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## Foreign Direct Investments and Home Country's Institutions: The Case of CEE Countries

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**Abstract:**

**Purpose:** This paper's research objective was to determine if the scale of outward foreign direct investments (OFDI – outward FDI) from Central and Eastern Europe (CEE) countries is determined by the key home country's institutional factors.

**Design/Methodology/Approach:** To achieve the assumed research aim, an econometric power panel model illustrating the interdependencies between the natural logarithms of the CEE countries' outward FDI per capita stocks values and the levels of natural logarithms of their explanatory variables, which were the key home country's institutional factors, during or at the end of the years 2004-2018, that constituted a balanced data panel, were used. The slope coefficients of the model indicated the percentage change the dependent variable (i.e., the value of the OFDI stocks of CEE countries growth pace) changes if a given exogenous institutional variable decreases or grows by 1.0%, which enables to determine if the scale of outward FDI from the CEE region was significantly determined in the examined period by the considered key home country's institutional factors.

**Findings:** The empirical results show that the home country's institutional factors determine OFDI stocks' scale from the CEE countries.

**Practical Implications:** Improving the quality of the institutional environment of the country of origin of FDI would contribute to increasing the scale of foreign capital expansion of enterprises from the CEE region.

**Originality/value:** The conducted study enabled to indicate the key directions of possible future improvements in the institutional environment of CEE enterprises, which would enable to significantly increase the scale of their foreign capital expansion, which would result in the growth of their exports that in turn would result in their further economic development, which was the case of many other well developed, as well as emerging economies. Such a result would contribute to the significant improvement of the effectiveness of the region's countries' economic and institutional policies in terms of supporting international economic cooperation.

**Keywords:** Foreign Direct Investments, institutions, foreign capital expansion, CEE region, power panel models.

**JEL classification:** F21, F23, F30, F40, F65, C23.

**Paper Type:** Research study.

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## **1. Introduction**

Foreign direct investments (FDI) are nowadays one of the basic forms of foreign expansion. Their existence determines the level and effectiveness of international cooperation and economic exchange. They can contribute to economic growth caused by many positive structural changes resulting from increased operational and financial ties, resulting from an increased degree of international economic cooperation, including exports and capital exchange (Gorynia *et al.*, 2018; Jindrichovska *et al.*, 2020). Nevertheless, FDI is still undertaken mainly by enterprises from highly developed countries. At the beginning of the 21st century, the share of investment value from emerging economies and Central and Eastern Europe (CEE) countries in global long-term capital flow increased. At the end of 2018, it amounted to about 23% of the global value of FDI stocks (UNCTAD database).

Considering the importance of emerging and CEE economies in shaping world production and exports, it should be recognized that these countries have significant development potential in terms of outward FDI (Vaz da Fonseca and Nascimento Juca, 2020).

It must be underlined that FDI would play an important role during economic recoveries after significant economic crises, such as the current COVID-19 pandemic. It results from the fact that past crises evidence has shown that capital groups that consist of both domestic and foreign-owned affiliates can show greater resilience during economic crises, thanks to their access to their diverse markets and socio-economic resources, as well as intragroup linkages than other capital groups and enterprises that do not form capital groups (Alfaro and Chen, 2012).

Institutional determinants of FDI can be considered both from the countries receiving investments (pull factors) and the countries of FDI origin (push factors). The topic literature is dominated by the first of the above-mentioned perspectives, which means that the importance of institutional determinants of FDI-accepting countries is primarily studied (Bénassy-Quéré *et al.*, 2007; Arize *et al.*, 2018). Studies on the impact of institutional factors of the country of origin on the value of FDI are relatively sparse and mainly concern FDI of emerging economies and other well-developed countries than CEE countries, so that the scale of outward foreign direct investments (OFDI – outward FDI) from Central and Eastern Europe (CEE) countries determination by the key home country's institutional factors remained undetermined so far, which became the reason for undertaking this study.

So far (2020), there have been relatively few scientific publications devoted to the institutional conditions of foreign direct investment considered from the country of origin's perspective. Even though this takes place at the beginning of the second decade of the 21st century, this issue began to become extremely important. This is proved by, among others, the economic success of the foreign capital expansion of

Chinese enterprises, the nature, motives, directions, and course of which are strongly related to the goals of the economy of the country of origin and the institutional solutions used in this regard. Similar observations also apply to other countries and business running conditions in the free-market economy system. However, most of the existing research in this area has been devoted to analyzing the institutional conditions of FDI implemented by enterprises from selected economies, including China, other Asian countries, and Russia (Chen *et al.*, 2015, Chen *et al.*, 2016).

