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Determinants of Foreign Direct Investment in Developed and Emerging Markets

A b s t r a c t. We analyzed FDI determinants for 26 developed economies and 25 emerging markets. The analysis was conducted using a panel regression model for the period 1996––2014 as well as macroeconomic and institutional variables. Growth dynamics, increasing welfare, and the size of the market positively influence FDI. Among institutional variables, government stability index and the rule of law index exert positive impact upon FDI. Misgivings with respect to the quality of democracy and corruption do not undermine FDI inflow.

K e y w o r d s: developed economies, emerging markets, foreign direct investment, institutional determinants, panel data.

J E L Classification: F21.

1. Introduction

Increasing importance of foreign direct investment (FDI) in modern global economy is connected with globalisation that has facilitated the flows of capital, goods, and services among individual countries. It enhances the role of FDI as a factor that boosts the dynamics of economic growth of coun-

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tries. On the other hand, for many companies foreign investment has become the vehicle of expansion and profit multiplication.

The goal of the paper is to identify factors that impact the scale of FDI in the host countries, considering not just the major economic indicators of the host country but also qualitative factors. We also analysed differences between factors that motivate to invest in developed economies and in developing countries, which often offer high growth potential. To this end, we used panel model to more accurately estimate the impact of individual factors upon the size of foreign direct investment in both groups of host countries and changes in the area of foreign direct investment in these countries.

2. Literature Review

FDI is considered to be one of the key drivers of economic growth in many countries, hence the analysis of its determinants has been the subject of various studies (review in Assuncao et al., 2011). Views on important factors that motivate investors to make FDI have evolved rather substantially. Conducted studies took account of many different conditions in micro- and macroeconomic scale. Faeth stresses that Heckscher-Ohlin (1933) and MacDougall-Kemp (1960,1964) models were among the first concepts to explain FDI and they pointed to determinants such as high profitability in foreign markets, lower cost of labour and foreign exchange risk (Faeth, 2009). Vernon (1966) analysed corporate propensity to get involved into FDI from the point of view of a product life cycle. He arrived at a conclusion that manufacturers' requirements as to the skills of the labour force and technological innovation diminish with time. That is why enterprises in the growth stage invest in developed countries because demand grows quickly and the production can be sold relatively effortlessly while in the stage of maturity of a product, production is transferred to developing countries. At that point the market is saturated and the product is no more innovative, which forces out the reduction of costs. Caves (1971) highlights imperfect competition as FDI determinant. Foreign direct investment and adequate product differentiation produce more benefits than exports and licensing. Dunning's approach, i.e. eclectic paradigm (or OLI), combines internationalisation theory and traditional trade theories. According to him, geographical distribution of international production is determined by three components: ownership advantages – O, location advantages – L, internalisation advantages – I. Ownership advantages bring benefits connected with the ownership and control over manufacturing, patents and technology. Location advantages may give access to a protected market, lower costs of production and transportation,

favourable tax system, lower business risk. Advantage of internalisation reduces transaction costs (Dunning, 1988, 2000). Subsequent concepts referred to as the „new theory of trade" analysed, inter alia, market size, transport cost, barriers to entry, and factor endowments (Markusen, Venables, 1998, 2000). Theoretical models also emerged to study political variables (review in Assuncao et al., 2011).

Until the end of the 1990s studies on the determinants of foreign investment were dominated by analyses that referred to the classical investment model. The impact of the size of the market and its growth rate, tariff related arrangements or the depth of integration were analysed rather commonly. For example, Root and Ahmed (1978) pointed to favourable tax rates as incentives for industrial investment. However, they stressed their volatile impact due to fears of their withdrawal by the host country. Schneider and Frey (1985) analysed FDI for a group of eighty emerging markets and identified inflation rate and salaries and wages as important determinants. High inflation rate and deficit of the balance of payments adversely affect the inflow of foreign investment because they might be indicative of the lack of economic stability and restrict free movement of capital. Smaller distance from developed markets, GNP per capita, and GNP growth rate also had positive impact upon FDI. Lucas (1993) analysed FDI determinants for countries of East and Southeast Asia. He stressed the sensitivity of foreign investment to costs of production and pointed to higher impact of salaries and wages than that of capital cost as well as higher impact of demand in export markets than in the domestic market. When analysing FDI determinants, Wang and Swain (1997) studied factors that attracted foreign capital to Hungary and China. They found out that FDI inflow is determined by the size of the market, cost of capital, and political stability. In the case of China, foreign exchange rate and labour cost were also vital. As of 2000 increasingly more studies have been considering not only macroeconomic but also institutional factors that describe the quality of state organisation and functioning. Biswas (2002) provided evidence for positive relationship between the quality of infrastructure and FDI inflow. Based on an integrated index that takes account of bureaucracy quality, corruption, and risk of expropriation he demonstrated positive impact of institutional quality upon investment. Botrić and Škuflić (2006) while analysing developing countries from South-East Europe used the number of the Internet connections as a measure of infrastructure development and concluded that the relationship between infrastructure and FDI is negative. The study provided evidence for positive impact of low deficit of the balance of payments, private sector development, and the GDP. Relationship with salaries and wages was negative,

