

PSYCHIC DISTANCE AND OTHER DETERMINANTS OF THE EU NEW MEMBER STATES' OUTWARD FOREIGN DIRECT INVESTMENT

Stanisław UMIŃSKI ¹, Kamil ULMANN ², Aleksandra BOROWICZ ³✉

^{1,3}Faculty of Economics, University of Gdansk, Gdansk, Poland

²Doctoral School of University of Gdansk, Gdansk, Poland

Article History:

- Received 26 August 2024
- accepted 29 October 2025

Abstract. Research on outward Foreign Direct Investment (OFDI) has so far been focused on developed countries. However, the significance of emerging and transition economies is increasing. The literature review shows the gap in research on determinants of the EU NMS (European Union New Member States) OFDI, in particular regarding Psychic Distance (PD). The paper motivates theoretically and uses a gravity model to investigate the drivers behind OFDI from NMS. We apply Hausman-Taylor (HT), Poisson Pseudo-Maximum Likelihood (PPML), and Gamma Pseudo-Maximum Likelihood (GPML) estimators. These are the characteristics of the destination country that exert more significant influence than the origin, which raises scepticism about OFDI being stimulated by policy measures in the case of the NMS. A tax-avoiding motive strongly drives their OFDI. We contribute to the literature by showing that PD affects OFDI from the NMS and is an alternative to distance in kilometres, which is traditionally used in gravity models. Socioeconomic and psychic distances are robust alternatives, while other single-dimensional ones (language, industrial, democratic, or religious) are not. Our findings confirm that NMS's OFDI strongly depends on the Inward Foreign Direct Investment (IFDI) from the counterpart economies.

Keywords: outward FDI, psychic distance, tax havens, gravity, post-communist economies.

JEL Classification: F14, F21, F23, F60, C33, H26.

✉Corresponding author. E-mail: aleksandra.borowicz@ug.edu.pl

1. Introduction

Economic transition and membership in the EU have triggered structural changes and convergence between the new and old member states regarding GDP per capita and living standards. Participation in the EU common market has also contributed to increasing openness, as is proved by the high export and import ratios to GDP and per capita. According to the Uppsala model, internationalization goes through stages, from trade to FDI. Therefore, one could expect that after the initial increase in openness through imports, exports, and inward FDI, OFDI would also rise. The Investment Development Path (IDP) concept envisages that GDP per capita correlates with net investment position changes. An important component of transformation and integration in NMS was an inflow of FDI that triggered a series of effects. Through competition, demonstration, and learning (Chen, 1996) effects evoked by the inward FDI, companies in NMS become stronger, more competitive, and more experienced. Accord-

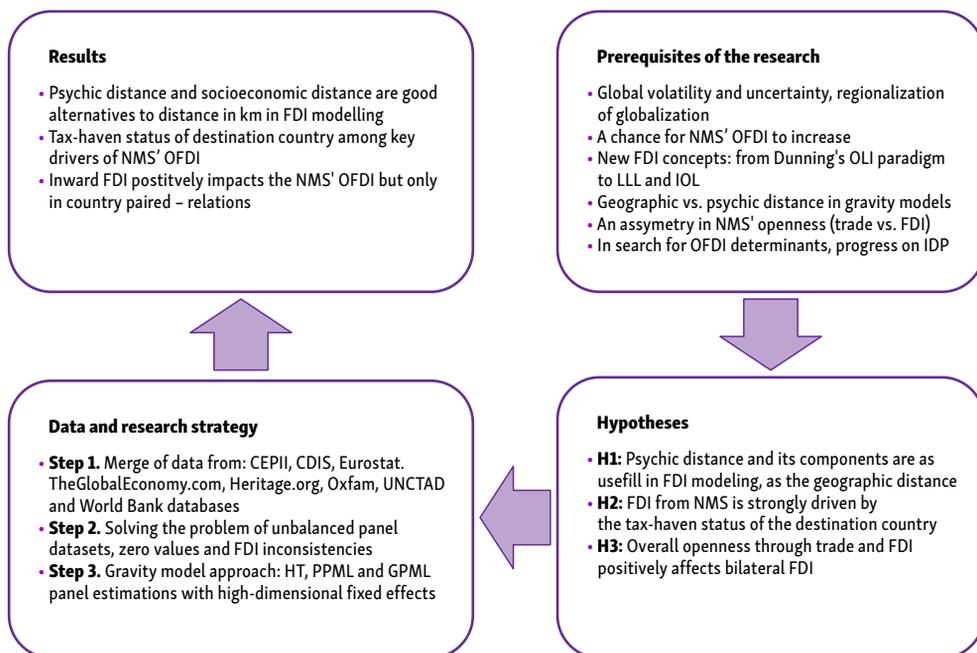
ing to the canonical Dunning's OLI typology, their ownership-related advantages upgrade, positively contributing to the capacity to invest abroad.

NMS are often treated jointly in economic analysis. However, they embrace quite different openness patterns, especially if one looks at internationalization through trade vs. FDI. These differences stem from the economy's size. Small economies tend to be more open. The analysis of stylized facts, however, shows that the correlation between size and openness shall be treated as a general rule only, subject to idiosyncrasies.

As stated by Thite et al. (2016), multinationals from emerging markets can hardly be considered homogeneous. They represent a variety of countries of origin, different business and entry strategies, and idiosyncratic firms' advantages. Investors from developed economies established the fundamentals of their foreign expansion decades ago. The contemporary internationalization of NMS through FDI proceeds in different conditions. It goes in a more open, globalized world, and represents integration into Global Value Chains (GVC). While inward FDI (IFDI) to NMS has already been subject to profound inquiry, aspects regarding OFDI appear to be underexplored in the existing literature. Despite opportunities stemming from participation in the EU internal market (free flow of capital in particular) and coupling into globalization, substantial differences persist in OFDI among the NMS. It depicts the potential for OFDI to increase.

Our research aims at the identification of OFDI determinants from the NMS. It is not based on the case studies of particular firms but relies on comprehensive databases. As most of the research is devoted to Chinese outward investors, the NMS's perspective allows us to reduce the bias towards China in the existing research on OFDI determinants (Jormanainen & Koveshnikov, 2012; Thite et al., 2016). We intend to identify factors that contribute to the progress along the IDP; however, our task is not to answer when OFDI from the NMS equalizes the IFDI. Our inquiry will allow the formulation of policy recommendations aiming at OFDI stimulation. Our research subscribes to the discussion on the nature of OFDI from EU NMS. We confirm that PD (and its components) can be an alternative measure of distance, particularly useful in FDI-gravity analysis.

Our workflow is presented in Figure 1. The paper is divided into the following sections. Firstly, by analyzing the major trends in OFDI from NMS, we present a broader view of changes recently impacting FDI. Then, we conduct a literature review, both theoretical and empirical. To understand the FDI phenomenon, we refer to selected conceptual considerations, especially suitable for NMS's OFDI. They go beyond Dunning's OLI paradigm and include the newest concepts, such as LLL (Linking, Leverage, Learning) and IOL (Inward Linkages-Outward Linkages-Leverage-Learning). Research hypotheses are formulated in the next Section. Then data and method, the strategy of econometric modelling, and the results are described. In the discussion, we compare our findings with the research of others. The last section concludes, shows the limitations, and possibilities for further research.



Notes: NMS – New Member States; OFDI – Outward Foreign Direct Investment; OLI – Ownership, Location, Internalization; LLL – Linkage, Leverage, Learning; IOL – Inward Linkages-Outward Linkages-Leverage-Learning; IDP – Investment Development Path; HT – Hausman-Taylor; PPML – Gamma Pseudo-Maximum-Likelihood; GPML – Poisson Pseudo-Maximum-Likelihood.

Figure 1. Research strategy and workflow (source: own elaboration)

2. Trends and stylized facts on OFDI from the NMS

The global economic order is changing. The COVID-19 pandemic revealed the weaknesses of dependence on China as a supplier of components and semi-products. This results in a serious reconsideration of regional supply resilience and a retreat from globalization (Enderwick & Buckley, 2020; Umiński & Borowicz, 2021; Verde, 2017). Regionalization of globalization and global value chain fragmentation can bring benefits to the EU NMS. Due to the search for supply resilience, their position as a place of FDI location will increase, primarily due to the geographic and cultural proximity and relatively low labor costs (Umiński et al., 2023). According to the LLL concept (Thite et al., 2016), the chances for OFDI increase stem from accelerated incorporation into the new, regionalized globalization setup. As regionalization opens opportunities for NMS's OFDI, inquiry into its determinants is even more important from the economic policy recommendations point of view.

Initially, the following NMS are the subject of our inquiry: Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia. They entered the EU in three stages, Croatia being the last one in 2013. Eight of them joined the eurozone. Only for Malta, the GDP per capita (in PPS, 2022) is above the EU27 average (102.2%), while Bulgaria takes the lowest position, respectively (58.8%). Since 2004, when the

first ten NMS accessed the EU, the biggest increase of GDP per capita vs. the EU average (ca. 40 percentage points) occurred in Romania and Lithuania, while for Cyprus, there was a drop of 8.2 pp. In line with the theory of economic growth, membership in the EU and participation in the internal market contribute to catching up and convergence vs. the EU average (Figure 2).

NMS at the start increased their share in the EU's IFDI stock starting at the beginning of the nineties of the 20th century, which resulted from the initiated economic transition reforms. However, since 2008, a declining trend has been observed. Regarding the OFDI, NMS's share remains much lower, and a slight increase observed before 2008 turned into a plateau (Figure 3).

The imbalance between IFDI and OFDI stocks can be explained in two ways. Witkowska (2023) notes that NMS have preferred FDI inflow due to its role in economic transition, competitiveness improvement, and export potential leveraging. For example, in Poland, a wide variety of incentives were used to attract IFDI (i.e., special economic zone or tax incentives), while OFDI were not hardly promoted. Investing abroad is challenging for NMS due to their limited capital base, mediocre experience compared to Western European firms, and lack of recognized international brands (Witkowska, 2023). Once their firms invest abroad, they challenge the liability of foreignness (Zaheer, 1995). However, companies from NMS can overcome these challenges through learning, which aligns with the LLL (Mathews, 2006). The EU enlargement in 2004 was of particular importance for OFDI from CEE countries (Jindra et al., 2015; Meinhart, 2024; Wojciechowski & Wach, 2014). A significant increase in OFDI occurred in Lithuania, Latvia, Poland, and Bulgaria (Meinhart, 2024). Firms from NMS in the CEE region are expected to invest actively in more advanced EU countries, leveraging investment liberalization to acquire strategic assets within the EU (Gorynia et al., 2022), which data from the CDIS database confirms.

Most OFDI from the NMS is located within the EU. In 2009, the share of the EU in total OFDI from NMS ranged from 42% to 85%, depending on the specific economy. For Czechia, Slovakia, and Estonia, the share of the EU was close to 85%, while for Hungary, Slovenia, and Croatia it remained below 50%. By 2021, the EU was still the largest recipient of NMS's OFDI. For most of the NMS, the share of the EU in the OFDI ranged from 45% to 85%. However, in the case of Hungary, only 17% of total OFDI was created in EU countries. It is to be highlighted in this context that the second major destination of NMS's OFDI are other European countries (non-EU). If we sum all investments done by NMS, we can conclude that in 2009, only 13.5% of NMS's OFDI was located outside of Europe. In 2021, the share of Europe in total OFDI was still high and ranged from 57% to 97% (with Hungary as an exception, with the value of 33% only). Large NMS like Czechia, Hungary, and Poland are particularly important as investors for small countries in the NMS group and the Western Balkans. As an example, in Bosnia and Herzegovina and North Macedonia, investors from these countries account for approximately 20% of inward FDI (Jirasavetakul & Rahman, 2018).

In the case of investments made within the EU, a substantial portion is directed to other NMS countries, particularly neighboring ones, which resonates with gravity theory. For example, in 2009, the largest recipients of investments from Estonia were Latvia and Lithuania; for Latvia, these were Lithuania and Estonia; and for Lithuania, the Netherlands and Latvia.