The study aims to analyse the CEE outward FDI determinants taking into consideration key home country's institutional factors, as well as to discuss the key policy implications of the performed empirical research taking into consideration currently an important issue of institutions role during economic recovery after the crisis related to the 2020 COVID-19 pandemic.

The plan of the following parts of the study is as follows. In section 2, the scale and main CEE OFDI characteristics are discussed. In section 3, are discussed key institutional determinants of outward FDI. In section 4, we discuss CEE countries' outward FDI institutional determinants. In section 5, the research aim, and scope are indicated. In section 6, the research methodology detailed outline is shown. In section 7, are presented the results of the performed empirical research. In section 8, are shown the study results. In section 9, we discuss our study's policy implications, showing the key directions of the potential institutional changes' impacts on CEE outward FDI scale during future recovery after the 2020 COVID-19 pandemic. Lastly, the study is concluded with the final remarks.

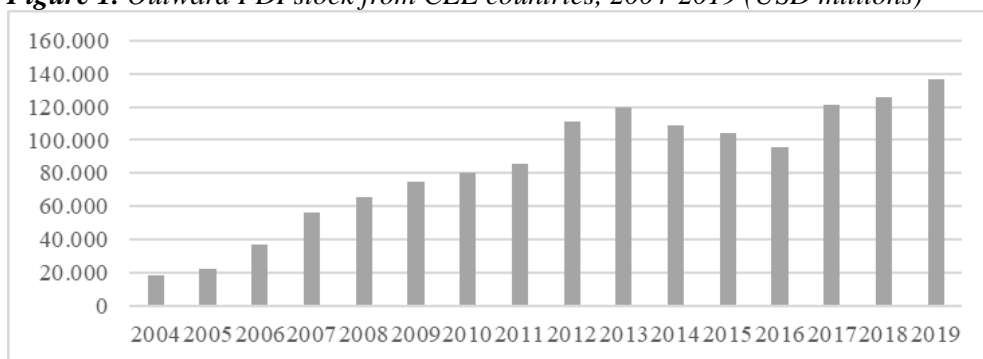
## **2. Outward FDI from Central and Eastern Europe**

The CEE countries (i.e., Bulgaria, Estonia, Lithuania, Latvia, Poland, the Czech Republic, Romania, Slovakia, Slovenia, Hungary) are currently classified as highly developed countries. Nevertheless, they are characterized by a lower GDP per capita than in the EU-15 and an average level of technological development. This means that they have not developed competitive advantages typical for many other EU countries (Hoskisson *et al.*, 2013). Therefore, on the one hand, they cannot be classified among typically low-cost economies. On the other hand, they cannot be classified among countries characterized by the highest technological development level. Apart from the fact that transformation processes in the CEE countries were diversified among individual region countries, which was shaped by the pace and scope of reforms introduced after political transformations in 1989, these countries are a relatively cohesive group in terms of political, economic, social, institutional, and technical conditions.

The foreign capital expansion of CEE enterprises began in the first half of the 1990s, but until around 2000, the FDI per capita from this region remained at a relatively shallow level. The increase of OFDI level started after 2004, i.e., when

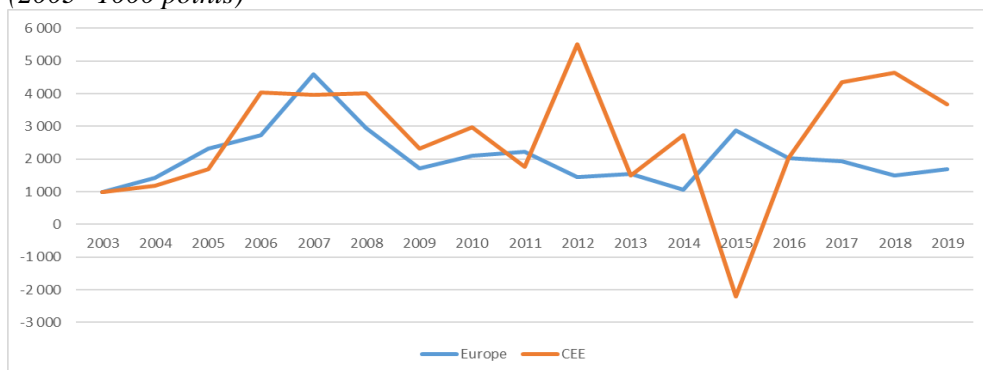
most countries in the region joined the European Union. As a result, the OFDI stock from CEE increased in nominal terms from USD 18,617.7 billion at the end of 2004 to USD 136,354.6 billion at the end of 2019. This means an increase in real terms by more than 250% during the above-mentioned period.

