quality products (Berberi, 2015); hence, OFDI is rather rare, and this explains the low figures for Albania's OFDI.

Though some OFDI proceeds through greenfield investment, the expansion of many PTE-based MNCs abroad resorted to cross-border M&As. Russian MNCs

conducted an asset-seeking strategy based on overseas M&As to acquire Western technology and R&D intensive units. Trans-border M&As enable them to consolidate their global competitiveness in creating or reaching the advantages of a monopoly or dominant oligopoly position in some foreign markets. The main target for M&As by Russian MNCs is to take over European and North American firms to enter industries linked to natural resources in the U.S., Canada, Italy, Switzerland, and South Africa. Big trans-border M&As are less frequent in Russia's close abroad, whose firms are smaller and less attractive in terms of high-tech assets. The proportion of M&As in Europe peaked in 1997–2000, whereas those in the CIS climaxed in 2001-2004. The first asset acquisitions appeared in developing countries in 2005. The financial crisis lowered M&As by Russian MNCs. The overall number of trans-border M&A deals was 114 in 2007 and 119 in 2008; it fell to 102 in 2009 and 70 in 2010 (Filipov, 2011). However, a few "jumbo deals" emerged, such as Gazprom taking a 24.8% share in Borsodchem (Hungary) in 2000, Sberbank acquiring Denizbank (Turkey) for $3.9 billion in 2012, the acquisitions ($27 billion each) of shares in TNK-BP (Virgin Islands) by Rosneft in 2013 and the takeover of Polyus Gold International (UK) for $5.4 billion by Sacturino in 2015.

Firms from other PTEs also acquired foreign companies through cross-border M&As. Among Polish firms' OFDI, greenfield investment is dominant compared to M&As. The overall value of greenfield projects since 2004 amounted to $13,730 billion, while M&A purchases were valued at $10,176 billion (Jasiniak, 2014). The most popular entry mode of Polish MNCs listed on the Warsaw Stock Exchange was through greenfield investment (Ciesielska-Maciągowska and Radło, 2016) for 83% of the surveyed companies. Acquiring foreign entities was less popular, but was still used by over 50 % of the surveyed entities. Every third company carried out both greenfield investment and M&As. Consequently, during the last decade, Polish MNCs have taken over several hundred foreign firms.

Many of these transactions were spectacular, such as the acquisition by Asseco, Maspex, KGHM, or PKN Orlen. Most of these M&As were market-seeking and aimed to develop a foreign sales and distribution network through OFDI; such was the case for LPP, Wojas, and Decora. Through M&As, only 23% of Polish MNCs wanted to reduce costs and 15% wanted to acquire know-how (e.g., Asseco). Polish cross-border M&As by service MNCs and greenfield FDI by manufacturing MNCs are motivated by the need for efficiency or to gain strategic assets (Kowalewski and Radlo, 2014). Other motivations for M&As include access to advanced technology (Italian pharmaceutical company Fisiopharma's purchase by Bioton), the acquisition of internationally or domestically established brands (Selena's investment in Latin America and Italy), and the purchase of intangible assets (purchase of Maflow's R&D entities in Italy by Boryszew).

In 2010–2011, the most active Polish MNC on the M&A market was Asseco. It took over four foreign entities from the IT business, including the Israeli company Formula Systems for $145 million. The value of Asseco's other transactions abroad were much lower, with each amounting to about $10 million. Due to M&As completed in 2010, Asseco has become not only a leader in the IT market among the CEECs, but is also a leading IT player across all of Europe, ranking 7th among European software vendors in 2011. Trakcja Polska made another large investment to acquire Lithuanian firm (Tiltra) in the infrastructure construction industry for $278 million. However, the value of the top 10 trans-

actions conducted abroad by Polish firms was rather low and reached approximately $609 million (Kaliszuk et al., 2012).[13]

Beyond Russia and Poland, since the transition, PTE companies have been more the prey of Western acquiring MNCs than acquiring MNCs themselves, probably explaining why their M&As have been less studied so far. Except some Hungarian MNCs such as MOL and OTP Bank, only a few participated in M&A "jumbo deals." One can mention the Ukrainian firm Palmary, the Azeri Chirag Gunashli merging with INPEX (Japan) for $1.4 billion in 2003, Kazakh Gold Group acquiring $6.3 billion in Polyus Zoloto (Russia) in 2011, KGMH Polska Miedz acquiring Quadra FNX Mining (Canada) for $3.3 billion in 2012, and Energeticky a Prumyslovy (Czech Republic) taking over Slovak Gas for $3.5 billion in 2013.