which the authors explained with increased FDI inflows into the service sector where salaries in countries included in the study were higher. Asiedu (2006) studied 22 countries of Sub-Saharan Africa and noticed positive impact of the size of the market, openness of the economy, quality of infrastructure and human capital, and the quality of institutional performance of the state on FDI. Inflation rate and corruption index had negative impact on foreign investment. Azman-Saini et al. (2010) analysed the impact of economic freedom on FDI in 85 countries. They concluded that the inflow of FDI is closely linked to economic freedom. Kinda (2010) examined the impact of investment climate upon FDI inflows analysing 77 developing countries. He provided evidence that infrastructural problems of the host country, financial restrictions and institutional issues are obstacles to FDI inflows. Vijayakumar et al. (2010) explored FDI determinants in BRICS countries. In their studies they demonstrated positive impact of the GDP, salaries and wages and the quality of infrastructure on investment. Weak and unstable foreign exchange rate turned out to have negative impact upon FDI. Doytch and Eren (2012) studied determinants of foreign investment in Eastern Europe and Central Asia across sectors. They provided evidence, inter alia, that human capital and quality of democracy have positive impact upon FDI. On top of that, they claimed that the inflow of investment to the service sector is driven by the level of education of the labour force while cheap labour and natural resources attract FDI to agriculture and manufacturing sectors.

The role of FDI and its significant increase initiated a series of studies designed to identify key determinants of investment inflow. In practice, however, consensus over their results has been hard to achieve and identified key FDI determinants are often manifestly different. Moreover, many studies focus on specific regions and there are fewer studies that would cover bigger groups of countries.

3. Foreign Direct Investment Inflows, 1996–2014

Globalisation has contributed to enhanced international capital transfers and to the change in the structure of their allocation. Years covered by the analysis, 1996–2014, are marked with significant fluctuations in FDI inflows. In the examined period, FDI inflows substantially increased, especially in developing countries. For the developed economies the growth FDI amounted to 111%, while for the emerging markets it reached 332%. The structure of FDI allocation also clearly evolved. In 1996, FDI inflows to emerging markets accounted for 64% of FDI inflows to developed economies, while in 2014 FDI inflows to emerging markets amounted to USD 653

bn and were by USD 154 bn higher than FDI inflows to developed economies. In developed economies we could observe significant fluctuations in FDI inflows caused by changes in global economic situation, especially following the downturns in 2000 and in 2008. Emerging markets exhibited relatively stable increasing tendency in FDI inflows, which confirmed their increasingly prominent role in the world economy.

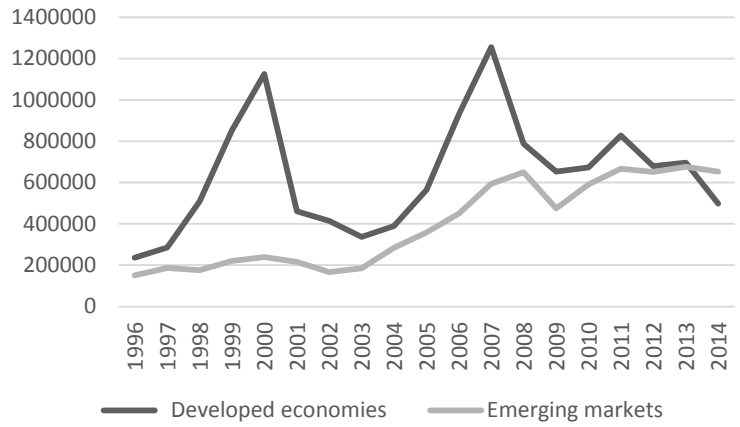

Figure 1. FDI inflows, by group of economies, 1996–2014 (millions of USD)
Source: own elaboration based on UNCTAD FDI Statistics.