**Figure 1.** *Outward FDI stock from CEE countries, 2004-2019 (USD millions)*



**Source:** *Own calculations based on UNCTAD database (2020).*

**Figure 2.** *Indices of FDI outflows from (all) European and CEE countries (2003=1000 points)*



**Source:** *Own calculations based on UNCTAD database (2020).*

What is nowadays important is that the recent 2020 COVID-19 pandemic would cause a deep economic recession in the entire world economy. Its level, strength, and duration in particular countries and regions cannot be predicted. Nevertheless, there is no doubt that the entire world economy will be affected by its economic effects for a long time. FDI flows are expected to decline sharply due to the 2020 pandemic and the resulting supply disruptions and some potential demand contractions, which will affect the entire FDI stocks values that will decline because of the capital assets market participants' pessimistic expectations. The immediate impact on FDI flows will come from a reduction in the levels and values of mergers and acquisitions (M&As) and greenfield investments, as well as any planned or not divestments. The impact on FDI stock values will also reduce capital asset prices shaped in the relevant capital markets.

However, this result is likely to be partially reduced by the interest rate cuts in many markets caused by quantitative easing monetary policies introduced in response to the current pandemic crisis, translating into declines in required returns on investments rates that in turn reduce the results of the overall asset prices decline tendencies.

### **3. Institutional Determinants of Outward FDI**

In line with the primary version of the ownership, location, internalization (OLI) paradigm (Dunning, 1980), multinational enterprises should have ownership advantages, location advantages, and internalization advantages that enable them to start and then pursue their foreign expansion. The favorable institutional conditions of their countries of origin are critical in the first of the above-mentioned advantages. It must be mentioned that the OLI paradigm was then supplemented with institutional variables. Dunning (2006) and Cantwell (2015) emphasized that institutions' quality is a key component influencing and shaping the market advantages of enterprises and attractiveness of individual countries as locations for FDI.

The results of the previous empirical research on the impact of economic and institutional factors on outward FDI performed by Globerman and Shapiro (2002), Narula (2002), Globerman, Shapiro, and Tang (2004), Witt and Lewin (2007), Barnard and Luiz (2018), Stoian (2013), Stoian and Mohr (2016), Estrin (2015), as well as Götz and Jankowska (2016) are characterized by the presence of many significant discrepancies in the obtained conclusions. These studies are presented in detail in Table 1. They allow concluding that favorable home country's institutions increase the outflow of FDI. However, many of them also show that the poor quality of the institutional environment in the home country of enterprises also may contribute to long-term capital outflows. As a result, OFDI may result from the development of enterprises and the increase in their competitiveness or may be an effect of a long-term outflow of investments caused by unfavorable conditions in the home country's institutional environment. Consequently, according to empirical research, institutions of the country of origin may increase the scale of outward FDI in the case of:

- high-quality institutional environment that is conducive to the functioning of enterprises and thus increases the value of outward FDI;
- low-quality institutional environment, which encourages companies to allocate their resources in a country with a higher institutional environment quality.
- The presented study aimed to check the case in CEE, considering key institutional variables that would influence OFDI from the region.

**Table 1.** Empirical research on the impact of institutional conditions of the country of origin on its outward foreign direct investments

<b>Author and publication year</b>	<b>Study scope (region and data scopes)</b>	<b>Conclusions</b>
Globerman and Shapiro (2002)	Period under analysis: 1995–1997; the study covered 70 countries from fast developing and post-transition economies compared to the most developed countries.	Higher quality of the institutional environment contributes to increasing the value of OFDI; the influence of institutional factors is greater in fast developing countries than in developed countries.
Narula (2002)	Research scope: Norwegian enterprises.	Internationalization of innovative activity is strongly determined by the institutional conditions of the country of origin.
Globerman, Shapiro and Tang (2004)	Period under analysis: 1995–2001; countries covered by the study: Albania, Belarus, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Macedonia, Malta, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Turkey, and Ukraine.	High quality of institutions is conducive to the implementation of outward FDI. Low quality of institutions means that fewer enterprises can invest abroad.
Witt and Lewin (2007)	Scope of analysis: outward FDI and institutional conditions; analyzed period: 1990-2003; analyzed countries: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Ireland, Italy and Japan.	The mismatch between the strategic needs of enterprises and the institutional constraints of the country of origin is an additional factor conditioning the increase in outward FDI.
Barnard and Luiz (2018)	Scope of analysis: outward FDI and their institutional conditions and motives; period under review: 1956-2012; the analysis covers OFDI from South Africa.	The increase in OFDI as an escape from the institutional environment in the country-of-origin results from the uncertainty as to changes taking place therein and concerns about the stability and production capacity of the economy.
Stoian (2013)	Research scope: the impact of the country of origin, including institutional determinants, on the implementation of FDI; period under analysis: 1996-2010; the analysis covered 20 countries from the CEE region.	In the case of the CEE countries the improvement of the institutional environment is conducive to increasing the value of outward FDI.
Stoian and Mohr (2016)	Research scope: the impact of deficiencies and limitations in the institutional environment of emerging economies on foreign direct investment; period under analysis: 1995-2011; the analysis covered 29 fast-developing (emerging) economies.	The occurrence of institutional gaps and a high level of protectionism, bureaucracy and corruption contribute to an increase in the number of outward FDI, implemented due to the desire to escape from the unfavorable environment in the country of origin of enterprises.
Estrin (2015)	Research scope: the impact of institutions in the country of origin on the level of internationalization of state	The influence of the environment of the country of origin is over territorial and determines the functioning of