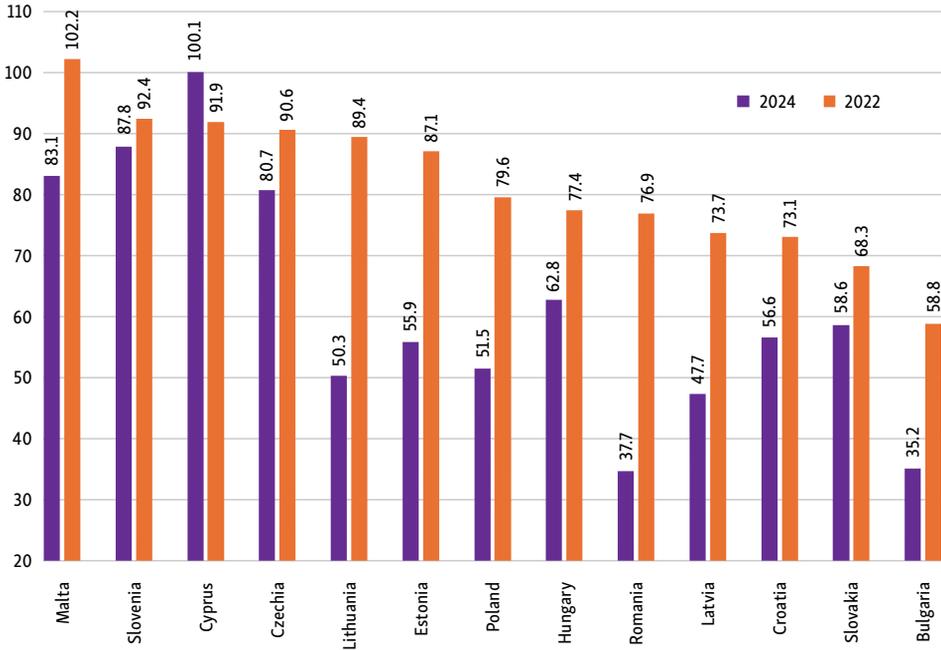


Figure 2. GDP per capita in PPS vs. the EU average (%)
 (source: own calculations based on Eurostat [NAMA 10 PC custom 7014653])

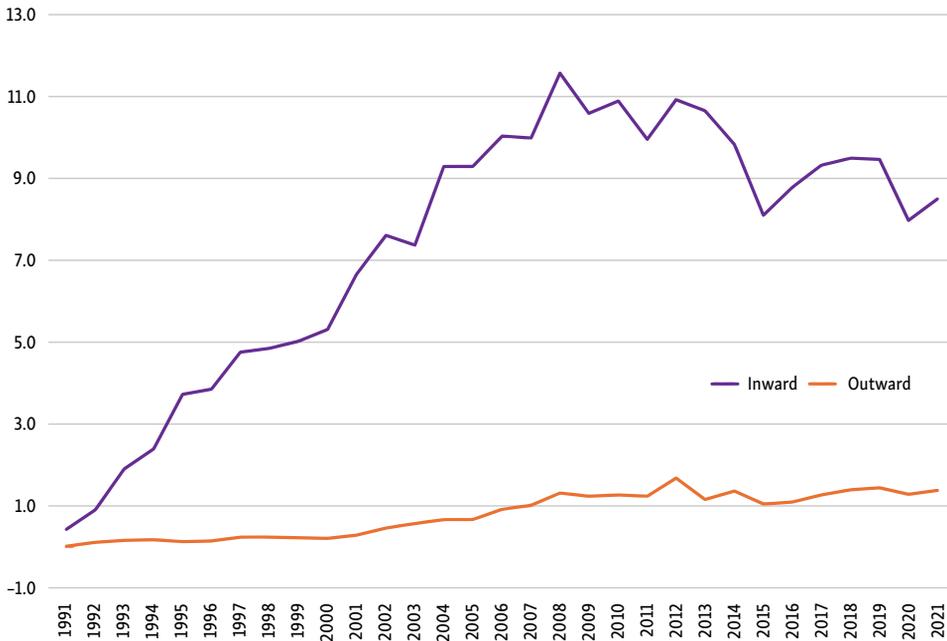


Figure 3. NMS's (excluding Cyprus and Malta) share in the EU inward and outward FDI stocks (%)
 (source: own calculations based on UnctadStat)

Beyond neighboring countries, significant recipients of investments included the Netherlands (the largest recipient of OFDI from Croatia, the Czechia, and Lithuania in 2009), Luxembourg, Germany, and Italy. Similar conclusions can be drawn from the analysis of data for 2021.

Empirical studies show that NMS's OFDI is predominantly driven by market-seeking and efficiency-seeking motives. This pattern suggests that as NMS' firms expand abroad, their strategies are shaped both by the desire to access larger regional markets and to exploit cost efficiencies or optimization (Jindra et al., 2015; Jirasavetakul & Rahman, 2018; Jones et al., 2020; Gorynia et al., 2007).

Relatively large roles as recipients of OFDI are played by countries with favorable tax jurisdictions (in Europe, these include Ireland, Cyprus, the Netherlands, and Luxembourg, according to Oxfam). The share of such countries in NMS's OFDI in 2009 ranged from a few percent (Slovakia 3%, Estonia 4%, Latvia and Romania 5%, Hungary 7%) to several tens of percent (Slovenia 41%, Czechia 39%, Poland 20%). A similar pattern was observed in 2021 (e.g., Latvia 4%, Slovakia 6%, Estonia 10%, Lithuania 20%, Poland 35%, Slovenia 27%).

Since the mid-1980s of the 20th century, the share of Malta and Cyprus in NMS' overall OFDI stock rose, from 0.4% in 1986 to as much as 70.0–83.0% in 2013–2021. Data on Malta and Cyprus are excluded from the in-depth stylized facts analysis, as well as from the econometric estimations, due to their intensive role in FDI trans-routing (substantial contribution of Special Purpose Entities). In 2003, the share of OFDI stock in GDP was 3260% for Malta and 148% for Cyprus. Positions of NMS excl. Malta and Cyprus are presented in Figure 4.

Relying on the UnctadStat databases, we perform several in-depth inquiries into the character and intensity of NMS's OFDI, trying to find regularities and dependencies. We utilize various measures, such as OFDI in USD per capita or as a percentage of GDP, and the ratio of OFDI to inward FDI. The stylized facts analysis does not, however, bring any robust conclusions. The regressions done are not satisfactory, and the R-squared coefficients are low. NMS represent a differentiated group of economies. Idiosyncratic factors and particular investors' activities seem to affect the overall OFDI scores.

The highest R-squared (48.0%) is observed for the OFDI stock as a percentage of GDP, depending on GDP per capita (Figure 5). The per capita OFDI stock ranges from 139 USD for Romania to 9.7k USD in the case of Estonia. As a percentage of GDP, OFDI stock remains at the level of around 4% in the case of Bulgaria, Poland, and Slovakia vs. 36.0% in Estonia.

NMS' economies are much more open through exports than through OFDI. Despite their two-decade membership in the EU, there appear to be impediments to internationalization through OFDI. They exhibit an active approach to foreign trade, whereas they assume a passive stance in the realm of OFDI. Thus, inward FDI dominate. The average OFDI stock-to-GDP ratio (weighted by GDP) for NMS in 2021 is 35.1%, while for old MS 83.5%. The disproportion between OFDI and exports creates a field for economic policy and diplomatic action.

As a part of a stylized facts presentation, a bench of firm-level facts is depicted below. The analysis of the NMS' OFDI characteristics presented is based on several data sources, including OECD FDI database, Moodys' (BvD, Orbis), and Eurostat (FATS¹). Depending on the data source used to calculate the specific FDI-related measure or index, results differ. It stems from specific methodological approaches and data coverage. The overview based on firm-level data is enriched through an empirical research review.

¹ Foreign affiliates of the EU enterprises.

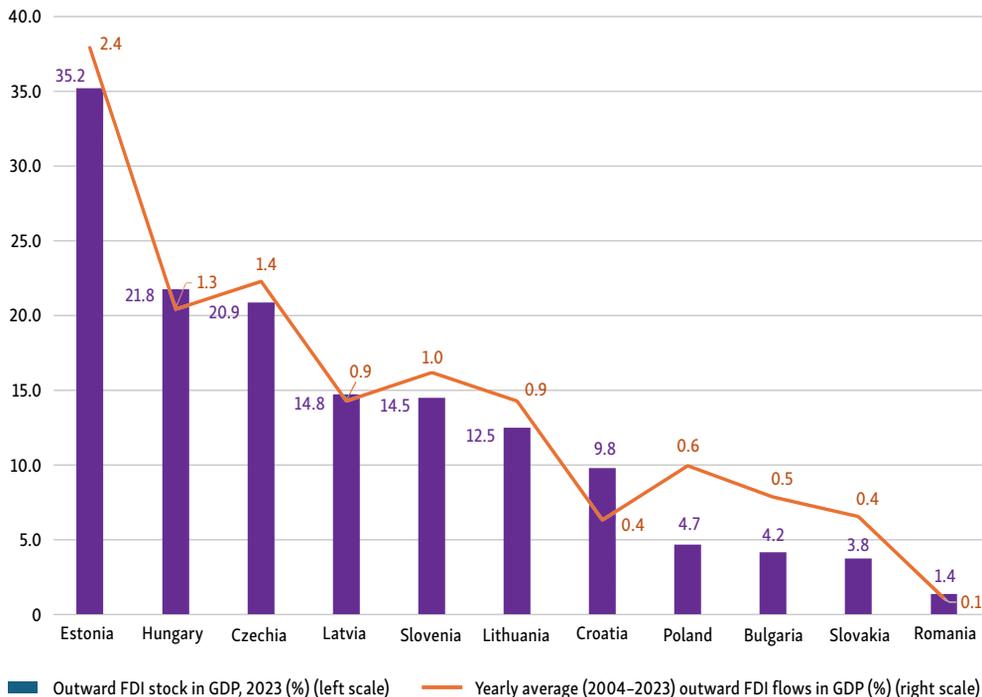


Figure 4. Position in outward FDI. Comparison of selected post-transition economies (source: own calculations based on UnctadStat)

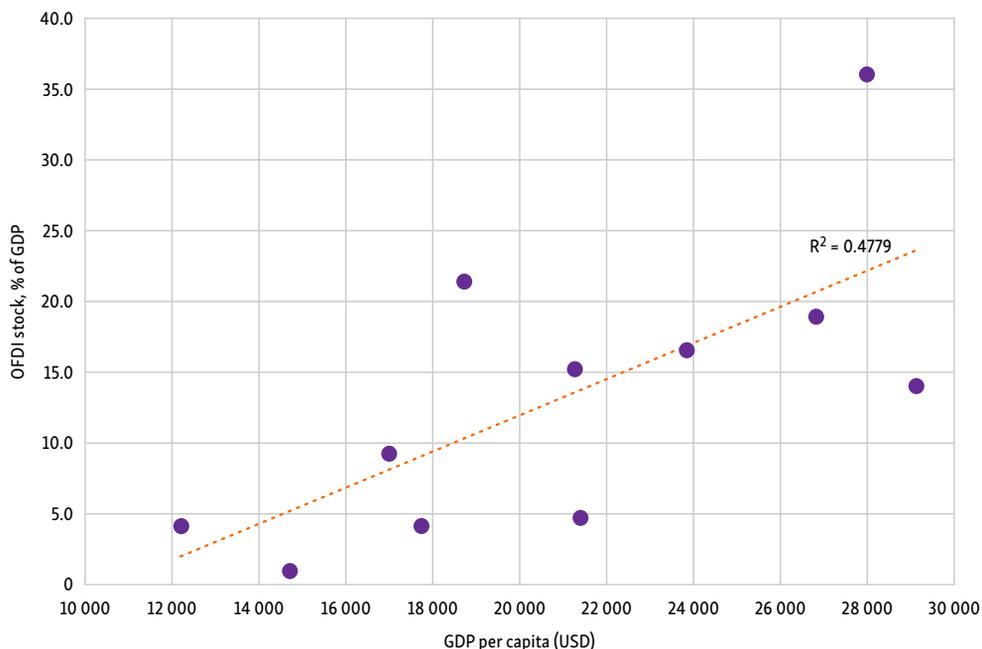


Figure 5. NMS (excl. Cyprus and Malta) outward FDI stocks % GDP vs. GDP per capita (USD) (source: own calculations based on UnctadStat)

According to Moody's/Orbis, the number of entities in which investors from NMS have equity stakes abroad equals ca. 434.3 ths². The highest number is for construction (84.4 ths.) and transport, and storage activities (83.5 ths.). To a great extent, this reflects the small-value, individual persons' foreign investments done in these two sectors, by countries that have labor-cost advantages. To illustrate this, Moody's data can be used. For example, there are 37.5 ths. entities in which Romanians have stakes abroad in construction (in storage and transport 24.3 ths. – accordingly).

Eurostat reports 10.3 ths. enterprises for which aggregate data are provided for outward NMS's affiliates. In 2022, they employed 521.8 ths. persons (abroad) and generated 186.5 bn EUR net turnover. Due to its economy's size, Poland has high shares in the overall NMS's outward foreign affiliates employment (27.3%), as well as in the net turnover (37.3%).

NMS's OFDI is directed to the services sector predominantly. According to the OECD FDI database, the share of services in OFDI NMS' stocks remains at 70–85% during the 2005–2023 period. According to Eurostat, services share in NMS' outward FDI affiliates' employment in 2022 is 70% (followed by manufacturing, 24%). Within NMS's OFDI in manufacturing, there is a high share of petroleum, chemical, and pharmaceutical industries (45.2% in the value of investments), followed by the metal and machinery industry (17%), and food, beverages, and tobacco (8.6%). In services, the financial and insurance sector accounts for 60.2% of OFDI, followed by professional, scientific, and technical activities (9.7%), and private real estate (9.4%).

Enterprises from NMS that engage in OFDI are generally larger and demonstrate higher productivity than domestic firms. This is in line with firms' heterogeneity concepts and empirics (Melitz, 2003). Empirical studies show that transnational companies are not only more productive and larger, but also more R&D intensive and export-oriented than domestic ones (Antràs & Yeaple, 2013; Girma et al., 2004; Mayer & Ottaviano, 2008).

A more detailed inquiry into the Eurostat and OECD databases reveals idiosyncrasies of each country's OFDI positions, which reflect their size, competitiveness of particular firms, and sectoral characteristics. The LQ (location quotient³) analysis performed on the Eurostat data (on turnover and employment) shows that Poland has comparative advantages in mining and quarrying (LQ ca. 2.7). In manufacturing, the highest advantages are an attribute of Slovenia, Czechia, and Croatia (LQ between 1.4 and 1.6), while in services of Romania, Lithuania (and also Malta) (LQ between 1.2–14). Analysis of employment in outward affiliates at a more disaggregated level brings more nuanced results. For instance, Bulgaria and Romania have strong specialization in textiles (LQ 8.5–12.8), Croatia, Czechia, and Lithuania in food products (LQ 2.1–4.0), Hungary and Poland in petroleum products (LQ 1.45–4.3), and Lithuania in furniture (12.4). Although Poland generally does not have a comparative advantage in services, in ICT, LQ is 2.5. In financial and insurance services, high LQ (1.7–3.9) are revealed for Bulgaria, Estonia, Hungary, and Slovenia.

Heterogeneity is also evident if we take productivity⁴ into account, ranging from 9.5 EUR

² A standard 10% threshold (recommended by the OECD) was applied to the queries in Moody's BvD/Orbis database.

³ The location quotient (LQ) provides a normalized measure of sectoral concentration by comparing the share of employment in a given activity to the NMS' average. Values above 1 indicate above-average specialization.

⁴ NMS' outward affiliates' net turnover per employee, Eurostat data.

ths. for Malta, to 40–50 EUR ths. for Cyprus, Czechia, and Poland, to 55 EUR ths. in the case of Hungary. Differences are also seen in terms of benefits per employee, ranging from 13.1 EUR ths. for Croatia, 19–20 EUR ths. for Slovenia and Slovakia, to 30–35 EUR ths. for Cyprus, Poland and Romania, which reflects the quality differentials in OFDI, and the personnel hired thereof.