7. Push factors as determinants of PTEs' OFDI: Results and discussion

The idea that domestic economic factors are determinants of OFDI from PTEs is often found in the literature. For instance, low growth potential in the domestic market and increasing regional competition "push" more firms located in Hungary to invest abroad (Majoros, 2008).

Before the econometric testing in the PTE context, the LLL hypothesis suggested by John Mathews (2002) for Asian emerging MNCs should be mentioned. The linkage, leverage, and learning theory starts from a resource-based view of internationalization. Matthews developed it as a popular theory to explain the expansion of "Dragon Multinational Enterprises." He stressed that emerging countries' MNCs are keen to establish links, including alliances and joint ventures with incumbent MNCs; leverage resources; and learn from these incumbents. Thus, latecomers acquire and absorb foreign resources and improve their competitive position through multinational growth. They enter outsourcing networks. They can leverage resources from other firms' strengths, namely via technology licensing contracts, imitation, and reverse engineering (Mathews, 2006).

Indeed it has often been observed that the presence of foreign firms has a positive spillover effect on labor productivity in domestic firms in the same sector, specifically in very open manufacturing sectors (Schoors and Van der Tol, 2002). Moreover, inward FDI in PTEs significantly contributed to industrial restructuring (Andreff, 2007) and to domestic firms' favoring internationalization toward export markets (Puig-Gomez, 2014). This must have facilitated further OFDI in tune with the LLL hypothesis. According to Rugraff (2010), the dominant position in terms of inward FDI due to the high attractiveness of both countries in the mid-1990s led to high investment activity by Czech and Hungarian firms owned or controlled by foreign MNCs. It was noted that the participation of indirect investors—foreign-owned MNCs—in the OFDI process is directly linked to the magnitude of inward FDI flows in the CEECs, which is an important dimension of the LLL model since "some elements of their ownership advantages will spill over to local firms, helping them to progressively internationalize. Foreign-owned firms may have productivity spillovers to local firms when some

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[13] A more detailed review of cross-border M&As by Polish companies is available in Kaliszuk et al. (2012) and Wancio (2013), by Hungarian companies in Sass and Kalotay (2010), by Slovenian companies in Jaklic (2011), and by Ukrainian companies in Kononov (2010).

of the technological and managerial practices and other tacit and codified know-how they bring with them spread to some of the local firms" (Rugraff, 2010, p. 7).

Davidkov and Yordanova (2015) found that the presence of foreign owners has a strong positive effect on the odds of internationalization, suggesting that foreign owners may provide SMEs in PTEs with the resources and capabilities needed for internationalization such as new products and marketing skills, knowledge, technology, management skills, and know-how. While inward FDI played a significant role in Poland's economic transformation, OFDI recently started to affect the international competitiveness of local firms (Gorynia et al., 2014), which is somewhat reminiscent of Mathews' LLL model. Wasowska (2013) stressed that the presence of a foreign investor in final ownership as the controlling owner is statistically significant and positively correlated with the level of internationalization. This helps firms gain knowledge about foreign markets and become part of an international corporation.

Damijan et al. (2014) showed the positive effect of OFDI on the productivity growth of investing firms from the CEEC-9 economies (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Poland, Romania, Slovakia, and Slovenia) though this effect is merely driven by Czech and Romanian firms. In addition, the positive effect does not appear to be long lasting, as it is only statistically significant a year after the investment. In Estonia, direct investors (domestic firms investing abroad) have a stronger home-country employment effect than do indirect investors (foreign-owned firms investing abroad) due to their smaller investment size and because the subsidiaries of indirect investors are served from locations other than Estonia (Masso et al.*,* 2008), which means that the latter still benefit from a favorable productivity gap over the former, despite spillovers.