	and private enterprises; period under analysis: 2010; the analysis covered 5 thousand largest corporations in the world.	enterprises on an international scale.
Götz and Jankowska (2016)	Research scope: institutional (political) conditions of direct foreign investments from Poland; period under analysis: 2008–2015.	Targeting comprehensive institutional support has a positive impact on the development of the OFDI phenomenon.

*Source:* Own research.

According to the existing research, the following institutional barriers limiting OFDI scale can be distinguished:

- barriers resulting from maladjustment of regulatory systems to the needs of enterprises, in particular the lack of effective protection of intellectual property rights, unstable or inadequate legal regulations, inadequate enforcement of law and contracts (Gammeltoft *et al.*, 2010) and underdeveloped financial markets (Khanna and Palepu 2010; Stoian and Mohr 2016);
- barriers resulting from political conditions and corruption (Wei and Nguyen 2018), which contribute to instability in the external environment of enterprises and limit their development opportunities;
- barriers resulting from political conditions and corruption (Wei and Nguyen 2018), which contribute to instability in the external environment of enterprises and limit their development opportunities;
- barriers resulting from the negative image of the institutional environment of the country of origin of FDI on the functioning and development of enterprises and their operations abroad;
- barriers resulting from solutions aimed at limiting capital transfer by enterprises.

#### 4. Institutional Determinants of CEE Outward FDI

The increase of the CEE outward FDI value results from the regional countries' gradual economic growth and development. This is in line with the theory of the investment development path (Dunning, 1981). However, the economic growth of a given country is not the only driver for outward FDI implementation. As Kayam (2009) points out, other economic determinants are also important about the CEE countries. They include, among others, an increase in the level of competition resulting from the FDI inflows to a given economy. Moreover, institutional factors also contribute to increasing the value of FDI. They play a greater role in supporting the foreign capital expansion of enterprises in developing countries and countries undergoing and after transformation than in most developed countries (Globerman and Shapiro, 2002). The importance of the individual, institutional determinants may differ in the case of selected emerging economies and be different in countries after the transformation period (Stoian and Mohr, 2016). The

development of market economy institutions leads to an increase in the value and flows of FDI, but these factors depend on the stage of economic development and the level of competitiveness of enterprises. Economic reforms in post-socialist countries, affecting the competitiveness and economic development of FDI countries of origin, contributed to creating ownership advantages facilitating foreign capital expansion for enterprises (Stoian, 2013).

Carrying out further reforms conducive to the improvement of institutions' functioning should contribute to supporting the development of outward FDI. They will then constitute the effect of development and increase the competitiveness of enterprises (Stoian and Mohr, 2016). Nevertheless, research conducted by Stoian (2013) shows that the higher the level of technological development of CEE countries, the lower their propensity to undertake FDI. This may mean that multinational enterprises from this region build their advantages in areas other than technological innovation and research and development activities. They are less technologically advanced than entities from the most developed countries.

However, it makes it easier for them to expand to other countries in the region because they are adapted to the prevailing institutional conditions. Peculiarly, these enterprises turn the fact of operating in a less developed institutional environment into their own advantage, enabling them to expand in countries with similar economic and political conditions. However, the above conclusions are not confirmed by the studies by Globerman *et al.* (2004), the results of which indicate that in the case of emerging economies and CEE countries, the low quality of institutional conditions contributes to the reduction of the number of entities investing abroad, and not to the location of FDI in countries with a high level of institutional conditions. The key institutional determinants of foreign capital expansion of international enterprises from emerging economies and CEE countries include overall determinants of the institutional system, in the case of emerging economies and the CEE countries, far-reaching regulatory reform processes have occurred, and in some cases are still ongoing; these include measures to promote a market economy, protection of property rights, reducing the corruption and bureaucracy and increase in the efficiency of the legal system. The above factors are not directly aimed at supporting foreign direct investments, however, because they determine the overall development of enterprises, they have a significant impact on their competitiveness on foreign markets, and thus favor the development of enterprises through their foreign capital expansion:

- liberalization of legal regulations in the field of long-term capital flows and various forms of supporting the activities of domestic enterprises on the international arena; Götz and Jankowska (2016) indicated the significant importance of the support aimed directly at outward FDI on the example of research on Polish FDI; they raised issues related to matching institutional support to the needs of enterprises in the context of implementing outward foreign direct investments;



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- regulations and institutions regarding state ownership of enterprises.