Considering the above observations and existing studies we have formulated the following research hypotheses:

H1: Economic situation of the host country and its economic growth exert positive impact upon FDI;

H2: Quality of institutions in the host country measured with the Worldwide Governance Indicators exerts positive impact upon FDI;

H3: FDI determinants are different for developed economies and for emerging markets.

4. Data and Methodology

Research sample included 51 countries from Asia, Australia and Oceania, Europe, North and South Americas. Sample selection was determined by the economic status of a country and availability of data used as variables in the models. To divide the research sample into developed economies and emerging markets we used guidelines worked out by the International Mone-

tary Fund (IMF), Morgan Stanley Capital International (MSCI), and BBVA Research. The group of developed economies was made up of 26 countries and the group of emerging markets consisted of 25 countries[1]. Analysis was conducted for nineteen years 1996–2014. Such a time horizon of the analysis resulted from the availability of institutional data published by the World Bank.

Studies were conducted in three options: for all countries included in the analysis on a research sample of 814 observations and separately for developed economies and emerging markets. In the last two cases the research sample consisted of 416 and 398 observations, respectively.

The first biennial cycle of publications of World Governance Indicators by the World Bank, were based on panel and non-balanced data of cross-sectional and time-based nature. In such a case, relations among variables can be studied using the classical ordinary least squares (OLS) method. However, we need to bear in mind that the condition of the absence of individual effect must be met. Hence, the research procedure included three stages. First, using the Breusch-Pagan test, we checked whether the introduction of individual effects could be justified.

Where no grounds were found to reject the null hypothesis, we assumed that a given panel model can be estimated using the classical ordinary least squares (OLS). If test values were high (LM multiplier), we rejected the null hypothesis in favour of the alternative one and we added individual effects. In the next stage, we conducted Hausman test to choose between fixed effects and random effects. High value of H statistics of the Hausman test gave preference to fixed effects model while low value of the statistics suggested random effects model. The last stage consisted in estimation of the selected model.

In the analysis we used the following panel regression model:

$$\begin{aligned} \mathrm{FDI}_{i,t} = \beta_0 &+ \beta_1 \mathrm{EER}_{i,t} + \beta_2 \mathrm{GDPGR}_{i,t} + \beta_3 \mathrm{GDPPC}_{i,t} + \beta_4 \mathrm{INF}_{i,t} \\ &+ \beta_5 \mathrm{POP}_{i,t} + \beta_6 \mathrm{VaA}_{i,t} + \beta_7 \mathrm{PSAVT}_{i,t} + \beta_8 \mathrm{GE}_{i,t} \\ &+ \beta_9 \mathrm{RQ}_{i,t} + \beta_{10} \mathrm{RoL}_{i,t} + \beta_{11} \mathrm{CoC}_{i,t} + \mathrm{v}_{i,t} \end{aligned}$$

[1] Developed countries: Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, United Kingdom, United States;

Emerging markets: Argentina, Brazil, Bulgaria, Chile, China, Colombia, Czech Republic, Estonia, Hungary, India, Indonesia, Republic of Korea, Latvia, Malaysia, Mexico, Peru, Philippines, Poland, Romania, Russian Federation, Slovakia, Slovenia, Thailand, Turkey, Venezuela.

All variables in the model are represented by individual data of the *i*-th country and the *t*-th year, $v_{i,t}$ is a total random error.

FDI inflows are dependent variable in the study. In the analysis we used FDI inflows in individual countries measured annually in US dollars and published by UNCTAD.

There were eleven independent variables in the study. Four of them represented the impact of macroeconomic factors on FDI: effective exchange rate indices, GDP growth, GDP per capita, inflation. One variable – population – referred to the size of the FDI host country. Six variables described the quality of state organisation and functioning and were represented by the Worldwide Governance Indicators: voice and accountability, political stability & absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, control of corruption.