OECD data on the role of SPEs in channeling NMSs' OFDI is limited. However, it shows that in the case of Hungary, their role is high. While, for instance, for Poland the share of resident SPEs in OFDI positions in 2023 is about 1.7%, for Estonia and Latvia about 7%, for Hungary it is much higher – 83%.

3. Literature review

Emerging economies play an increasing role in attracting and making FDI. However, the most developed countries still account for three-quarters of global OFDI (United Nations Conference on Trade and Development, [UNCTAD], 2022). The growing role of emerging economies, particularly those from the CEEC region, encourages researchers to identify the drivers of their OFDI. However, the number of related papers remains small. If one considers research conducted using quantitative methods, like the gravity panel data approach, the gaps are even more apparent.

The analysis of OFDI from NMS subscribes to a broader research path, which is developing and emerging countries' increasing participation in the global economy, FDI in particular (Bhasin & Kapoor, 2021). The nature of world FDI started to change after the 2008 global financial crisis. Flows become more volatile, global FDI dynamics slow down, and the developing economies' share is on the rise. This trend reflects the global economy's structural changes and developing countries' resilience as investors.

According to Blažević et al. (2005), OFDI from CEECs is determined (pulled) by external factors, rather than pushed by investors' firm-specific advantages. Several papers cover the issue of institutional quality and distance as driving forces of IFDI and OFDI. Jindra et al. (2015) show the positive impact of legal institutions, patents, and the quality of infrastructure in host countries on attracting OFDI from CEECs. Investors from CEECs rely highly on institutional proximity while investing in advanced economies. Institutional proximity is a comparative advantage. In the literature on FDI, one finds references to PD, the operationalization of which was proposed by Dow and Karunaratna (2006) and Brewer (2007). Dow and Ferencikova (2010) and Håkanson and Ambos (2010) elaborate on various measures of distance in FDI analysis, which are PD itself and its components (incl. language, religious, socio-economic, industrial, educational, and democratic). Li et al. (2020) prove that the traditional measures of distance are becoming less important than those based on cultural and psychic components.

Economic links are subject to gravity; the neighboring markets are favored (Head & Mayer, 2021). According to Bloningen and Piger (2014), cultural proximity and trade agreements are on top of inclusion probabilities among gravity variables. The question, however, is what proximity measures determine the OFDI and what the alternatives for the traditionally used geographic distance in gravity models are. PD and other alternative measures were used in OFDI modeling, but not within the gravity models context (Puthusserry et al., 2021).

Chen et al. (2020) study the moderating effect of firm heterogeneity on PD for Chinese OFDI and find a U-shaped relationship between PD and OFDI in emerging economies. Szunomár (2020) indicates that pull factors (home country characteristics) can be grouped into structural and institutional. The first group embraces low factor costs, access to new markets, and opportunities for those investors who seek strategic assets (know-how, new technology, etc.). Institutional pull factors include host country policies (like reduced taxes), trade agreements, institutional and political stability, and several investment-related institutions (for instance, investment promotion agencies and intellectual property agreements). As stated by Silva Rêgo (2020) and Hassan (2015), institutional proximity may reduce the uncertainty in foreign expansion of firms from less developed economies. According to Buckley et al. (2013), MNEs from emerging markets are strongly driven by specific incentives offered by tax-haven countries.

It is found that investors from CEECs primarily seek new markets (Ipsmiller & Dikova, 2021; Popovici & Călin, 2019) and strategic assets (Jindra et al., 2015). The efficiency-seeking motive is usually unimportant for emerging economies, as their advantages predominantly stem from low labor costs (Jindra et al., 2015). Similar conclusions for the Baltic countries' OFDI were formulated by Ginevičius and Tvaronavičiene (2005). Firms internationalize once they gain experience in their home markets (Çela et al., 2022). However, Jindra et al. (2015) found that some investors from Central and Eastern European countries engage in outward FDI as a means of optimizing their corporate tax burden.

Nguyen and Ciešlik (2021) use the knowledge-capital (K-C) model to analyze OFDI from Europe to Asia and identify the difference in skilled labor endowments and language proximity as significant determinants. Ciešlik and Ghodsi (2021) show the positive impact of the economic sentiment on OFDI in the EU.

In summary, the literature indicates that firms from emerging markets internationalize differently from those in developed economies (Dunning, 2006; Rugman, 2009). Jindra et al. (2015) emphasizes that the motives for IFDI and OFDI change along with location and ownership advantages. Undoubtedly, FDI motives remain dynamic and could have many interpretations (Cuervo-Cazurra & Narula 2015; Dobrowolska et al., 2024). This view emphasizes the importance of considering investment motives as aspiration-driven and open to change, when strategic outcomes fail to meet expectations. Literature on NMS's OFDI determinants remains limited, particularly concerning the usage of quantitative methods. Although there is a rise in interest in using alternative distance measures to a geographic one, the PD is still neglected.

4. Selected conceptual considerations

FDI theory has undergone profound changes since the contribution of Hymer (1960), who describes FDI as capital and the whole package of resources/advantages. Dunning (1970) and Cantwell (1994) treat FDI as a combination of an idiosyncratic set of resources and capabilities, constituting a competitive advantage for the investing company. Crossing FDI motives with components of the OLI paradigm (Dunning & Lundan, 2008; Jensen, 2002) provides

a matrix in which FDI is traditionally interpreted. However, the structure of global FDI flows started to change. Developing countries began to invest. With time, they targeted not only the adjacent, developing economies but also the developed, distant ones. NMS's OFDI is predominantly driven by the motivation of seeking (markets, resources, efficiency, capabilities, etc.) or avoiding (taxes, instability, risk), which corresponds to idiosyncratic firm-level factors (Bellak et al., 2005). Preferential taxation can be interpreted not only within the escape motive category, as Dunning originally did, but also as a manifestation of efficiency-seeking. In foreign investors' search for more favorable tax conditions, a kind of dualism occurs, related to how we understand and interpret escape vs. efficiency-seeking. On the one hand, firms employ structures in tax havens to mitigate exposure to high taxation and adverse fiscal regulations in the home country (Aykut et al., 2017; Bolwijn et al., 2018; Damgaard et al., 2019). On the other hand, these arrangements enable more efficient resource use by reducing fiscal burdens and improving capital allocation (Gorynia et al. 2015; Jindra et al. 2015; Lundan, 2016). These points of view are well documented in the literature. In the traditional formulation of the eclectic OLI paradigm, the efficiency-seeking motive primarily refers to the pursuit of lower production costs, economies of scale, and specialization effects. However, the traditional OFDI train has already gone, and OFDI meets several new global challenges. The latest version of OECD Benchmark FDI Definition takes into account tax determinants and underlines that structures like SPEs or „round-tripping“ are utilized in business practice as fiscal-oriented solutions. However, it does not provide a clear answer whether the motive for global tax avoidance can be classified as escape or efficiency-seeking. This is due to the specific nature of FDI statistics, which cannot deliver an answer whether every SPE structure, or routing through transit countries, is used for tax avoidance purposes. The OECD confirms that preferential tax treatment is one, among others, possible motive for FDI for example in case of round-tripping (Organisation for Economic Co-operation and Development, [OECD], 2025). The debate surrounding the classification of tax-related investment motives stems from the evolving landscape of global FDI. MNEs increasingly focus not only on traditional drivers, such as market seeking or the pursuit of lower production costs, but also on the use of alternative forms of FDI, such as SPEs or round-tripping investment, for tax optimization or as a means of escaping unfavorable fiscal conditions. This strongly encouraged us to formulate H2.

It is worth noticing that the OLI paradigm has its counterpart in management literature. The Resource-Based View (RBV) of the firm concept (Barney et al., 2001; Peng, 2001) stresses the importance of resources (such as networks and intangibles) for foreign expansion, particularly in the internationalization of firms from emerging markets. Literature does not offer an unequivocal approach to internationalization patterns interpretation. On the one hand, some concepts put emphasis on stages and linearity (Uppsala model and IDP). On the other hand, new concepts appeared that aim at explaining the phenomenon of emerging countries' OFDI. The Uppsala model is one of the most frequently used frameworks for the interpretation of internationalization through stages (Johanson & Vahlne, 1977; Vahlne & Johanson, 2017), which has also been a subject of criticism due to, e.g., ambiguity in terms of stage range (Gorynia & Jankowska, 2007).

The Uppsala model, as the literature suggests, can be treated as a dynamic version for understanding the market-seeking FDI (with the role played by PD). Market seeking, in a natural way, draws our attention to the gravity model, which we use empirically in econometric estimation (market corresponds to the GDP variable in the gravity model). Another important motive is searching for efficiency, which could take various forms depending on the character and maturity of an overseas investment project and its sectoral characteristics. We deliberate it more in justification of H2.

The interaction of various factors can provide additional insight into the nature of FDI. Bellak et al. (2009) focus on the role of infrastructure endowment as a determinant of FDI, linking it with tax burdens imposed on firms. FDI theory shifts its focus to technological and innovation capabilities (Cantwell, 1989). From the perspective of developing countries, OFDI is a chance to gain managerial and technological capabilities and to upgrade the home economy's industrial structure. NMS's OFDI can also be interpreted as coupling into GVCs and catching up on the internationalization path (through exports and FDI), for which the dynamic IDP approach is useful. Countries that initially were the target for FDI turn into positive net investment positions as their GDP per capita increases. According to Dunning and Narula (1996), Dunning (2002a), Narula and Dunning (2010), as an economy grows and its prosperity improves, it activates as a capital exporter (Djokoto, 2021; Gorynia et al., 2022; Sawitri & Brennan, 2023; Yin et al., 2021).

NMS' firms are evolving/changing organizations, embedded in a network of interactions, enabling them to make use of competitive advantages for foreign expansion (Dunning, 2002b; Ietto-Gillies, 2007). Camarero et al., (2022) treat the accession to the EU as a quasi-natural experiment that subscribes to the C-P framework, which well suits OFDI from NMS interpretations. According to Wallerstein (1974), there is an array of core and peripheral locations, performing different functions. Iammarino and McCann (2013, p. 40) find Hymer's (1972) "correspondence principle" useful in interpreting the nexus between organizational/industrial and spatial structures. As a result of the economic transition and membership in the EU, NMS witnessed dynamic growth. Nevertheless, significant differences in productivity persist among new and old member states (Giordano & Lopez-Garcia, 2019). This heterogeneity is reflected in the internationalization capacity (Brodzicki & Umiński, 2018; Mayer & Ottaviano, 2008; Nazarczuk et al., 2020).

One of the structural changes the global FDI goes through is the rising share of developing/emerging economies, which is a challenging test for FDI theories. Buckley (2018) believes that "new phenomena need a new theory", and there comes the new LLL concept, for instance, which is an alternative approach to the new players' role in global FDI (Mathews, 2006) that resonates with the C-P and catching-up framework. It focuses on the success of investors that apparently have meager chances for a dynamic expansion and, despite their initial deficiencies (lack of skills, competencies and social capital, remoteness), do leapfrog to higher technological stages, relying on cooperation. Investors from the periphery are smartly adapting to the global "interfirm connections" (Mathews, 2006), or linkages. It stands in contrast to the traditional OLI concept, in which an internationally expanding firm primarily relies on already existing advantages. In LLL, the expanding firm is linked to the better-positioned/

competitive firms abroad, from which the needed advantages can be sourced. Luo and Tung (2007) underline that the international expansion of latecomers is rapid (not gradual), and represents a springboard perspective, with assets and opportunities seeking as the dominant motive. The LLL thus supplements the traditional OLI paradigm, which does not envisage fast internationalization. The extension of LLL to IOL by Lu et al. (2017), relates to the inward-outward linkage and takes into account the inward FDI stimulating effects on OFDI (Xia et al., 2014). This approach resonates with IDP, which shows the transformation from inward to outward FDI along the GDP per capita growth path. However, it does not explain in detail the “mechanics” behind this transformation. The extension of OLI and LLL is further described by a multidimensional ambidexterity perspective, which perceives EMNEs as organizations that offset their late-comer disadvantages (Child & Rodrigues, 2005; Luo & Rui, 2009). The ambidexterity perspective is focused on pull factors, attracting OFDI. However, an alternative point of view is push factors, in which OFDI is a response to the home country's institutional constraints (Witt & Lewin, 2007). OFDI is an escape from a home country's conditions, and is looking for tax incentives.

An investing firm can respond to misalignment between the institutional environment and its needs through acquiescence, abatement, diminution, or escape (Oliver, 1991; Witt & Lewin, 2007). This resonates with the institutional theory (Adithi, 2018). The strategy that MNEs adopt in destination countries depends on the institutional environment. This determines the intensity of FDI relations (Jensen, 2007).

A prominent role in modelling international economics is played by gravity (Head & Mayer, 2014), which is deeply embodied in the trade and FDI analysis. Recently, two trends have enriched FDI analysis. The first relates to the method of the analysis, the usage of Bayesian Model Averaging (BMA) reduces uncertainty regarding the model specification itself (Bloningen & Piger, 2014; Camarero et al., 2022; Cieřlik & Gurshev, 2021; Cieřlik et al., 2022). The second relates to the understanding of distance and the inclusion of the genetic distance (Xu et al., 2021). Both shall be considered for FDI analysis, in particular for the efficiency of technology and tacit knowledge transfer (Delis et al., 2017).

Geographic distance is the foundation of the gravity models; however, it has several potential alternatives. Whereas it seems intuitive that geographic distance would be the first-best option (commodity trade means the physical delivery of commodities), it is not evident for capital flows. FDI represents a more advanced and sophisticated form of international cooperation, so PD or its components are probably more relevant. While the PD term was used in the research quite early (Beckerman, 1956; Linnemann, 1966), its nexus with the process of internationalization was noticed later (Brewer, 2007; Johanson & Vahlne, 1977; Johanson & Wiedersheim-Paul, 1975; O'Grady & Lane, 1996). According to Beckerman (1956), PD is not a symmetric measure: investors from country A may consider country B as very similar, but it does not imply that the opposite holds. This could explain differences between FDI two-way flows or stocks between “similar” economies. Moreover, the two countries may be geographically distant and psychically similar, which might determine excessive FDI flows to (geographically) distant entities. Mayer and Ottaviano (2008) illustrate this phenomenon for gravity forces in trade, focusing on the impact of former French colony status and using

the French language on French exports. The understandings of the PD itself differ, depending on the context of the analysis. According to Nordstrom and Vahlne (1994), cultural and PD are different but overlap. Boyacigiller (1990) perceives religious, language, and form of government differences as contributing to PD. Referring to Dow and Karunaratna (2006), we treat language, religious, socio-economic, industrial, educational, and democratic distances as PD components.