Éltető *et al.* (2015) researched the scope of political support and instruments used by individual governments to stimulate companies' foreign capital expansion from the Visegrad Group countries between 2008, i.e., after the 2008 global financial crisis, and 2014. These studies indicate that the scope of support for foreign capital expansion of enterprises is diametrically different in individual countries of the region under consideration.

In the case of Hungary, support in foreign direct investment processes is visible. However, it was mainly targeted at small and medium enterprises. Also, in Poland, several institutional tools have been developed to support enterprises' development through foreign capital expansion, the scope of which is clearly defined, and their nature can be described as long-term. The intensification of activities in this area is related rather to increasing enterprises' activity in this area, contributing to a gradual increase in demand for this type of support, than to a change in government policy, which would adjust to the conditions resulting from the economic crisis. The situation is different in the case of the Czech Republic and Slovakia. These states undertake activities promoting internationalization. However, they are focused on supporting exports. Foreign direct investments of enterprises from these countries, despite their growing value, are treated rather as marginal.

Götz and Jankowska (2016) analyzed Polish foreign investments' institutional formal conditions, with particular emphasis on government policy. They showed an evolution in offering incentives and support to outward FDI that had been established in Poland after an extended period characterized by an ed action in this area. Currently, the relevant policy is relatively well suited to the needs of enterprises planning foreign capital expansion. The organically key element in the effective use of this type of support in Poland's case is not the lack of them, but the low level of entrepreneurs' Poland's remissibility of obtaining it.

These results seem to confirm the high importance of the home country's institutional impacts on the capital expansion of the CEE enterprises, which in turn help to grow the level of their internationalization on the path of exports, resulting in their overall economic growth and development (Ciesielska and Kołtuniak, 2017), that in turn, according to the investment development path would result in the further growth of its internationalization level (Trąpczyński *et al.*, 2019).

## 5. Research Aim and Scope

The research aimed to determine if the scale of outward FDI from the Central and Eastern Europe (CEE) region is determined by the key home country's institutional factors. Our research approach included the estimation of the econometric panel model. The panel model's estimation was made, considering the occurrence of individual fixed effects, using the ordinary least squares (OLS) estimator, assuming a confidence level of 5.0%.

To estimate the panel model, empirical data on the levels of institutional variables characterizing the individual countries covered by the study in 2004-2018 would have a potentially significant impact on the values of the outward foreign direct investment resources from CEE countries in the period covered by the study were used. The variables covered by the study have been taken from the database of indicators used for the annual development of the Global Competitiveness Index and from selected other studies published by the World Economic Forum. The scope of the study includes the period between 2004 and 2018.

## 6. Research Methodology

Achieving the indicated above research aim was possible, thanks to:

- development of a list of the institutional variables characterizing the economies of foreign direct investments (FDI) origin they would have a potentially significant impact on the values of the outward foreign direct investments' resources from CEE countries in the period covered by the study;
- collecting empirical data with an annual interval covering the above-mentioned scope for years 2004-2018;
- carrying out panel non-stationarity tests of the considered time series of the dependent and explanatory variables, as well as the time series of the first differences of their natural logarithms using the Levin-Lin-Chu (LLC), BreiThung, Im-Pesaran-Shin, Philips-Perron, Hadri, and Augmented Dickey-Fuller tests procedures for the considered economic group and analysis period, assuming 5.0% confidence levels;
- estimation of econometric power panel model illustrating the interdependencies between the natural logarithms of the outward FDI per capita values and the levels of natural logarithms of the indicated explanatory variables during or at the end of the years 2004-2018, along with the constants, for which the slope coefficients of the model indicate the percentage change the dependent variable changes if a given exogenous variable decreases or grows by 1.0%, with the form<sup>3</sup>:

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<sup>3</sup> *The possibility of the delayed endogenous variables presence in the specification of the estimated model was disabled (including the construction of dynamic Arellano-Bond panel model, which enable to capture the hysteresis of the current values of the considered*

$$OFDI_{it} = y_{jit}^{\beta_j} + c + \epsilon_{it} + \mu_i, \quad (1)$$

$$\ln(OFDI_{it}) = \beta_j \ln(y_{jit}) + c + \epsilon_{it} + \mu_i, \quad (2)$$

$$\ln(OFDI_{it}) = \beta_j \ln(y_{jit}) + c + \vartheta_{it}, \quad (3)$$

where monetary variables (in USD) were expressed at the constant prices as of January 1, 2004:

$i$  – subsequent CEE national economies;

$t$  – subsequent years covered by the study;

$OFDI_{it}$  – per capita OFDI values for individual economies at the end of a given period (dependent variables);

$j$  – subsequent explanatory variables (exogenous variables);

$y_{jit}$  – the level of the exogenous variable for a given national economy during or at the end of the considered period;

$\beta_j$  – coefficients of individual exogenous variables;

$c$  – constant values for the considered group of countries and time range under consideration;

$\epsilon_{it}$  – random errors for a given national economy and a specified period;

$\mu_i$  – a purely individual effect for a given national economy and indicated period, provided that its existence has been demonstrated for the panel under consideration on the basis of the results of at least two of the Breusch-Pagan, Honda, King-Wu or Gouriéroux tests and then confirmed using tests based on the Fisher or chi-square distributions, assuming 5.0% confidence levels;

$\vartheta_{it}$  – cumulative (total) random errors for a given national economy and time period indicated ( $\vartheta_{it} = \epsilon_{it} + \mu_i$ );

The considered model was subject to the estimations made for the considered group of (CEE) countries and period of 2004-2018; in this regard, the classical procedure of the ordinary least squares (OLS) method could be used, provided that the conditions of compliance of the OLS estimators were met, concerning total errors and purely random errors, respectively:

$$E(\vartheta_{it}) = 0, \text{cov}(\vartheta_{it}, y_{jit}) = 0 \quad (4)$$

$$E(\epsilon_{it}) = 0, \text{cov}(\epsilon_{it}, y_{jit}) = 0 \quad (5)$$

and the condition of no correlation between the explanatory variables and purely individual effects concerning individual economies; it would be fulfilled if the individual effects did not occur and the panel was composed of cross-sectional data

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individual economies FDI portfolios, and therefore their dependence on their levels realized in previous periods, because of accumulation previously realized FDI flows). This was made in the aim to ensure the highest utility of the achieved results in the context of the considered economic policy assessment.

sets, which could not be the case in the case under consideration; the verification of the presence of statistically significant purely individual effects in relation to individual countries under consideration within the considered group was carried out using the Breusch-Pagan, Honda, King-Wu and Gourieroux tests, assuming 5.0% confidence levels; confirmation of the individual effects occurrence in the case of the considered model made it impossible to directly use the OLS estimators to perform the conducted study.

In connection with the above, as a result it was necessary to include the effect of total random errors (purely random errors in relation to individual national economies, as well as purely individual effects concerning individual countries) in the considered econometric model estimation process; individual effects can manifest themselves in the form of both fixed effects and random effects, assuming that they are not correlated with pure random effects ( $\epsilon_{it}$ ); the occurrence of fixed individual effects within the considered dependencies was verified using tests of fixed effects irrelevance referring to chi-square and Fisher-Snedecor distributions, assuming 5.0% confidence levels; the results of the indicated tests confirmed the previous findings (made with the use of, *inter alia*, Breusch-Pagan tests).

The occurrence of individual random effects was verified using the Hausman individual random variable presence test, which allows for the verification of the correlation of explanatory variables and random effects, assuming a 5.0% confidence level in the case of statistical significance of these effects (compliance of their estimators), the panel model under consideration should be estimated, taking them into account, using the generalized least squares method (GLS) as a result of the above-mentioned tests, it was found out that in the considered panel statistically significant individual fixed effects occurred in the absence of individual random effects; as a consequence, the considered panel model was estimated, taking into account the occurrence of individual fixed effects using the classic ordinary least squares method (OLS) estimator:

- verification of the sign and statistical significance (as well as the analysis of the dynamics levels) of the individual structural parameters of the estimated panel model with the use of Student's t-tests, assuming a 5.0% confidence level,
- verification of the total statistical significance of the structural parameters of the estimated panel model using the results of Fisher's test, assuming a 5.0% confidence level,
- interpretation of the results of the Durbin-Watson test, enabling confirmation of the lack of autocorrelation of the first-order residual components within the estimated model, assuming a 5.0% confidence level,
- establishing, using White's test, the invariance of the random components' variance level (i.e., homoscedasticity) of the considered model,
- establishing, with the use of the Jarque-Ber test, the normality of the

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- distribution of the residual components of the considered model,
  - verification of the Gauss-Markov scheme assumptions fulfilment,
  - selecting the structural specification of the considered model, considering the Akaike and Schwarz information criteria, as well as specifying a list of variables irrelevant for the considered panel,
  - economic interpretation and assessment of the obtained model structural parameters' compliance with the results of the findings made hitherto,
  - analysis and assessment of the coefficient of determination levels and adjusted determination coefficient of the considered panel model.