Finally, Kuzel (2017) indicated that approximately 96% of Polish subsidiaries of the world's largest MNCs located in Poland had well-established local business partners. While the cooperation focused primarily on building vertical linkages with domestic firms, more than 29% of respondents indicated backward linkages with suppliers and 25% forward linkages with customers. Building linkages between Polish subsidiaries of the world's largest MNCs and local firms creates favorable conditions for the exchange of information, solutions, and business experience, and the diffusion of knowledge and skills, and sharing technical information and know-how. This corresponds to both the third IDP phase, Kuzel stressed, and a process in tune with the LLL assumption. All previous empirical evidence suggests that the linkage, leverage, and learning hypothesis may be applicable to PTEs, which this study will test.

In line with Andreff (2003), there are three candidate explanatory variables as push factors of OFDI from PTEs: the home country's economic dimension (population as a proxy), its level of economic development (GDP per capita), and possibly its economic growth (average annual GDP growth). From previous testing, the home country's technological level is a possible determinant in its OFDI. Moreover, for the BRICS and New Wave Emerging Countries (NWECs) (Andreff, 2014, 2016a), OFDI is boosted, with some time lag, by previous inward FDI: foreign investors brought new relationships with local firms with a network of MNCs (linkages); some beneficial impact on local competitors, namely on the productivity of using local resources (leverage); and new technology and know-how (learning by doing) that affects local firms' productivity and competi-

tiveness making them robust enough to move outbound and invest abroad. This assumption is tested now with the empirical evidence of PTEs' OFDI.

Overall, the model writes for each home country i as:

$$OFDI_{i,t} = f(GDP/capita_{i,t}, g_{i,t}, POP_{i,t}, SCIENT_{i,t}, Xhightec_{i,t}, INFDI_{i,t-k}) + \\ + u_i, \tag{1}$$

where: $OFDI_{i,t}$ stands for the outward foreign direct investment stock from country i in year t; $GDP/capita_{i,t}$ is the gross domestic product per capita in the home country i in year t; $g_{i,t}$ refers to the annual index of GDP growth in the home country i in year t; $POP_{i,t}$ stands for population in the home country i in year t taken as a proxy of its economic size; $SCIENT_{i,t}$ denotes the number of scientists working in the home country i in year t taken as one proxy[14] of its technological level; $Xhightec_{i,t}$ is the share of high-technology exported products in overall export of the home country i in year t as a second assessment of technological level and competitiveness; finally, $INFDI_{i,t-k}$ denotes the inward foreign direct investment stock hosted in country i in year $t-k$.

Data for outward and inward FDI stock are from UNCTAD and pertain to all years from 2000 to 2015 (and 1997 to 2012 for *INFDI*), statistics about GDP per capita (in PPP), GDP growth rate, population, the number of scientists, and the share of high-tech exports in overall exports, collected from the World Bank database for the same years. This makes a database with 240 observations (16 years × 15 countries). Missing observations or those with zero values are dropped from the calculation, shrinking the data sample to 204 observations for the econometric estimation.

The lagged variable *INFDI* is a proxy for testing whether inward FDI in a country had enough linkage, leverage, and learning effects to trigger OFDI by local firms benefitting from these effects one, two, and three years later.

Therefore, the model to be estimated becomes:

$$OFDI_{i,t} = a \times GDP/capita_{i,t} + b \times g_{i,t} + c \times POP_{i,t} + d \times SCIENT_{i,t} + \\ + e \times Xhightec_{i,t} + f \times INFDI_{i,t-k} + u_i. \tag{2}$$

Equation (2) was estimated first with an OLS model, then using a panel data test with fixed and random effects (Table 7). The econometric results do not vary much with both methodologies. Significant Breusch-Pagan tests verify that random effects are at play in determining OFDI with push factors.