In the new concepts (LLL and IOL), there is a clear emphasis on FDI determinants, which is different from those in traditional theory, especially in comparison with the more static OLI paradigm. These determinants relate to the issues of interaction, relationships, and learning to a much greater extent, the effectiveness of which is conditioned by distance. At the same time, the understanding of the concept of distance is also evolving, regarding culture and PD.

5. Research hypotheses

Concerning trends and stylized facts in OFDI, literature review, and conceptual considerations, we formulate three hypotheses, which are later econometrically verified.

H1: *Psychic distance and its components are as useful in FDI modeling as the geographic distance.*

The market-seeking motive is crucial for making overseas investments, and it can be treated as an underlying driver of FDI. In the gravity approach, it is captured by GDP variables. However, in the research we focus on different measures of distance, PD in particular – as a second key determinant. The understanding of PD has been changing. Initially described by Beckerman (1956) as the proximity of suppliers and customers in terms of economic and linguistic aspects of doing business, it evolves into a multifaceted, comprehensive concept, embracing issues of cultural, linguistic, industrial, educational, political, and religious nature, as well as time zone differences and colonial links (Dow & Karunaratna, 2006). From the FDI perspective, the PD resonates with the concept of the investment climate (Nehrt, 1970).

The relationship between PD and internalization is complex. O'Grady and Lane (1996) describe the PD paradox, meaning that operations in psychically proximate countries are not always easily manageable: "Assumptions of similarity can prevent executives from learning about the critical difference". Decision-makers are often unprepared for differences associated with the internationalization process, and psychic proximity may be deceptive. On the one hand, investors from emerging economies are vulnerable to PD because it hampers effective business communication, technology transfer, and information flows (Puthusserry et al., 2021). Conversely, investing in psychically distant countries provides access to complementary resources (technology or talent). This resonates with the optimum technological gap concept that determines the effectiveness of FDI-related spillovers (Kotikova & Vavrek, 2019; Shen et al., 2021).

There are several ways in which the PD impacts the process of internationalization. The PD is rooted in the foreign markets' unfamiliarity (Child et al., 2002), which relates to the liability of foreignness (Zaheer, 1995). PD hampers international knowledge transfer, increases transactional costs (Jiménez & de La Fuente, 2016) and learning barriers (Puthusserry et al., 2021),

which reduces the effectiveness of foreign environment understanding (Coldwell & Joosub, 2018). The liability of foreignness has been extended within the Uppsala model evolution by introducing the liability of outsidership concept. It points to the significance of networking in a globalized economy, understood as participation in the corporate exchange of goods and tacit knowledge, and access to a distribution network (Johanson & Vahlne, 2015).

H2: *FDI from NMS is strongly driven by the tax-haven status of the destination country.*

As the literature review shows, efficiency-seeking belongs to the most important motives of OFDI (Dunning & Lundan, 2008; Jensen, 2002, 2007). There is an ongoing debate in the literature on whether tax- or fiscal system-related investment motives should be classified as an instance of escape motivation or rather as a specific form of efficiency-seeking. The advantage of preferential tax regimes and allocating capital in such jurisdictions is in line with the escape logic (Driffield et al., 2021; Felix et al., 2025). On the other hand, the optimization of tax burdens may be treated as a form of cost rationalization. It fits the broader efficiency-seeking framework (Erokhin, 2023; Gorynia et al., 2015; Jindra et al. 2015). OECD (2025) shows that practices such as round-tripping and the use of SPEs reflect both fiscal avoidance and the pursuit of greater efficiency in global resource allocation. The distinction between escape and efficiency-seeking is not clear-cut. Recognizing that tax motives may simultaneously embody both escape and efficiency-seeking dimensions allows for a more comprehensive understanding of the investors' motivation.

Preferential taxation is among FDI determinants in many estimations of FDI (Ateş et al., 2020; Driffield et al., 2021), either as a dummy variable or as a continuous one, reflecting the strength of tax incentives (Kandogan, 2016). As shown by Meinhart (2024), the NMS's OFDI is strongly driven by regulatory differences stemming from taxation issues. This reflects the round-tripping (or trans-routing) type of many investment projects, as well as Special Purpose Entities' (SPEs) activities.

We expect the high role of tax havens in attracting FDI from NMS. This role may be higher than the literature predicts overall – NMS have not yet established a solid manufacturing base comparable to developed economies; this is why we expect a high magnitude of influence of tax-haven dummy variables on OFDI. Many investors from NMS are active in the services sector and represent not-yet-experienced business entities (compared to MNEs from highly developed economies). They cannot benefit from more nuanced efficiency-seeking based on production factors' intensity and costs. However, they could benefit from taxation-based efficiency or optimization.

H3: *The NMS's OFDI is positively affected by the inward FDI.*

Inward FDI creates an open, stimulating economic environment for cooperation in the form of outward FDI (Cantah et al., 2018) through competition, imitation, and learning-by-interacting effects (Chen, 1996). Post-transition economies attract MNEs and use them to provide the necessary resources needed for foreign expansion and overcoming the problem of liability of foreignness and outsidership (Barney, 1991; Barney et al., 2001; Peng, 2001). The question, however, is whether openness to inward FDI stimulates the outward ones, on a bilateral basis. For instance, German FDI in Czechia can significantly stimulate Czechia's FDI in Germany by reducing the liability of foreignness, risk, and information gap. Moreover, if an

investor is a big MNE, FDI flows take place in both directions (in and out) between subsidiaries (internalization motive in the OLI paradigm (Dunning & Lundan, 2008)). It corroborates the FDI exchange of threats theory (Graham, 1975, 1990). Our H3 can also be rooted in contemporary conceptual frameworks, such as LLL and IOL (Mathews, 2006; Lu et al., 2017), that shed light on the nexus between inward and outward FDI.

6. Data and method. The strategy of econometric modelling

The preparation of the database is carried out as follows: the CEPII Gravity database (Conte et al., 2022) is merged with the databases of CDIS, Eurostat, TheGlobalEconomy.com, Heritage.org, Oxfam, UnctadStat, and World Bank. We adopt data on bilateral IFDI and OFDI stocks from the CDIS (for countries). We rely on stock values because they – unlike the values of short-term flows – better reflect the sophistication of the long-term phenomenon, that is FDI. Moreover, we adopt the PD measure by Dow and Karunaratna (2006) and the PD components (incl. religious, language, educational, industrial, democratic, and socio-economic). PD (and its components) measures are based on macro-level data, which implies that the PD is the same from country A to country B and inversely. Dow and Karunaratna (2006) apply ten-year intervals, which is enough because most metrics are unlikely to change over time. There are two standard ways to deal with interval data in panel models to tackle the problem of unbalanced datasets: substitution of lacking data with the last observation (chosen by us) or the interpolation between the intervals, which is not necessary in case the metrics do not vary significantly over time.

In the initial estimations, we tested a wide set of variables covering various OFDI determinants across different overseas investment motives (i.e., labor costs reflecting efficiency-seeking; several technology-related measures reflecting countries' positions on the technology ladder and resonating with strategic assets and capabilities-seeking). It turned out, however, that they are insignificant and decreased the overall quality of the results obtained.

Apart from the variables obtained from various databases, we create indicators of difference between countries, e.g., difference in GDP per capita, rule of law, export of high-tech products, and share of services in GDP. We drop values for FDI stocks lower than zero (978 occurrences). Negative FDI flows stem from reverse investments, disinvestments, redemption of intercompany loans, credit movements, or dividend transfers. Theoretically, FDI stocks shall take only positive values; however, in practice, in databases, stocks also take below zero values.

We use the gravity model framework; the literature review proves the usefulness of this tool in the bilateral FDI analysis (Head & Mayer, 2014). While in the literature the semi-parametric approach is on the rise, in the context of our research, it would eliminate distance-related variables. We find them crucial, because the purpose of the research is to inquire into various measures of distance. Without inspecting the coefficients of particular variables, our discussion on the role of distance would be limited. In our case, the distance-related variables are not the controls. They constitute the quintessence of research. Despite the fact that the semi-parametric approach provides robust results with fixed effects, we had to choose the alternative approaches.

Therefore, we adopt models estimated with Poisson Pseudo Maximum Likelihood (PPML), Gamma Pseudo Maximum Likelihood (GPML), and Hausman-Taylor (HT) estimators. We rely on various estimators, including those proposed in recent years in the literature. This refers especially to PPML and GPML. While PPML is one of the most common choices in the case of gravity models (Porto, 2023; Santos Silva & Tenreyro, 2006), GPML is recommended as a robustness check (Head & Mayer, 2014; Yotov et al., 2016). In particular, Head and Mayer (2014) point out that similar results obtained with PPML and GPML estimators prove the superiority of the Pseudo Maximum Likelihood approach over OLS (mostly due to heteroscedasticity issues). Gravity panel data models are typically estimated with fixed effects, which has been proved in our case by the results of Wald, Hausman, and Breusch-Pagan tests. Initially, we considered using the BMA method, but finally decided not to do so. We wanted to eliminate the risk that the distance variables and the GDP of the origin and destination countries would not be those with the highest posterior inclusion probability. Distance is the fundamental variable in gravity models (which our results confirm).

We add 1.0 (unity) to all the OFDI and IFDI stocks observations to be able to use the Hausman-Taylor estimator, which (unlike the PPML) does not handle the frequent zeros as well as negative values that could appear if FDI stocks are lower than unity in natural logarithm. We decide to add 1.0 to all observations (not only to the zero values) for OFDI and IFDI stocks not to influence the coefficient estimates. Adding a constant value to selected observations would result in inaccurate estimates, impacted by the mathematical procedure.

We adopt the HT estimator as a primary tool, PPML and GPML as the alternative ones for robustness checks. The advantages of HT stem from the possibility of using simultaneously the country-pairs fixed effects and time-invariant variables (such as distance in km). Moreover, control of endogeneity is easily applicable. HT estimator finds its use in gravity modelling in various papers (Cieřlik & ANH, 2016; Egger, 2005; Gouveia et al., 2018; Khan et al., 2023; Manocha, 2023).

We realize that there could potentially be a problem of collinearity between some of the covariates. HT overcomes this issue by using the instrumental approach. However, HT is also a mixed model and therefore is not fully robust to the problem of endogeneity or correlation between some of the covariates and the random error term. That is also why the gravity literature is moving towards a semi-parametric approach, where all the structural factors are represented with fixed effects. However, in our case, this is not the solution because of the lack of estimations of coefficients for the important variables on distance. To inspect potential collinearities, we went through the VIF procedure for every single estimation. Moreover, we applied robust standard errors.

In PPML and GPML, we do not use the log values of the dependent variable. In gravity analysis, the PPML approach is well-suited (Brodzicki et al., 2017; Brodzicki & Umiński, 2018; Head & Mayer, 2014; Martin & Pham, 2020; Nguyen et al., 2020; Santos Silva & Tenreyro, 2006). We applied the PPML estimator in the HDFE version, as it provides more robust results with regard to the treatment of heteroscedasticity. However, it gives the same results of estimations as PPML with standard robust errors, which stems from the fact that we do not use multiple fixed effects.

The general model takes the following form:

$$\begin{aligned} \ln OFDI_{ijt}^5 = & \alpha_1 \ln GDP_{it}^6 + \alpha_2 \ln GDP_{jt} + \alpha_3 DISTANCE_{ij}^7 + \alpha_4 CONTIG_{ij} + \\ & \alpha_5 \ln DIFF_GDP_PER_CAP_{ijt} + \alpha_6 DIFF_RULE_OF_LAW_{ijt} + \\ & \alpha_7 CONTROL_CORRUPTION_{jt} + \alpha_8 TAXHAVEN_j + \alpha_9 VA_SERV_GDP_{jt} + \\ & \alpha_8 \ln IFDI_PERCAP_{ijt} + \eta_{ij}^8 + \varepsilon_{ijt}, \end{aligned}$$

where $OFDI_{ijt}$ denotes vector of outward FDI from the i -th country of origin to the j -th country of destination, GDP_{it} refers to GDP of the country of origin, GDP_{jt} stands for GDP of destination country, whereas $DISTANCE_{ij}$ depicts the matrix of distances in pairs of the economies (incl. PD measures, distance in km between capital cities). The η_{ij} coefficient refers to the country-pair fixed effects. Other variables are described in the Table 1. Correlation between variables used in the research and descriptive statistics one may find in Appendix (Tables A1–A2).

There are minor differences in the list of variables used in the HT, PPML, and GPML approaches. In case of HT estimator, we use log values of $OFDI_{ijt}$. Applying PPML and GPML, we do not use log values for endogenous variables due to a different estimation technique. Apart from this, in case of models estimated with PPML and GPML, we adopted lagged values of GDP_{it} to deal with potential endogeneity. The fact that the GDP of the country that initiates FDI determines the volume of FDI is undisputed. However, such investments contribute to GDP growth, hence endogeneity should be handled. HT estimator is well-suited to deal with such issues, as it allows one to choose which variables are endogenous. In the case of the PPML, there is a possibility to adopt an instrumental variable approach. However, we chose to lag the values of GDP_{it} , as typically decisions about capital outflows are made based on past GDP records since the value for the current period is unknown. Moreover, for models obtained using the PPML and GPML estimators, we apply a non-standard approach to fixed effects (origin, or destination country fixed effects) to deal with the limitation of the estimation technique that, unlike the HT approach, does not handle well enough the time-invariant variables.