For the considered panel model estimations, empirical data on the levels of institutional and economic variables characterizing the individual countries covered by the study that could be significant in foreign capital expansion processes of their enterprises from 2004 to 2018 were used. The variables used in the study were gathered from the two below mentioned data sources:

- UNCTAD's international statistics database,
- databases of indicators used for the annual development of the Global Competitiveness Index and selected other studies published by the World Economic Forum<sup>4</sup>.

For the study, data sets with an annual interval for the period 2004-2018 were used. The entry date of most of the Central and Eastern European countries to the European Union was assumed as the beginning of the period covered by the study, due to its strong associations with some significant institutional changes, which could have been influenced by such factors as liberalization and intensification of capital flows from and to these countries.

The collected data set made it possible to specify a balanced data panel for Central and Eastern Europe for the years 2004-2018. As a result of panel non-stationarity Levin-Lin-Chu (LLC), Ima-Pesaran-Shin, Phillips-Perron, and Augmented Dickey-Fuller (ADF) tests, it was confirmed that all the time series included in the considered data panel were integrated of order 1, which enabled further data processing in line with the above-mentioned methodology.

## **7. Research Results**

Table 2 presents the description, coefficient signs and statistical relevance of all the considered variables of our model. The model includes the dependent variable (CEE country's OFDI stocks) and all the considered explanatory variables measured separately for all the considered CEE home country's economies for

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<sup>4</sup>*These indicators are developed based on the results of surveys conducted periodically with entrepreneurs from 141 countries.*

each of the considered (2004-2018) years. These variables are the following:

- protection of property rights,
- protection of intellectual property rights,
- inefficiency of government spending,
- administrative decisions bias,
- independence of common courts,
- total fiscal burden,
- administrative burden,
- tariff burden,
- customs procedures burden,
- anti-monopoly policy degree,
- trust in the political class,
- trade barriers level,
- cluster development level,
- venture capital financing ease of access,
- innovation market advantages,
- R&D institutions quality,
- enterprises' R&D expenditures,
- innovative capacity,
- government policy transparency,
- investors' rights protection degree,
- minority shareholders protection degree,
- audit and reporting standards quality.

As can be observed, such variables as protection of property rights, protection of intellectual property rights, inefficiency of government spending, administrative decisions bias, independence of common courts, total fiscal burden, administrative burden, government policy transparency, investors' rights protection degree, minority shareholders protection degree, as well as audit and reporting standards quality in the considered OFDI home country's economies turned out to be statistically significant institutional factors of the CEE country's OFDI stocks changes in the considered period of 2004-2018. Whereas such home country's institutional factors as tariff burden, customs procedures burden, antimonopoly policy degree, trust in the political class, trade barriers level, cluster development level, venture capital financing ease of access, innovation market advantages, R&D institutions quality, enterprises' R&D expenditures, and innovative capacity turned out to be not.

**Table 2.** *Panel research results*

<b>2004-2018 Panel</b>		
<b>Variable</b>	<b>Coefficient sign</b>	<b>CEE OFDI stocks</b>
Protection of property rights	+	*
Protection of intellectual property rights	+	*

Inefficiency of government spending	–	*
Administrative decisions bias	–	*
Independence of common courts	+	*
Total fiscal burden	+	*
Administrative burden	+	*
Tariff burden	+	Irrelevant variable
Customs procedures burden	+	Irrelevant variable
Anti-monopoly policy degree	+	Irrelevant variable
Trust in the political class	+	Irrelevant variable
Trade barriers level	+	Irrelevant variable
Cluster development level	+	Irrelevant variable
Venture capital financing ease of access	+	Irrelevant variable
Innovation market advantages	+	Irrelevant variable
R&D institutions quality	+	Irrelevant variable
Enterprises' R&D expenditures	+	Irrelevant variable
Innovative capacity	+	Irrelevant variable
Government policy transparency	+	*
Investors' rights protection degree	+	*
Minority shareholders protection degree	+	*
Audit and reporting standards quality	+	*

**Note:** *x* means statistical significance of a given variable, assuming 5.0% statistical significance.

**Source:** Own research.

All the considered variables except inefficiency of government spending and administrative decisions bias in the considered period were characterized by the positive signs of their dependences towards CEE country's OFDI stock levels.

## 8. Research Results Discussion

The conducted research observed several statistically significant dependencies between CEE OFDI stocks levels development and the home country's institutional factors of their growth. They concern, among others, the protection of property and intellectual property, investors', and minority shareholders rights, as well as auditing and reporting standards quality and independence of common courts level, which turned out to have a significant positive impact on outward FDI held by CEE countries in the considered period. This observation (in terms of property protection factors) confirms the results of studies conducted earlier by Luo and Thung (2007).