Table 7 shows that, as expected from Dunning's IDP model, the level of economic development (GDP/capita) is significant at the 1% threshold as an explanatory variable of PTEs' OFDI. This confirms a result established years ago (Andreff, 2003) with a sample that included PTEs with developing countries[15] and more developed market economies. However, note that with the panel data estimation, the relationship between OFDI and GDP/capita ceases to be signifi-

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[14] Usually, the number of patents registered in the home country is used to assess the technological level in econometric testing (Andreff, 2003, 2016a); but this data is not enough available (every year, every country) in the selected PTE sample.

[15] Moreover, the sample does not include the least developed PTEs such as Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan, Moldova, and Kosovo since they do not invest significantly abroad.

Table 7
The determinants of outward foreign direct investment from post-communist transition economies.

Dependent variables	OLS			Panel data					
				Fixed effects			Random effects		
	H1: LLL_{t-1}	H2: LLL_{t-2}	H3: LLL_{t-3}	H1: LLL_{t-1}	H2: LLL_{t-2}	H3: LLL_{t-3}	H1: LLL_{t-1}	H2: LLL_{t-2}	H3: LLL_{t-3}
GDP per capita	1.268***	1.676***	1.852***	−0.786	−0.115	0.248	−0.168	0.507	0.699
GDP growth rate	0.465	0.966**	0.909**	0.087	0.704**	0.676**	0.124	0.724**	0.649*
POP	1.424***	1.521***	1.666***	−5.885*	10.522***	−13.304***	1.208***	1.301***	1.530***
SCIENT	−5.330***	−5.028***	−5.325***	−4.123***	−3.686***	−5.504***	−4.617***	−4.141***	−4.972***
X high tec	−0.789**	−0.921***	−1.014***	−1.419**	−1.947***	−1.661***	−1.118**	−1.542***	−1.590***
$INFDI_{t-1}$	0.799***			0.799***			0.826***		
$INFDI_{t-2}$		0.838***			0.798***			0.847***	
$INFDI_{t-3}$			0.952***			0.945***			0.981***
Constant	−20.902***	−26.128***	−27.075***	147.94**	241.02***	302.93***	−4.378	−10.196	−10.736
σ_u				258.62	433.13	550.24	15.088	15.645	16.464
σ_e				22.767	24.452	22.523	22.767	24.452	22.523
ρ				0.992	0.997	0.998	0.305	0.290	0.348

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.
Source: Authors' calculations.

cant. Although the level of economic development is not comparable between Slovenia and Albania or Ukraine, with respective per-capita GDPs of $23,143, $4,412, and $3,986 in 2013, the gap is only 1 to 5 or 6, which is much narrower than with the most and least developed countries in the world. Thus, though the level of economic development determines the magnitude of PTEs' OFDI, it does not differentiate PTEs enough to fully play a significant role in determining all variances in their OFDI levels. In terms of the IDP model, all PTEs are somewhere between the end of the second stage and the third stage of development; none, even Russia, definitely reached the fourth stage of a developed economy.

The economy size (population as a proxy) is a second significant explanatory variable of PTEs' OFDI at the 1% threshold, with either the OLS or panel data regression. It must be highlighted that the coefficient of this variable has a negative sign, which means that the smaller a PTE is, i.e. the smaller its market size, the sooner its firms substitute OFDI for domestic investment in a very small home market. The only exception is Russia, to some extent, but this is not enough to distort the overall statistical result.

GDP growth rate also explains PTEs' OFDI; though this variable is significant, it is not at the 1% threshold. MNEs from fast growing home PTEs are more likely to invest abroad than MNEs from PTEs with a slower growth. However the relationship is not significant when inward FDI is lagged by just one year. This suggests that both GDP growth rate and inward FDI (see below) determine PTEs' OFDI, but it takes more than one year for this triangular relationship to be plainly at work.