We adopt VIF measures and correlation analyses to exclude potential multicollinearity. They do not reveal any issues. Results of VIF tests are satisfactory, tested for each estimation, VIF does not exceed the level of 2.0. Panel diagnostics show potential issues with heteroscedasticity and serial correlation. The PPML approach is robust to heteroscedasticity. We decide to apply robust standard errors.

⁵ Log-values are not applied in the case of PPML and GPML approaches due to the specification of the estimation procedure.

⁶ We apply the lagged values of this variable in the case of models estimated with PPML and GPML approaches to address the potential endogeneity issue.

⁷ The *DISTANCE* term includes both PD and distance in km. The use of the given measure varies across estimations. In the results section, more details about applied distance measures are provided. Please note that we use log-values of distance in km.

⁸ We apply country-pair fixed effects for estimations in which we use HT. For PPML and GPML (which we apply as a robustness check) we use a non-traditional approach and limit the fixed effects only to the origin or destination country. It enables us to deal with the problem of time-invariant variables, eliminated in estimations. It is worth mentioning that apart from trade analysis (where importer and exporter fixed effects find the use), some researchers apply origin and destination fixed effects in FDI analysis (Camarero et al., 2022; Kox & Rojas-Romagosa, 2019).

As an element of robustness checks, we tested the models with linear, quadratic, and logarithmic time trends. In the most estimations, the trend is statistically insignificant. It is significant only in the core model that includes merely GDP and distance variables. Our estimation results remain consistent, and so do the research conclusions. Adding the time control variable does not eliminate the issue of serial correlation (p -value is 0.000). The only difference can be seen with respect to the GDP of the origin country, which stems from absorbing part of the GDP variability by the global trend.

Table 1. Definitions of the variables in econometric models and the expected impact (source: own elaboration)

Variables and acronyms	Definition and calculation (database)	Expected impact on OFDI
OFDI	Stock of OFDI from NMS (CDIS)	•
gdp_o	GDP of the country of origin (CEPII)	+
gdp_d	GDP of the country of destination (CEPII)	+
dist	Geographic distance*, km (CEPII)	–
contig	Common border* (0;1) (CEPII)	+
psychic_dist	Psychic distance* (Dow, 2023)	–
diff_gdp_per_cap	Absolute difference* in GDP per capita (CEPII)	–
diff_rule_of_law	Absolute difference* in the rule of law index (TheGlobalEconomy.com)	–
control_corruption_d	Coping with corruption control in the destination country (TheGlobalEconomy.com)	+
taxhaven_d	The country of destination status (0;1) (Oxfam)	+
socioeconomic_dist	Socioeconomic distance* (Dow, 2023)	–
IFDI_percap_o	IFDI from the destination country stock in the origin country per capita (CDIS)	+
va_serv_gdp_d	Share of value added of services in GDP in the destination country (CEPII)	+
t	Time control variable	+

Note: * – between the country of origin and destination.

7. Results

As indicated in the econometric strategy, our estimations rely on the three approaches (HT, PPML, and GPML). The estimation HT1, which includes the basic variables for gravity models, brings satisfactory results. Estimations 1A confirm the results (with PPML and GPML). Moreover, they also introduce a common border dummy variable (contig). In est. 1B distance in km is replaced by PD, which turns out to be a statistically significant alternative. In est. 2, we add two variables that tackle the differences between countries, as well as the control of corruption and value-added services share in GDP in the destination country. They do not, however, bring robust results. Our initial estimation proved that these are the destination country characteristics that matter for NMS's OFDI. From estimation 3 onward, we introduce

the tax-haven status of the destination country, which, with high magnitude, affects the OFDI. Several components of the PD are tested as potential alternatives to distance in km. Only the socioeconomic one proves its usefulness (est. 4). The last three estimations (5) include the FDI inward stocks in the origin country, from the destination country, which is statistically significant. Contrary to 2 and 3, estimation 4 brings consistent results about the control of corruption in the country of destination (Table 2).

Table 2. Results of econometric estimations (source: own elaboration in STATA)

VARIABLES	HT 1	PPML 1A	GPML 1A	PPML 1B	GPML 1B	HT 2	PPML 2	GPML 2
ln_gdp_o_lag1		0.529*** (0.041)	0.768*** (0.032)	0.589*** (0.040)	1.134*** (0.045)		0.589*** (0.044)	0.730*** (0.032)
ln_gdp_o	2.732*** (0.419)					2.921*** (0.472)		
ln_gdp_d	1.662*** (0.242)	1.486** (0.605)	0.870*** (0.129)	1.274** (0.625)	0.628*** (0.147)	1.074*** (0.187)	1.600** (0.665)	0.957*** (0.125)
ln_dist	-3.519*** (0.384)	-1.100*** (0.126)	-1.932*** (0.076)			-4.113*** (0.334)	-1.187*** (0.115)	-2.138*** (0.080)
psychic_dist				-0.369*** (0.112)	-1.006*** (0.058)			
contig		0.704*** (0.126)	0.350*** (0.089)			0.108 (0.913)	0.764*** (0.125)	0.356*** (0.093)
control_of_corruption_d						0.806*** (0.242)	-0.325 (0.576)	0.721*** (0.163)
diff_rule_of_law						0.060 (0.316)	0.707*** (0.179)	0.736*** (0.080)
ln_diff_gdp_per_cap						-0.131 (0.145)	-0.120** (0.054)	-0.205*** (0.045)
va_serv_gdp_d						0.016 (0.012)	0.060 (0.041)	0.023** (0.010)
constant	-42.605*** (7.863)	-10.614 (12.236)	4.153* (2.445)	-12.905 (12.779)	-8.404*** (2.613)	-30.856*** (7.829)	-17.203 (12.240)	3.593 (2.464)
Observations	8,662	7,882	7,884	7,093	7,095	7,093	6,879	6,881
Country FE	PAIR	DESTIN	DESTIN	DESTIN	DESTIN	PAIR	DESTIN	DESTIN
Year FE	NO	NO	NO	NO	NO	NO	NO	NO
Wald chi	5331					4711		
Prob > chi2	0	0		0		0	0	
Log-PseudoLikelihood		-1.760e+12		-1.960e+12			-1.600e+12	
Wald chi2		593.8		217.1			617.9	
Pseudo R2		0.730		0.689			0.742	
AIC			29.49		30.44			29.05

Notes: robust standard errors in parentheses, *** p < 0.01, ** p < 0.05, * p < 0.1.

The NMS are relatively new players on the global FDI scene and sensitive to PD and contiguity. It probably stems from the relatively scarce experience in foreign expansion and risk aversion, which is determined by shallow ownership advantages (Svetlicic & Jaklic, 2007). This kind of FDI attitude stands in contrast to big emerging markets (i.e., China) firms, which take advantage of multidimensional ambidexterity, allowing simultaneous investing and learning (Chen et al., 2023). In contrast, NMS's investors divide the internationalization process into two steps. Firstly, they gain knowledge of foreign markets (learning) and then enter new markets as FDI makers (investing). Thus, NMS's OFDI path does not fully correspond to the latest FDI concepts, such as LLL and IOL, explaining latecomers' foreign expansion (Bhasin & Kapoor, 2021).

Although the gravity approach proves useful for international trade and FDI analysis with the use of distance in km, there is a discussion in the literature on alternative measures. Their application could potentially reveal new aspects of FDI stimuli and barriers. As the literature review shows, cultural distance traditionally is treated as an alternative to the distance in km, but it is at the same time criticized as it only captures one narrow aspect of the wider spectrum of PD components. Our results corroborate this criticism. We show that only if broader operationalizations of PD are used, we obtain solid results. Socioeconomic and psychic distances turned out to be robust alternatives to the distance in km, while other narrow, single-dimensional distances (language, industrial, democratic, or religious) did not. Thus, we confirm *H1*.

The tax haven status of the destination country significantly matters and is one of the critical drivers of NMS's OFDI. *H2* is confirmed. On the other hand, we do not obtain conclusive and robust results as regards differences between countries, which is contrary to our expectations. In particular, the difference in GDP per capita is frequently used in gravity models as it captures important structural variations of economies. The same situation is with differences in the rule of law regimes.

Also, *H3* is confirmed. Inward FDI exerts a positive impact on outward investments. It holds under one important condition, that these are bilateral investments (country-paired). We test alternative estimations using total IFDI (not country-paired) for robustness checks, but it does not bring statistically significant results (Table 3). Our findings are in line with LLL and IOL models (Lu et al., 2017), as they address inward-outward linkages, taking into account the IFDI stimulating effects on OFDI (Xia et al., 2014). It also resonates with IDP, which shows the transformation from inward to outward FDI along the GDP per capita growth path.

Table 3. Results of econometric estimations (Source: own elaboration in STATA)

VARIABLES	HT 3	PPML 3	GPML 3	HT 4	PPML 4	GPML 4	HT 5	PPML 5	PPML 5 #	GPML 5
ln_gdp_o_lag1		1.612**	1.434***		1.531**	1.249***		1.849**	0.822	1.197***
		(0.701)	(0.377)		(0.732)	(0.380)		(0.738)	(0.992)	(0.443)
ln_gdp_o	2.944***			2.312***			2.521***			
	(0.471)			(0.501)			(0.535)			
ln_gdp_d	1.102***	0.505***	0.678***	1.018***	0.311***	0.463***	1.061***	0.116**	0.114*	0.363***
	(0.194)	(0.051)	(0.020)	(0.250)	(0.044)	(0.022)	(0.321)	(0.058)	(0.059)	(0.032)
ln_dist	-3.872***	-0.643***	-1.775***							
	(0.360)	(0.060)	(0.047)							

End of Table 3

VARIABLES	HT 3	PPML 3	GPML 3	HT 4	PPML 4	GPML 4	HT 5	PPML 5	PPML 5 #	GPML 5
psychic_dist							-0.824**	-0.688***	-0.673***	-1.179***
							(0.362)	(0.094)	(0.091)	(0.091)
socioeconomic_dist				-0.330***	-0.147**	-0.667***				
				(0.103)	(0.068)	(0.032)				
contig	0.618	1.168***	-0.059	9.079***	2.188***	2.705***		0.971***	0.968***	1.103***
	(0.938)	(0.191)	(0.118)	(0.540)	(0.165)	(0.103)		(0.212)	(0.212)	(0.104)
ln_diff_gdp_per_cap	-0.146	-0.098**	-0.081	-0.158	-0.038	-0.201***	-0.317*	-0.076	-0.076	-0.144***
	(0.145)	(0.048)	(0.055)	(0.157)	(0.055)	(0.041)	(0.167)	(0.060)	(0.062)	(0.047)
diff_rule_of_law	0.039	0.037	-0.865***				0.170	0.069	0.052	0.025
	(0.315)	(0.103)	(0.098)				(0.395)	(0.120)	(0.120)	(0.102)
control_of_corruption_d	0.719***	0.070	-0.160**	1.241***	0.241***	0.502***	1.469***	-0.094	-0.092	0.342***
	(0.243)	(0.069)	(0.064)	(0.275)	(0.069)	(0.062)	(0.333)	(0.083)	(0.083)	(0.085)
taxheaven_d	4.110***	1.472***	2.501***	4.771***	1.261***	2.637***	4.728***	0.878***	0.871***	2.277***
	(0.624)	(0.179)	(0.165)	(0.631)	(0.201)	(0.181)	(0.760)	(0.253)	(0.250)	(0.168)
va_serv_gdp_d	0.013	0.097***	0.032***	0.043***	0.109***	0.012*	0.043**	0.100***	0.099***	0.001
	(0.012)	(0.008)	(0.006)	(0.013)	(0.009)	(0.006)	(0.020)	(0.013)	(0.013)	(0.008)
ln_IFDI_percap_o							0.165***	0.280***	0.280***	0.196***
							(0.045)	(0.035)	(0.035)	(0.007)
t									0.045	
									(0.030)	
constant	-33.997***	-21.600	-9.184	-53.377***	-21.787	-12.877*	-53.127***	-21.560	-2.956	-4.957
	(7.933)	(13.136)	(6.668)	(7.382)	(13.635)	(6.720)	(8.912)	(13.665)	(18.424)	(7.876)
Observations	7,093	6,881	6,881	6,414	6,205	6,205	4,220	4,038	4,038	4,038
Country FE	PAIR	ORIGIN	ORIGIN	PAIR	ORIGIN	ORIGIN	PAIR	ORIGIN	ORIGIN	ORIGIN
Year FE	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Wald chi	5665			4668			2890			
Prob > chi2	0	0		0	0		0	0	0	
Log-Pseudo Likelihood		-2.010e+12			-2.090e+12			-1.390e+12	-1.380e+12	
Wald chi2		1149			759.2			671.8	670.3	
Pseudo R2		0.675			0.651			0.732	0.735	
AIC			35.24			36.73				35.74

Notes: robust standard errors in parentheses, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$; # – including time trend.

8. Discussion

After 20 years of membership in the EU, the NMS' OFDI has not reached a satisfactory level. The openness of the economy, measured by the share of OFDI in GDP remains relatively low, compared to openness through commodity trade. Moreover, there are significant differences among countries. Our research aims at the identification of determinants of OFDI from NMS. We conclude that these are not features of the country of origin that are the most critical OFDI drivers. Characteristics of the destination country matter more, with the tax-haven status as a leading determinant. NMS's OFDI does not represent well-established manufacturing projects but is services-oriented, often representing SPEs, which are more prone to being

attracted by tax incentives. Our findings are in line with Deng et al., (2020) and Buckley et al. (2013). It subscribes to the C-P framework and latecomers' internationalization patterns. Our results in this respect correspond well with Bellak et al. (2005, 2009), and Xu et al. (2021), which underline the motives of avoiding taxes as well as the role of idiosyncratic firm-level factors. According to the Uppsala model, internationalization goes linearly through stages. Our research confirms the predictions of the Uppsala model twofold. Firstly, in NMS linear internationalization path is observed; however, countries got stuck at the export stage and are not yet "ready for the flight" into intensive FDI making. Secondly, PD negatively affects the intensity of OFDI. Also, scarce ownership advantages may play a negative role. Let us recall that the Uppsala model puts a strong emphasis on proximity in terms of culture, religion, or language (i.e., these factors that can disturb the flow of information between subsidiaries). It shall be stressed that exports of NMS are strongly driven by MNEs, experienced in operating globally. They are not so much affected by any kind of distance, which resonates with Melitz's concept of heterogeneity of firms (Melitz & Redding, 2015). Due to their experience, networking and ownership advantages, and high productivity (Dunning & Lundan, 2008; Forsgren, 2013), MNEs are more capable of overcoming distance challenges.