The institutional variables that turned out to be important factors of CEE country's OFDI stocks growth also include government policy transparency. This is in line with the findings of Globerman and Shapiro (2002). This means that entities interested in foreign capital expansion are influenced by whether the governments' regulations and state administrations are stable and communicated clearly and adapted to entrepreneurs' needs.

The results obtained in terms of the significance of the government expenditures ineffectiveness scale and the degree of administrative bias in entrepreneurial decisions indicate that from the perspective of the CEE outward FDI phenomenon development - the more this inefficiency increases, the lower the level of entrepreneurs' interest in these investments becomes.

The presented research results indicate the importance of the understood quality of the political environment from the perspective of increasing the value of outward FDI from CEE countries. Nevertheless, the fact that outward FDI from CEE is predominantly located in other EU countries seems to support the hypothesis that some of the political factors would become irrelevant in these terms, which was shown by our study results. The study results did not confirm the importance of the CEE home country's antitrust policies and the role of trade barriers, tariff burden, and customs procedures burden in the case of the considered phenomenon. It results from the fact that the statistical importance of these 'escape FDI' factors among CEE investors have not been confirmed. The above-mentioned location factors probably caused it. What are more such tendencies have not also been confirmed in terms of cluster development level, venture capital financing ease of access, innovational market advantages, R&D institutions quality, enterprises' R&D expenditures, and innovative capacity, which are not developed on such scale as it is in the case of developed or some emerging economies? On the other hand, administrative and total fiscal burdens, which are relatively often classified as typical 'escape FDI' factors, turned out to be statistically important factors of the CEE outward capital expansion processes in the considered period.

## **9. Policy Implications for the Recovery After 2020 COVID-19 Pandemic**

The empirical and literature study results, as well as the past experiences of enterprises from emerging or highly developed economies, have shown that the further improvement of the home country's property rights protection on the path of judiciary improvement, governments policy transparency and audit and reporting standards quality growths, combined with administrative decisions bias, the inefficiency of government spending and total fiscal, as well as administrative burdens reductions undoubtedly will help to increase the CEE region's enterprises ability to compete on the foreign markets, including their ownership, location and internationalization competitive advantages, which will result in the further growth of their internationalization level, both on the export, as well as the capital expansion paths.

These findings are significant given that outward foreign direct investment supports the exports of enterprises from their home countries and, consequently, supports their economic growth. Moreover, thanks to technological, institutional, and know-how spill over effects, they inevitably contribute to their further economic and institutional development.



Taking into consideration that the recent 2020 COVID-19 pandemic would cause a deep economic recession in the entire world economy, resulting in the deep capital assets prices declines, FDI flows decreases, and M&A and greenfield investments downturns, the current economic situation will be an excellent opportunity for a breakthrough change in the scale of foreign operations conducted by enterprises from the CEE region, so far investing mainly within the region and in the field of technologies with a low or an average level of development. It could be done by undertaking greenfield or M&A investments on the competitive conditions in the field of new services or industrial technologies on new foreign markets, which will support the growth of exports of their countries of origin and other countries of the region, resulting in economic and institutional spillover effects, and, consequently, their introduction to the path of the future long-term stable and sustainable economic growth.

However, seizing this opportunity requires the achievement of ownership, localization, and internalization of competitive advantages, which will undoubtedly require significant strengthening of their institutional surrounding in their home countries. Taking into account the specificity of the 2020 COVID-19 economic crisis, the currently most important directions of institutional development of the region's national economies seem to be governments policy transparency quality growth, combined with administrative decisions bias, the inefficiency of government spending and total fiscal, as well as administrative burdens reductions and in the mid-term the further improvement of the home country's property rights protection on the path of judiciary improvement.

## **10. Summary and Concluding Remarks**

The study's empirical results show that the home country's institutional factors determine the scale of outward foreign direct investment stocks from the CEE countries. It means that improving the quality of the institutional environment of the country of origin of FDI would contribute to increasing the scale of foreign capital expansion of enterprises from the CEE region. These findings are significant given that OFDI supports the exports of enterprises from their home countries and, consequently, supports their economic growth. Moreover, thanks to technological, institutional, and know-how spill over effects, they inevitably contribute to their further economic and institutional development.

The empirical and literature study results, as well as the past experiences of enterprises from emerging or highly developed economies, have shown that the further improvement of the home country's property rights protection on the path of judiciary improvement, governments policy transparency and audit and reporting standards quality growths, combined with administrative decisions bias, the inefficiency of government spending and total fiscal, as well as administrative burdens reductions undoubtedly will help to increase the CEE region's enterprises ability to compete on the foreign markets, including their ownership, location and

internationalization competitive advantages, which will result in the further growth of their internationalization level, both on the export, as well as the capital expansion paths.

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