Technological variables also explain OFDI from PTEs, but they do not exactly fit with expectations and econometric results obtained for the 1990s (Andreff, 2003). PTEs' OFDI decreases with an increase in the number of scientists in the home economy, since *SCIENT* is significant at the 1% threshold with a negative sign. MNCs from PTEs do not take advantage of a domestic technological gap to invest abroad; only a few firms in a few industries are on the global technological frontier. This result rather suggests that they invest abroad while seeking technological assets that are absent in their home country while using less sophisticated technologies that require few researchers and scientists (as compared to developed market economies) and probably also using the technologies more adapted to the economic environment of their neighboring PTEs. This result is in line with analyses that stress the role of strategic asset seeking, especially for firms that face ownership disadvantages and wish to leverage them with knowledge acquired from abroad. This strategy appeared in the car industry, for instance, the Geely-Volvo case by Balcet and Ruet (2011), while at the macroeconomic level, it seriously jeopardizes the standard foreign trade and investment theory (Andreff and Balcet, 2013). This is a springboard for further research.

The share of high-tech products in overall exports appears to be a significant variable of OFDI with a negative sign. The interpretation goes as follows. There is a technological gap between PTE MNCs and some of their competitors based in the most technologically advanced economies; they suffer from a negative gap[16]

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[16] Such a negative gap was observed in the textile and clothing industry for Ukrainian (and somewhat Polish) firms: "The internationalization of Ukrainian and Polish enterprises is aimed at building a competitive advantage based on foreign suppliers and customers. As regards Ukraine, the pursuit of access to technologies seems to be a clear manifestation of the innovation gap" (Patora-Wysocka, 2011, pp. 10–11.).

that hinders their OFDI instead of benefitting from a positive gap, which usually triggers OFDI. Thus, they have to stick to specific technological niches with more exports than OFDI. PTE firms are not yet capable of exploiting the techonological benefits of investing abroad, although they can export some (high-tech) products of good quality. On the other hand, the most technologically advanced PTEs may have reached a domestic technological level high enough to become a comparative advantage, on which local firms can rely in view of investing abroad,[17] whereas most other PTEs have not; hence, the negative sign.

Finally, a strong and significant relationship between OFDI and lagged inward FDI suggests that a process similar to Mathews' LLL must be at work, more so because the coefficient for this relationship is increasing over time (working back from inward FDI one year to three years before); this confirms Gorynia et al. (2014) and Davidkov and Yordanova's (2015) conjectures. This clearly means that PTE MNCs greatly benefit from their local relationships with foreign investors who previously invested in their home countries, in particular when foreign investors have a share in the capital of PTE MNCs (although this ownership advantage remains to be tested in further research). However, it takes some time for LLL relationships to materialize, and thus for previous inward FDI to become a stronger determinant of OFDI.

Overall, the results conform to those from previous studies (Andreff, 2003) with rather larger samples of transition and developing economies, meaning that basically the level of economic development and home market size are major determinants of PTEs' OFDI, while the home country's technological level also plays a role in the process, not as a comparative advantage, but as a constraint pushing for investment abroad in view of acquiring technological assets missing in the home country. It appears that opening a PTE to inward FDI and foreign MNCs has been a launch pad for its further OFDI and the development of its own MNCs. The observed econometric results are quite similar to those recently obtained for a sample of thirteen of the most promising NWECs in terms of OFDI, economic development, growth rate, and escaping the financial crisis and great recession (Andreff, 2016a). It might be that PTEs will be able to stick to a similar scheme, which may lead them to consolidate in the third stage of the IDP model not too long from now.

8. Conclusion

During the past decade or so, the number of studies about OFDI from transition economies has increased quickly. Most are country studies focused on OFDI by firms in a single home country. A few studies are comparative, and at best examine OFDI from the four Visegrad countries, the three Baltic States, or a specific sample of CEECs. Since the mid-2010s, the scope of comparison has grown with studies analyzing China and Russia's OFDI and comparing it with other BRICs' direct investment abroad. A next step is the present study, which attempted to compare OFDI from all transition economies with available data. Consequently, an obvious avenue for further research is a comparison between transition economies and emerging-market economies regarding their OFDI and MNCs.

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[17] See the analysis by Andreff and Balcet (2013).

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Appendix

Outward foreign direct investment stock from transition economies, 1998–2015 ($ billion).