It is crucial to emphasize that psychic distance has not been widely analyzed in the context of the European OFDI. Some research can be found for Spanish MNEs highlighting the impact of selected PD stimuli on OFDI (Jiménez & de la Fuente, 2016). Our results do not allow us to optimistically look into the perspective of NMS as regards their move on the IDP. It stands in contrast to Gorynia et al. (2022). Moving out of the peripherality of the NMS in terms of OFDI will be a long process.

Our findings show that distance in km, psychic, or socioeconomic distances are equally useful as fundamental variables in gravity models (Dow & Ferencikova, 2010; Li et al., 2020). We also test other categories of PD (i.e., language, religious, democratic, industrial, and educational), but they are insignificant as OFDI determinants. Barrell and Nahhas (2022) document the decreasing role of geographic distance for FDI, but our research needs further efforts to confirm this. Our findings indicate a negative correlation between PD and NMS' OFDI, aligning with Azar and Drogendijk (2014). Limited access to knowledge on a host market translates into the cost of making FDI (Jiménez & de La Fuente, 2016), which aligns with transaction cost theory. A question arises: how does changing globalization affect the role of geographic distance or PD (and its components) in FDI? As globalization drifts towards regionalization, the role of psychic proximity could increase. It applies to FDI in modern business services, knowledge-intensive in particular (Association of Business Services Leaders [ABSL], 2024). An opposite tendency could stem from the growing share of asset-light FDI (Cassella & Formenti, 2018) in tech-intensive global platforms, in which the role of distances and borders diminishes.

Our research reveals that one of the key determinants of OFDI from NMS is the tax-haven status of the destination country. The canonical description of FDI motives by Dunning and Lundan (2008) includes seeking market, efficiency, resources, and strategic assets and capabilities (Jensen, 2002). Dunning (1970), however, also mentions escape investment, which originates from the government's strategies not acceptable to the business community. They can be driven by more subtle aspects of the business environment, such as volatile legislation,

inconsistent macroeconomic policy (i.e., monetary policy), or, last but not least, tax rules changes and unpredictability (Barnard & Luiz, 2018; Oliver, 1991; Witt & Lewin, 2007). By showing the importance of the tax-haven status of the destination country, we contribute to the discussion about hyper-globalization, where regulatory differences play a larger role than in earlier periods. It seems that NMS's OFDI participates in some kind of round-tripping, but the scale of it requires further research. Our findings showing the high significance of the tax-haven status as FDI driver make us formulate a general conclusion that this aspect of foreign investing is not sufficiently captured in the mainstream FDI theory.

At this stage of our research, we cannot unequivocally judge whether these tax-haven-driven investments are done by MNEs (as internalized, trans-routed FDI) or by smaller investors (Cuervo-Cazurra & Ramamurti, 2015). Moreover, in the business world, FDI projects are driven by a mix of determinants and it is difficult to separate seeking from escape motives. Utilizing preferential taxation falls between efficiency-seeking and escape motives (Gorynia et al., 2015; Aykut et al., 2017).

We contribute to the discussion on the relationship between various aspects of openness and FDI (Cantah et al., 2018; Gao, 2023; Yan et al., 2018). We confirm the findings of Forte and Ferreira (2023) by showing that inward FDI stimulates the outward one. According to our results, however, it works only in a bilateral (country-paired) framework. FDI inflow to NMS stimulates the outward FDI flow into the counterpart economy. This sheds an interesting light on the nature of outcomes stemming from the absorption of FDI. It triggers a series of positive effects, such as improvements in competitiveness, transfer of technology, and tacit knowledge. It opens further interesting research possibilities, which shall be firm-level oriented (including the case studies of the largest outward investors from the NMS). These positive interactions probably stem from learning (by interacting), reduction of information gaps, and within-MNE flows. On the other hand, it might make the outward FDI severely dependent on the inward, potentially leading to the petrification of already existing inward-outward investment patterns. Firm-level analysis could also show more details about the structure of motives that drive the OFDI. In particular it would help to judge whether the taxation-related motives are close to efficiency-seeking. Another path for further research on FDI directions and motives would involve a focus on environmental regulations.

9. Conclusions

The discussion on the character of distance in the gravity models is pending, propelled by the reshaping of globalization patterns and the global economy influenced by technological changes and digital orientation. We contribute to the literature on determinants of NMS' OFDI by showing that psychic and socioeconomic distances are alternatives to distance in km, traditionally used in gravity modelling. Other, narrower measures of PD are not relevant, as they capture only the limited scope of aspects important to foreign investors.

A tax-avoiding motive has a significant impact on OFDI from NMS. Our findings manifest the significance of the features of the country of destination rather than the country of origin. Economic policy stimulating OFDI from NMS shall be based on supplying potential investors with knowledge of foreign markets and incentives towards their internationalization. To

decrease the PD, home countries need continuous strategies that provide potential investors with knowledge on doing foreign business, investment climate, and cultural differences. At the same time, at the EU level, NMS should create a coalition to set the agenda for economic diplomacy. Taking advantage of emerging opportunities due to changes in globalization (regionalization) is essential for promoting their interests. Implementing these measures to decrease PD could result in a more dynamic expansion into international markets through OFDI and, in the long-term perspective, progress on IDP. Our findings should be perceived in a broader context, which is NMS's place in the global economic order and value chains. Their OFDI does not yet represent fully-fledged, well-established manufacturing projects but is services (asset-light)-oriented (Cassella & Formenti, 2018). Services are more prone to be attracted by tax incentives. Without an increase in OFDI, their position on the IDP will remain mediocre. NMS are at the stage of learning to invest. Services in particular constitute a promising field for their foreign investment expansion.

Acknowledgements

The authors would like to express their gratitude to prof. Dorota Ciołek, prof. Tomasz Brodzicki and the two anonymous reviewers for their valuable insights and discussions that contributed to this research and the final version of the text. Also, authors would like to thank InfoCredit for their help in preparing the data from Moody's BvD/Orbis database.

Author contributions

The authors were equally involved in the process of preparing the article.

Disclosure statement

Authors declare that they do not have any competing financial, professional, or personal interests from other parties.

References

- Association of Business Services Leaders. (2024). *Business Services Sector in Poland 2024*. <https://2024.abslsummit.com/files/settings/20240613144141-business-services-sector-in-poland2024.pdf>
- Adithi, A. (2018). Development of institutional theory and its application to MNE context: A review of literature. *Focus: Journal of International Business*, 4(2), 124–141. <https://doi.org/10.17492/focus.v4i02.11693>
- Antràs, P., & Yeaple, S. R. (2013). Multinational firms and the structure of international trade. In G. Gopinath, E. Helpman, & K. Rogoff (Eds.), *Handbook of International Economics* (pp. 55–130). Elsevier. <https://doi.org/10.1016/B978-0-444-54314-1.00002-1>
- Ateş, L., Cobham, A., Harari, M., Janský, P., Meinzer, M., Millán, L., & Palanský, M. (2020). The Corporate Tax Haven Index. A new geography of profit shifting. In B. Unger, L. Rossel & J. Ferwerda (Eds.), *Combating fiscal fraud and empowering regulators. Bringing tax money back into the COFFERS* (pp. 89–111). Oxford Academic. <https://doi.org/10.1093/oso/9780198854722.003.0006>

- Aykut, D., Sanghi, A., & Kosmidou, G. (2017). *What to do when foreign direct investment is not direct or foreign: FDI round tripping* (Policy Research Working Paper No. 8046). World Bank.
- Azar, G., & Drogendijk, R. (2014). Psychic distance, innovation, and firm performance. *Management International Review*, 54, 581–613. <https://doi.org/10.1007/s11575-014-0219-2>
- Barnard, H., & Luiz, J. M. (2018). Escape FDI and the dynamics of a cumulative process of institutional misalignment and contestation: Stress, strain and failure. *Journal of World Business*, 53(5), 605–619. <https://doi.org/10.1016/j.jwb.2018.03.010>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Barney, J., Wright, M., & Ketchen, D. J. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management*, 27(6), 625–641. <https://doi.org/10.1177/014920630102700601>
- Barrell, R., & Nahhas, A. (2022). Regional integration and bilateral FDI Stocks in the OECD. *International Journal of Finance & Economics*, 27(3), 3032–3050. <https://doi.org/10.1002/ijfe.2311>
- Beckerman, W. (1956). Distance and the pattern of intra-European trade. *The Review of Economics and Statistics*, 38(1), 31–40. <https://doi.org/10.2307/1925556>
- Bellak, C., Leibrecht, M., & Roemisch, R. (2005). *New evidence on the tax burden of MNC activities in central- and east-European New Member States* (SFB International Tax Coordination Paper No. 2). SSRN. <https://doi.org/10.2139/ssrn.869222>
- Bellak, C., Leibrecht, M., & Damijan, J. P. (2009). Infrastructure endowment and corporate income taxes as determinants of foreign direct investment in central and eastern European countries. *The World Economy*, 32(2), 267–290. <https://doi.org/10.1111/j.1467-9701.2008.01144.x>
- Bhasin, N., & Kapoor, K. (2021). Impact of outward FDI on home country exports. *International Journal of Emerging Markets*, 16(6), 1150–1175. <https://doi.org/10.1108/IJOEM-05-2017-0160>
- Blažević, B., Jelušić, A., & Perić, J. (2005, May 26–28). Outward foreign direct investment from Central and Eastern European countries. In *Proceedings of the Sixth International Conference on Enterprise in Transition* (pp. 221–223). Bol, Croatia. University of Split.
- Blonigen, B. A., & Piger, J. (2014). Determinants of foreign direct investment. *The Canadian Journal of Economics / Revue Canadienne D'economique*, 47(3), 775–812. <https://doi.org/10.1111/caje.12091>
- Bolwijn, R., Casella, B., & Rigo, D. (2018). An FDI-driven approach to measuring the scale and economic impact of BEPS. *Transnational Corporations*, 25(2), 107–143. <https://doi.org/10.18356/c4f9fd3c-en>
- Boyacigiller, N. (1990). The role of expatriates in the management of interdependence complexity and risk in multinational corporations. *Journal of International Business Studies*, 21, 357–381. <https://doi.org/10.1057/palgrave.jibs.8490825>
- Brewer, P. A. (2007). Operationalizing psychic distance: A revised approach. *Journal of International Marketing*, 15(1), 44–66. <https://doi.org/10.1509/jimk.15.1.044>
- Brodzicki, T., Ciołek, D., & Śledziewska, K. (2017). What really determines Polish exports? The semi-mixed effects gravity model for Poland. *Argumenta Oeconomica*, 2(39), 5–20. <https://doi.org/10.15611/aoe.2017.2.01>
- Brodzicki, T., & Umiński, S. (2018). A gravity panel data analysis of foreign trade by regions: The role of metropolises and history. *Regional Studies*, 52(2), 261–273. <https://doi.org/10.1080/00343404.2017.1296123>
- Buckley, P. J. (2018). Internalisation theory and outward direct investment by emerging market multinationals. *Management International Review*, 58, 195–224. <https://doi.org/10.1007/s11575-017-0320-4>
- Buckley, P. J., Sutherland, D., Voss, H., & El-Gohari, A. (2013). The economic geography of offshore incorporation in tax havens and offshore financial centres: The case of Chinese MNEs. *Journal of Economic Geography*, 15(1), 103–128. <https://doi.org/10.1093/jeg/lbt040>

- Camarero, M., Montolio, L., & Tamarit, C. (2022). Explaining German outward FDI in the EU: A reassessment using Bayesian model averaging and GLM estimators. *Empirical Economics*, 62, 487–511. <https://doi.org/10.1007/s00181-021-02040-4>
- Cantah, G. W., Brafu-Insaidoo, G. W., Wiafe, E. A., & Adams, A. (2018). FDI and trade policy openness in Sub-Saharan Africa. *Eastern Economic Journal*, 44, 97–116. <https://doi.org/10.1057/ej.2016.9>
- Cantwell, J. (1989). *Technological innovation and multinational corporations*. Basil Blackwell.
- Cantwell, J. A. (1994). The relationship between international trade and international production. In D. Greenaway & L. A. Winters (Eds.), *Surveys in international trade* (pp. 303–328). Basil Blackwell.
- Cassella, B., & Formenti, L. (2018). UNCTAD Insights: FDI in the digital economy: A shift to asset-light international footprints. *Transnational Corporations*, 25(1), 101–130. <https://doi.org/10.18356/cb688e94-en>
- Çela, A., Hysa, E., Voica, M. C., Panait, M., & Manta, O. (2022). Internationalization of large companies from central and eastern Europe or the birth of new stars. *Sustainability*, 14(1), Article 261. <https://doi.org/10.3390/su14010261>
- Chen, E. K. Y. (1996). Transnational corporations and technology transfer to developing countries. In UNCTAD (Ed.), *Transnational corporations and world development* (pp. 181–214). Routledge.
- Chen, C., Zhan, Y., Yi, C., Li, X., & Wu, Y. J. (2020). Psychic distance and outward foreign direct investment: The moderating effect of firm heterogeneity. *Management Decision*, 58(7), 1497–1515. <https://doi.org/10.1108/MD-06-2019-0731>
- Chen, Y.-C., Arnold, T., Liu, P.-Y., & Huang, C.-Y. (2023). Understanding the role of entrepreneurial orientation in creating ambidextrous competitive advantage: A comparative-design, Longitudinal Study. *European Journal of Marketing*, 57(1), 89–124. <https://doi.org/10.1108/EJM-08-2021-0661>
- Child, J., Ng, S. H., & Wong, C. (2002). Psychic distance and internationalization: Evidence from Hong Kong firms. *International Studies of Management & Organization*, 32(1), 36–56. <https://doi.org/10.1080/00208825.2002.11043656>
- Child, J., & Rodrigues, S. B. (2005). The internationalization of Chinese firms: A case for theoretical extension? *Management and Organization Review*, 1(3), 381–410. <https://doi.org/10.1111/j.1740-8784.2005.0020a.x>
- Ciešlik, A., & Ghodsi, M. (2021). Economic sentiment indicators and foreign direct investment: Empirical evidence from European Union countries. *International Economics*, 168, 56–75. <https://doi.org/10.1016/j.inteco.2021.07.001>
- Ciešlik, A., & Gurshev, O. (2021). Factor endowments, economic integration, round-tripping, and inward FDI: Evidence from the Baltic economies. *Journal of Risk and Financial Management*, 14(8), Article 348. <https://doi.org/10.3390/jrfm14080348>
- Ciešlik, A., Gurshev, O., & Hamza, S. (2022). Between the Eurozone crisis and the Brexit: The decade of British outward FDI into Europe. *Empirical Economics*, 63(3), 1159–1192. <https://doi.org/10.1007/s00181-021-02177-2>
- Ciešlik, A., & Nguyen, A. T. N. (2016). Determinants of foreign direct investment from OECD to ASEAN. In *Forum for Research on Empirical International Trade* (pp. 1–30). <https://www.freit.org/WorkingPapers/Papers/ForeignInvestment/FREIT987.pdf>
- Coldwell, D. A. L., & Joosub, T. (2018). The FDI psychic distance paradox: Myth or reality? *Journal of Business & Retail Management Research*, 12(2), 38–48. <https://doi.org/10.24052/JBRMR/V12IS02/TFPDP MOR>
- Conte, M., Cotterlaz, P., & Mayer, T. (2022). *The CEPII Gravity Database* (CEPII Working Paper No. 2022-05). https://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=8
- Cuervo-Cazurra, A., & Narula, R. (2015). A set of motives to unite them all? Revisiting the principles and typology of MNE motives. *Multinational Business Review*, 23(1), 2–14. <https://doi.org/10.1108/MBR-03-2015-0010>