Country	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.3
Armenia	0	0	0	0	0.1	0.1	0	0	0	0	0	0.1	0.1	0.2	0.2	0.2	0.2	0.3
Azerbaijan	0.1	0.5	0.5	0.6	1.0	1.3	2.6	3.7	4.4	4.7	5.2	6.1	5.8	6.3	7.5	9.0	11.2	15.4
Belarus	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.3	0.4	0.7	0.6	0.7
Bosnia–Herzegovina	0	0	0	0	0	0	0	0	0	0	0	0.1	0.1	0.2	0.3	0.2	0.2	0.3
Bulgaria	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.6	1.2	1.3	1.5	1.7	1.9	2.3	2.2	3.1
Croatia	0	0	0.9	1.0	1.1	2.3	2.4	2.1	2.4	3.5	3.6	5.8	4.2	4.5	4.5	4.4	5.4	5.5
Czech Republic	0.8	0.9	0.7	1.1	1.5	1.7	3.1	4.2	5.1	7.0	9.9	13.9	15.5	15.5	15.2	21.4	19.0	18.5
Estonia	0.2	0.3	0.3	0.4	0.7	1.0	1.4	2.0	3.6	5.9	6.7	6.6	5.8	4.7	5.8	6.7	6.3	6.1
Georgia	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.2	0.7	1.2	1.4	1.5	1.7
Hungary	1.1	1.6	2.1	4.4	4.6	3.9	4.5	6.6	12.7	18.3	14.2	17.5	20.7	23.8	34.7	39.6	39.6	38.5
Kazakhstan	0	0	0	0	0.5	0.3	n.a.	n.a.	n.a.	2.1	5.8	6.8	16.2	19.9	21.0	29.1	27.2	23.9
Kyrgyzstan	0	0	0	0	0	0	0	0.1	0	0	0	0	0	0	0	0	0.4	0
Latvia	0.3	0.3	0.2	0.1	0.1	0.1	0.2	0.3	0.4	0.8	1.1	1.0	0.8	0.9	1.1	1.5	1.2	1.2
Lithuania	0	0	0	0	0.1	0.1	0.4	0.7	1.2	1.6	2.0	2.3	2.1	2.0	2.5	2.9	2.7	2.2
Macedonia	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Moldova	0	0	0	0	0	0	0	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1
Montenegro	0	0	0	0	0	0	0	0	0	0.2	0.3	0.3	0.4	0.4	0.4	0	0.4	0.4
Poland	1.2	1.4	1.0	1.1	1.3	1.8	2.7	4.7	10.7	19.6	21.8	26.2	36.8	50.0	57.5	55.0	65.2	27.8
Romania	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.9	0.9	1.7	1.5	1.5	1.4	1.5	0.7	0.6
Serbia	0	0	0	0	0	0	0	0	0	0	0	3.9	3.9	4.0	2.2	2.6	2.8	2.9
Slovakia	0.7	0.3	0.4	0.4	0.4	0.6	0.6	0.5	1.3	1.6	1.9	2.7	2.8	4.2	4.4	4.3	3.0	2.6
Slovenia	0	0	0.8	1.0	1.1	1.8	2.5	3.6	3.9	6.1	8.7	8.7	7.6	7.1	7.8	7.7	6.2	5.5
Ukraine	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.5	0.3	6.1	7.0	7.3	8.0	8.2	9.4	9.7	9.7	9.6
Vietnam	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.5	8.6
Russia	7.4	8.6	12.4	14.7	18.0	51.8	81.9	120.4	156.8	255.2	202.8	248.9	433.7	362.1	413.2	501.2	431.9	252.0
Total	12.1	14.2	19.8	25.3	31.1	67.4	103.0	149.8	203.6	334.5	293.6	361.8	568.2	518.6	593.0	701.8	645.6	428.0
Total (– Russia)	4.7	5.6	7.4	10.6	13.1	15.6	21.1	29.4	46.8	79.3	90.8	112.9	134.5	156.5	179.8	200.6	213.7	176.0
Russia / Total (%)	61.2	60.6	62.6	58.1	57.9	76.9	79.5	80.4	77.0	76.3	69.1	68.8	76.3	69.8	69.7	71.4	66.9	58.9

Source: UNCTAD database.