- Cuervo-Cazurra, A., & Ramamurti, R. (2015). The escape motivation of emerging market multinational enterprises. *Columbia FDI Perspectives*, 143.
- Damgaard, J., Elkjær, T., & Johannesen, N. (2019). The Rise of Phantom Investments: Empty corporate shells in tax heavens undermine tax collection. *Finance & Development*, 56(3). International Monetary Fund. <https://www.elibrary.imf.org/view/journals/022/0056/003/article-A004-en.xml>
- Delis, M. D., Gaganis, C., Hasan, I., & Pasiouras, F. (2017). The effect of board directors from countries with different genetic diversity levels on corporate performance. *Management Science*, 63(1), 231–249. <https://doi.org/10.1287/mnsc.2015.2299>
- Deng, Z., Yan, J., & Sun, P. (2020). Political status and tax haven investment of emerging market firms: Evidence from China. *Journal of Business Ethics*, 165, 469–488. <https://doi.org/10.1007/s10551-018-4090-0>
- Djokoto, J. G. (2021). The investment development path theory and small states. *Research in Globalization*, 3, Article 100048. <https://doi.org/10.1016/j.resglo.2021.100048>
- Dobrowolska, B., Dorożyński, T., & Kuna-Marszałek, A. (2024). Does governance matter for outward FDI? Evidence from the European Union Member States. *Comparative Economic Research. Central and Eastern Europe*, 27(4), 67–87. <https://doi.org/10.18778/1508-2008.27.31>
- Dow, D. (2023). *The research page of Douglas Dow: Psychic distance stimuli*. Retrieved July 25, 2023, from https://dow.net.au/?page_id=29
- Dow, D., & Ferencikova, S. (2010). More than just national cultural distance: Testing new distance scales on FDI in Slovakia. *International Business Review*, 19(1), 46–58. <https://doi.org/10.1016/j.ibusrev.2009.11.001>
- Dow, D., & Karunaratna, A. (2006). Developing a multidimensional instrument to measure psychic distance stimuli. *Journal of International Business Studies*, 37, 578–602. <https://doi.org/10.1057/palgrave.jibs.8400221>
- Driffield, N., Jones, C., Kim, J.-Y., & Temouri, Y. (2021). FDI motives and the use of tax havens: Evidence from South Korea. *Journal of Business Research*, 135, 644–662. <https://doi.org/10.1016/j.jbusres.2021.06.061>
- Dunning, J. H., & Narula, R. (1996). The investment development path revisited: Some emerging issues. In *Foreign direct investments and governments: Catalysts For economic restructuring* (pp. 1–41). Routledge.
- Dunning, J. H. (1970). *Studies in international investment*. Allen & Unwin.
- Dunning, J. H. (2002a). *Regions, globalization, and the knowledge-based economy*. Oxford University Press. <https://doi.org/10.1093/0199250014.001.0001>
- Dunning, J. H. (2002b). The investment development path revisited. In *Theories and paradigms of international business activity: The selected essays of John H. Dunning* (vol. 1, pp. 138–172). Edward Elgar Publishing. <https://doi.org/10.4337/9781843767053.00010>
- Dunning, J. H. (2006). Comments on Dragon multinationals. *Asia Pacific Journal of Management*, 23, 139–141. <https://doi.org/10.1007/s10490-006-7161-1>
- Dunning, J. H., & Lundan, S. M. (2008). *Multinational enterprises and the global economy* (2nd ed.). Edward Elgar Publishing.
- Egger, P. (2005). Alternative techniques for estimation of cross-section gravity models. *Review of International Economics*, 13(5), 881–891. <https://doi.org/10.1111/j.1467-9396.2005.00542.x>
- Enderwick, P., & Buckley, P. J. (2020). Rising regionalization: Will the post-COVID-19 world see a retreat from globalization? *Transnational Corporations*, 27(2), 99–112. <https://doi.org/10.18356/8008753a-en>
- Erokhin, D. (2023). Tax effects on foreign direct investment – Just a rerouting. *The World Economy*, 46(9), 2808–2834. <https://doi.org/10.1111/twec.13465>
- Felix, K., Jones, C., Rewilak, J., & Temouri, Y. (2025). Democracy and natural resources: Their institutional impact on tax haven use by emerging market multinational enterprises. *Management International Review*, 65, 903–947. <https://doi.org/10.1007/s11575-025-00592-6>

- Forsgren, M. (2008). *Theories of the multinational firm: A multidimensional creature in the global economy*. Edward Elgar Publishing.
- Forte, R., & Ferreira, M. (2023). Determinants of outward FDI from developing economies: Evidence for a sample of Latin American countries. *Latin American Business Review*, 24(3), 243–268. <https://doi.org/10.1080/10978526.2023.2222668>
- Gao, R. (2023). Inward FDI spillovers and emerging multinationals' outward FDI in two directions. *Asia Pacific Journal of Management*, 40, 265–293. <https://doi.org/10.1007/s10490-021-09788-4>
- Ginevičius, R., & Tvaronavičiene, M. (2005). Inward and outward FDI in Lithuania and Estonia: Review of patterns in neighboring countries. *Journal of Business Economics and Management*, 6(3), 179–188. <https://doi.org/10.3846/16111699.2005.9636106>
- Giordano, C., & Lopez-Garcia, P. (2019). *Firm heterogeneity and trade in EU countries: A cross-country analysis* (Bank of Italy Occasional Paper No. 506). SSRN. <https://doi.org/10.2139/ssrn.3446774>
- Girma, S., Görg, H., & Strobl, E. (2004). Exports, international investment, and plant performance: Evidence from a nonparametric test. *Economics Letters*, 83(3), 317–324. <https://doi.org/10.1016/j.econlet.2003.10.024>
- Gorynia, M., & Jankowska, B. (2007). The internationalization theories of the firm: A short review. *Gospodarka Narodowa*, 219(10), 21–44. <https://doi.org/10.33119/GN/101377>
- Gorynia, M., Jankowska, B., & Wolniak, R. (2007). Motives for undertaking FDI in Poland: Market-seeking and efficiency-seeking considerations. *Argumenta Oeconomica*, 2(19), 45–65.
- Gorynia, M., Nowak, J., Trąpczyński, P., & Wolniak, R. (2015). Outward FDI of Polish firms: The role of motives, entry modes and location factors. *Journal of East European Management Studies*, 20(3), 328–359. <https://doi.org/10.5771/0949-6181-2015-3-328>
- Gorynia, M., Nowak, J., Trąpczyński, P., & Wolniak, R. (2022). Integration and investment development paths of CEE countries. Does EU-membership make a difference? *Eurasian Geography and Economics*, 63(1), 27–54. <https://doi.org/10.1080/15387216.2020.1828124>
- Gouveia, S., Rebelo, J., & Lourenço-Gomes, L. (2018). Port wine exports: A gravity model approach. *International Journal of Wine Business Research*, 30(2), 218–242. <https://doi.org/10.1108/IJWBR-02-2017-0008>
- Graham, E. M. (1975). *Oligopolistic imitation, theories of foreign direct investment, and European direct investment in the United States* (Working Paper No. 817-75). Alfred P. Sloan School of Management.
- Graham, E. M. (1990). Exchange of threat between multinational firms as an infinitely repeated noncooperative game. *The International Trade Journal*, 4(3), 259–277. <https://doi.org/10.1080/08853909008523695>
- Håkanson, L., & Ambos, B. (2010). The antecedents of psychic distance. *Journal of International Management*, 16(3), 195–210. <https://doi.org/10.1016/j.intman.2010.06.001>
- Hassan, S. S. (2015). Economic institutions and the outward FDI location strategies of emerging market multinational business groups: Evidence from Central and Eastern European countries. *Review of Economics and Institutions*, 6(1), Article 6.
- Head, K., & Mayer, T. (2014). Gravity equations: Workhorse, toolkit, and cookbook. In G. Gopinath, E. Helpman, & K. Rogoff (Eds.), *Handbook of international economics* (vol. 4, pp. 131–195). Elsevier. <https://doi.org/10.1016/B978-0-444-54314-1.00003-3>
- Head, K., & Mayer, T. (2021). The United States of Europe: A gravity model evaluation of the Four Freedoms. *Journal of Economic Perspectives*, 35(2), 23–48. <https://doi.org/10.1257/jep.35.2.23>
- Hymer, S. H. (1960). *The international operations of national firms. A study of direct foreign investment* [Doctoral thesis, Massachusetts Institute of Technology].
- Hymer, S. H. (1972). The multinational corporation and the Law of Uneven Development. In J. N. Bhagwati (Ed.), *Economics and World Order from the 1970's to the 1990's* (1st ed., pp. 113–140). Collier-Macmillan.
- Iammarino, S., & McCann, P. (2013). *Multinationals and economic geography: Location, technology and innovation*. Edward Elgar Publishing. <https://doi.org/10.4337/9781781954799>

- letto-Gillies, G. (2007). Theories of international production: A critical perspective. *Critical Perspectives on International Business*, 3(3), 196–210. <https://doi.org/10.1108/17422040710774987>
- Ipsmiller, E., & Dikova, D. (2021). Internationalization from Central and Eastern Europe: A systematic literature review. *Journal of International Management*, 27(4), Article 100862. <https://doi.org/10.1016/j.intman.2021.100862>
- Jensen, C. (2002). Foreign direct investment, industrial restructuring and the upgrading of Polish exports. *Applied Economics*, 34(2), 207–217. <https://doi.org/10.1080/00036840010025641>
- Jensen, C. (2007). Institutional contexts and FDI trends in European emerging economies. In K. E. Meyer & S. Estrin (Eds.), *Acquisition strategies in European emerging markets* (pp. 11–26). Palgrave. https://doi.org/10.1057/9780230286542_2
- Jiménez, A., & de La Fuente, D. (2016). Learning from others: The impact of vicarious experience on the psychic distance and FDI relationship. *Management International Review*, 56(5), 633–664. <https://doi.org/10.1007/s11575-015-0269-0>
- Jindra, B., Hassan, S. S., Günther, J., & Cantner, U. (2015). European integration and outward FDI from Central and Eastern Europe – Is there any evidence of knowledge-seeking? *JCMS: Journal of Common Market Studies*, 53(6), 1248–1267. <https://doi.org/10.1111/jcms.12260>
- Jirasavetakul, L.-B. F., & Rahman, J. (2018). *Foreign direct investment in New Member States of the EU and Western Balkans: Taking stock and assessing prospects* (IMF Working Papers, 187). International Monetary Fund. <https://doi.org/10.5089/9781484373323.001>
- Johanson, J., & Wiedersheim-Paul, F. (1975). The internationalization of the firm? Four Swedish cases. *Journal of Management Studies*, 12(3), 305–323. <https://doi.org/10.1111/j.1467-6486.1975.tb00514.x>
- Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm – A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8, 23–32. <https://doi.org/10.1057/palgrave.jibs.8490676>
- Johanson, J., & Vahlne, J.-E. (2015). The Uppsala internationalization process model revisited: From liability of foreignness to liability of outsidership. In M. Forsgren, U. Holm, & J. Johanson (Eds.), *Knowledge, networks and power* (pp. 153–186). Palgrave. https://doi.org/10.1057/9781137508829_7
- Jones, J., Serwicka, I., & Wren, C. (2020). Motives for foreign direct investment location in Europe and EU enlargement. *Environment and Planning A: Economy and Space*, 52(8), 1681–1699. <https://doi.org/10.1177/0308518X20916503>
- Jormanainen, I., & Koveshnikov, A. (2012). International activities of emerging market firms. *Management International Review*, 52(5), 691–725. <https://doi.org/10.1007/s11575-011-0115-y>
- Kandogan, Y. (2016). Economic development, cultural differences and FDI. *Applied Economics*, 48(17), 1545–1559. <https://doi.org/10.1080/00036846.2015.1102847>
- Khan, M. A., Fatima, Z., & Fatima, S. (2023). Revisiting the gravity model of migration. *Foreign Trade Review*, 58(2), 329–349. <https://doi.org/10.1177/00157325221088707>
- Kotikova, S., & Vavrek, R. (2019). Determining the size of technological gap between local firms and foreign direct investment at regional level. *Journal of International Studies*, 12(3), 48–63. <https://doi.org/10.14254/2071-8330.2019/12-3/5>
- Kox, H., & Rojas-Romagosa, H. (2019). *Gravity estimations with FDI bilateral data: Potential FDI effects of deep preferential trade agreements* (Robert Schuman Centre for Advanced Studies Research Paper No. RSCAS 2019/70). SSRN. <https://doi.org/10.2139/ssrn.3457319>
- Li, Y., Zhang, Y. A., & Shi, W. (2020). Navigating geographic and cultural distances in international expansion: The paradoxical roles of firm size, age, and ownership. *Strategic Management Journal*, 41(5), 921–949. <https://doi.org/10.1002/smj.3098>
- Linnemann, H. (1966). *An econometric study of international trade flows*. North-Holland Publishing Company.
- Lu, J., Ma, X., Taksa, L., & Wang, Y. (2017). From LLL to IOL3: Moving dragon multinationals research forward. *Asia Pacific Journal of Management*, 34, 757–768. <https://doi.org/10.1007/s10490-017-9542-z>

- Lundan, S. (2016). Definitions, motivations, and locational determinants of foreign direct investment. In A. Tavares-Lehmann, P. Toledano, L. Johnson & L. Sachs (Eds.), *Rethinking investment incentives: Trends and policy options* (pp. 45–60). Columbia University Press. <https://doi.org/10.7312/tava17298-004>
- Luo, Y., & Tung, R. L. (2007). International expansion of emerging market enterprises: A springboard perspective. *Journal of International Business Studies*, 38(4), 481–498. <https://doi.org/10.1057/palgrave.jibs.8400275>
- Luo, Y., & Rui, H. (2009). An ambidexterity perspective toward multinational enterprises from emerging economies. *Academy of Management Perspectives*, 23(4), 49–70. <https://doi.org/10.5465/amp.23.4.49>
- Manocha, R. (2023). Impact of regional blocs on FDI flows: A study of select Asian blocs. *Journal of Development Research*, 16(1), 1–30. <https://doi.org/10.1177/22297561231207539>
- Martin, W., & Pham, C. S. (2020). Estimating the gravity model when zero trade flows are frequent and economically determined. *Applied Economics*, 52(26), 2766–2779. <https://doi.org/10.1080/00036846.2019.1687838>
- Mathews, J. A. (2006). Dragon multinationals: New players in 21st century globalization. *Asia Pacific Journal of Management*, 23, 5–27. <https://doi.org/10.1007/s10490-006-6113-0>
- Mayer, T., & Ottaviano, G. I. P. (2008). The happy few: The internationalisation of European firms. *Inter-economics*, 43, 135–148. <https://doi.org/10.1007/s10272-008-0247-x>
- Meinhart, B. (2024). How EU membership affects foreign direct investment: Differences between EU15 and CEE countries. *The World Economy*, 47(5), 2194–2218. <https://doi.org/10.1111/twec.13541>
- Melitz, M. J. (2003). The impact of trade on intra-industry reallocations and aggregate industry productivity. *Econometrica*, 71(6), 1695–1725. <https://doi.org/10.1111/1468-0262.00467>
- Melitz, M. J., & Redding, S. J. (2015). Heterogeneous Firms and Trade. In G. Gopinath, E. Helpman & K. Rogoff (Eds.), *Handbook of international economics* (vol. 4, pp. 1–54). Elsevier. <https://doi.org/10.1016/B978-0-444-54314-1.00001-X>
- Narula, R., & Dunning, J. H. (2010). Multinational enterprises, development and globalization: Some clarifications and a research agenda. *Oxford Development Studies*, 38(3), 263–287. <https://doi.org/10.1080/13600818.2010.505684>
- Nazarczuk, J. M., Umiński, S., & Brodzicki, T. (2020). Determinants of the spatial distribution of exporters in regions: The role of ownership. *The Annals of Regional Science*, 64, 547–574. <https://doi.org/10.1007/s00168-019-00947-6>
- Nehrt, L. C. (1970). *The political climate for private foreign investment*. Praeger.
- Nguyen, A. T. N., & Cieślak, A. (2021). Determinants of foreign direct investment from Europe to Asia. *World Economy*, 44(6), 1842–1858. <https://doi.org/10.1111/TWEC.13064>
- Nguyen, A. T. N., Haug, A. A., Owen, P. D., & Genç, M. (2020). What drives bilateral foreign direct investment among Asian economies? *Economic Modelling*, 93, 125–141. <https://doi.org/10.1016/j.econmod.2020.08.003>
- Nordstrom, K., & Vahlne, J.-E. (1994). Is the globe shrinking? Psychic distance and the establishment of Swedish sales subsidiaries during the last 100 years. In M. Landeck (Ed.), *International trade: Regional and global issues* (pp. 41–56). Palgrave.
- Organisation for Economic Co-operation and Development. (2025). *OECD benchmark definition of foreign direct investment (fifth edition)*. OECD Publishing. <https://doi.org/10.1787/7f05c0a3-en>
- O’Grady, S., & Lane, H. W. (1996). The psychic distance paradox. *Journal of International Business Studies*, 27, 309–333. <https://doi.org/10.1057/palgrave.jibs.8490137>
- Oliver, C. (1991). Strategic responses to institutional processes. *The Academy of Management Review*, 16(1), 145–179. <https://doi.org/10.2307/258610>
- Peng, M. (2001). The resource-based view and international business. *Journal of Management*, 27(6), 803–829. [https://doi.org/10.1016/S0149-2063\(01\)00124-6](https://doi.org/10.1016/S0149-2063(01)00124-6)

- Popovici, O. C., & Călin, A. C. (2019). FDI motivations in CEE countries. The role of governance ethics. In S. Văduva, I. Fotea, L. P. Văduva & R. Wilt (Eds.), *Applied ethics for entrepreneurial success: Recommendations for the developing world: 2018 Griffiths School of Management Annual Conference (GSMAC) on Business, Entrepreneurship and Ethics* (vol. 9, pp. 93–110). Springer. https://doi.org/10.1007/978-3-030-17215-2_7
- Porto, M. (2023). *Using R for trade policy analysis: R codes for the UNCTAD and WTO practical guide* (2nd ed.). Springer. <https://doi.org/10.1007/978-3-031-35044-3>
- Puthusserry, P., Khan, Z., Nair, S. R., & King, T. (2021). Mitigating psychic distance and enhancing internationalization of fintech SMEs from emerging markets: The role of board of directors. *British Journal of Management*, 32(4), 1097–1120. <https://doi.org/10.1111/1467-8551.12502>
- Rugman, A. M. (2009). Theoretical aspects of MNEs from emerging economies. In R. Ramamurti & J. V. Singh (Eds.), *Emerging multinationals in emerging markets* (pp. 42–63). Cambridge University Press.
- Santos Silva, J. M. C. S., & Tenreyro, S. (2006). The log of gravity. *The Review of Economics and Statistics*, 88(4), 641–658. <https://doi.org/10.1162/rest.88.4.641>
- Sawitri, K. A., & Brennan, L. (2023). The investment development path literature: A review and research agenda. *Management Review Quarterly*, 73, 1825–1872. <https://doi.org/10.1007/s11301-022-00287-4>
- Shen, J. H., Wang, H., & Lin, S. C.-C. (2021). Productivity gap and inward FDI spillovers: Theory and evidence from China. *China & World Economy*, 29(2), 24–48. <https://doi.org/10.1111/cwe.12369>
- Silva Rêgo, B. F. da. (2020). *Inward and outward incentives for the internationalization of firms* [Doctoral dissertation. Universidade Federal do Rio de Janeiro].
- Svetlicic, M., & Jaklic, A. (2007). Outward FDI from New European Union Member States. In K. Liebscher, J. Christl, P. Mooslechner, & D. Ritzberger-Grünwald (Eds.), *Foreign direct investment in Europe*. Edward Elgar Publishing. <https://doi.org/10.4337/9781847208798.00028>
- Szunomár, Á. (2020). Theories of internationalization and foreign direct investment: How to explain FDI from emerging MNEs? In Á. Szunomár (Ed.), *Emerging-market multinational enterprises in East Central Europe* (pp. 3–19). Springer. https://doi.org/10.1007/978-3-030-55165-0_1
- Thite, M., Wilkinson, A., Budhwar, P., & Mathews, J. A. (2016). Internationalization of emerging Indian multinationals: Linkage, leverage and learning (LLL) perspective. *International Business Review*, 25(1), 435–443. <https://doi.org/10.1016/j.ibusrev.2015.06.006>
- United Nations Conference on Trade and Development. (2022). *World investment report 2022: International tax reforms and sustainable investment*. United Nations.
- Umiński, S., & Borowicz, A. (2021). Will multinational enterprises contribute to Poland's economic resilience and recovery during and post COVID-19 pandemic. *Transnational Corporations Review*, 13(1), 74–87. <https://doi.org/10.1080/19186444.2021.1888638>
- Umiński, S., Nazarczuk, J. M., & Borowicz, A. (2023). The role of foreign-owned entities in building economic resilience in times of crisis: The case of European digital and technologically-intensive firms during the COVID-19 PANDEMIC. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 18(3), 751–777.
- Vahlne, J.-E., & Johanson, J. (2017). From internationalization to evolution: The Uppsala model at 40 years. *Journal of International Business Studies*, 48, 1087–1102. <https://doi.org/10.1057/s41267-017-0107-7>
- Verde, A. (2017). *Is globalisation doomed? The economic and political threats to the future of globalisation*. Palgrave. <https://doi.org/10.1007/978-3-319-58583-3>
- Wallerstein, I. (1974). The rise and future demise of the world capitalist system: Concepts for comparative analysis. *Comparative Studies in Society and History*, 16(4), 387–415. <https://doi.org/10.1017/S0010417500007520>

- Witkowska, J. (2023). The role of FDI in the sustainable development of the European Union. *Comparative Economic Research. Central and Eastern Europe*, 26(1), 21–43.
<https://doi.org/10.18778/1508-2008.26.02>
- Witt, M. A., & Lewin, A. Y. (2007). Outward foreign direct investment as escape response to home country institutional constraints. *Journal of International Business Studies*, 38(4), 579–594.
<https://doi.org/10.1057/palgrave.jibs.8400285>
- Wojciechowski, L., & Wach, K. (2014). The factors of outward FDI from V4 countries from the perspective of EU and EMU membership: A panel gravity model approach. *Acta Universitatis Lodzianis. Folia Oeconomica*, 5(307), 169–184.
- Xia, J., Ma, X., Lu, J. W., & Yiu, D. W. (2014). Outward foreign direct investment by emerging market firms: A resource dependence logic. *Strategic Management Journal*, 35(9), 1343–1363.
<https://doi.org/10.1002/smj.2157>
- Xu, C., Xiong, Y., Sun, Y., & Liu, Y. (2021). Genetic distance, international experience and the performance of cross-border R&D for EMNEs. *Journal of International Management*, 27(2), Article 100853.
<https://doi.org/10.1016/j.intman.2021.100853>
- Yan, H., Wang, J., & Deng, P. (2018). Outbound linkage and inbound leverage for emerging multinationals: A signaling theory perspective. *Asia Pacific Journal of Management*, 35, 347–372.
<https://doi.org/10.1007/s10490-017-9554-8>
- Yin, T., Proprius, L. de, & Jabbour, L. (2021). Assessing the effects of policies on China's outward foreign direct investment. *International Business Review*, 30(5), Article 101818.
<https://doi.org/10.1016/j.ibusrev.2021.101818>
- Yotov, Y. V., Piermartini, R., Monteiro, J.-A., & Larch, M. (2016). *An advanced guide to trade policy analysis: The structural gravity model*. WTO. <https://doi.org/10.30875/abc0167e-en>
- Zaheer, S. (1995). Overcoming the liability of foreignness. *Academy of Management Journal*, 38(2), 341–363.

APPENDIX

Table A1. Independent variables correlation table

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) gdp_o	1.00											
(2) gdp_d	0.02	1.00										
(3) dist	-0.08	0.11	1.00									
(4) psychic_dist	0.05	0.10	0.36	1.00								
(5) socioeconomic_dist	-0.05	-0.00	0.21	0.48	1.00							
(6) contig	0.04	-0.06	-0.30	-0.47	-0.18	1.00						
(7) va_serv_gdp_d	0.03	0.15	-0.08	-0.10	-0.50	-0.06	1.00					
(8) taxhaven_d	0.06	-0.05	-0.14	0.03	-0.06	-0.02	0.24	1.00				
(9) control_corruption_d	0.03	0.07	-0.15	-0.05	-0.42	-0.03	0.48	0.26	1.00			
(10) IFDI_percap_o	-0.01	0.07	-0.23	-0.08	-0.14	0.14	0.24	0.31	0.33	1.00		
(11) diff_gdp_per_cap	0.02	0.10	-0.08	0.27	0.13	-0.17	0.32	0.41	0.58	0.30	1.00	
(12) diff_rule_of_law	-0.06	-0.05	0.17	0.17	0.53	-0.12	-0.19	-0.01	-0.26	0.05	0.26	1.00

Table A2. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
OFDI	8878	267,40 M	2,127 B	1.1	70,71 B
gdp o (in thousands)	34338	132,30 M	145,20 M	19,48 M	674,00 M
gdp d (in thousands)	26941	373,20 M	1,58 B	27,10 k	23,00 B
dist (km)	34226	6677.83	4219.03	54	18086
psychic dist	20350	6.6	0.64	0.79	8.88
socioeconomic dist	20350	3.21	1.66	0.04	8.37
contig	32616	0.02	0.14	0	1.0
va_serv_gdp_d	19182	55.89	12.43	22.13	96.2
taxhaven_d	35058	0.14	0.35	0	1.0
control_corruption_d	20139	-0.04	1.0	-1.78	2.4
IFDI_percap_o	6524	134,57 k	422,35 k	0	7,36 M
diff_gdp_per_cap	26426	15.99	17.26	0	179.61
diff_rule_of_law	20211	1.08	0.7	0	3.73