Effective exchange rate indices (EER) – in the study we used data published by the Bank for International Settlements. EER is calculated as a weighted geometrical mean of bilateral exchange rates adjusted for the consumer price index. The impact of the effective exchange rate on FDI is ambiguous. On the one hand, depreciation of the currency of the host country favours those who acquire assets in the host country. On the other hand, the strengthening of domestic currency boosts the purchasing power of the residents, which may also be positive.

GDP growth (GDPGR) – we used data published by the IMF. It represents annual percentage changes in gross domestic product at constant prices.

GDP per capita (GDPPC) – we also used the IMF statistics. Gross domestic product per capita is reported in current prices in US dollars.

In our analysis we assumed that GDP growth and GDP per capita are two variables, which identify economic potential of the FDI host country and should be positively correlated with the level of FDI inflows.

Inflation (INF) – we used data published by the IMF included in the annual consumer price index. We assumed that relatively high inflation rate – that has been maintained for several years – may be indicative of macroeconomic instability, which may adversely affect FDI.

Population (POP) – based on data published by the IMF. Our assumption was that the population of the host country reflects its size and potential and as such it should have positive effect upon FDI.

Institutional variables were represented by the Worldwide Governance Indicators (WGI) published by the World Bank. WGI consist of six aggregate indicators and measure various aspects of the functioning of the state. They are typically based on the opinions of businesses, individual citizens,

and experts in individual countries. For the analysis we used WGI ranging from –2.5 to 2.5 points where higher values inform about stronger and better quality governance.

- Voice and accountability (VaA) index measures the quality of democracy, citizens' impact upon government, freedom of association, freedom of speech and media.
- Political stability & absence of violence/terrorism (PSAVT) index measures governance stability and the probability of government getting destabilised by the use of violence.
- Government effectiveness (GE) index measures the quality of state civil service and its independence of political pressures, the quality of state infrastructure.
- Regulatory quality (RQ) index assesses the capability of a government to pursue policy that would support and promote the growth of the private sector.
- Rule of law (RoL) index informs about the quality of the judiciary and police, respect for ownership rights and order, crime rates.
- Control of corruption (CoC) index evaluates corruption rate in a country in different areas.

In our study we assumed that WGI growth reflecting higher quality of state and its functioning should positively impact FDI inflows.

5. Descriptive Statistics

Descriptive statistics were examined for two groups of countries: developed economies and emerging markets. It helped overview differences in statistics and confirm the thesis about obviously divergent statistics for developed economies and emerging markets.

Average FDI for developed economies was more than twice as high as the for emerging markets. Clear differences were observed also in macroeconomic variables. Average GDP growth dynamics for emerging markets was 3.94%, while for developed economies it amounted to 2.31%.

Significant differences were observed in wealth levels measured by GDP per capita. For developed economies average GDP per capita amounted to USD 36.4 k and for emerging markets ca. USD 7.4 k. We need to stress, however, differences in the size of population where median for developed economies was 9.90 million and for emerging markets 38.02 million. Differences also manifested in levels of EER index; for developed economies the average exceeded 100 points meaning currencies were relatively strong contrary to the currencies of emerging markets. Significant disproportions were

reflected in institutional variables represented by WGI, especially political stability and control of corruption where for emerging markets average values were negative. We need to highlight deep differentiation in WGI indices within countries that belong to the emerging markets.

Table 1. Descriptive statistics developed economies

Variables	Mean	Median	Std. Dev.	CV
FDI	25,678.80	10,700.10	42,953.50	1.6727
EER	101.28	100.00	11.84	0.1169
GDPGR	2.31	2.43	2.81	1.2194
GDPPC	36,384.00	33,540.00	15,537.00	0.4270
INF	2.08	2.02	1.71	0.8188
POP	34.503	9.906	60.451	1.7521
VaA	1.24	1.37	0.42	0.3345
PSAVT	0.84	0.99	0.59	0.7002
GE	1.61	1.71	0.43	0.2693
RQ	1.45	1.54	0.36	0.2494
RoL	1.52	1.64	0.41	0.2684
CoC	1.67	1.81	0.62	0.3707

Note: unit variables: FDI – million USD; POP – million; GDPPC – USD; GDPR, INF – percentage point; EER – index point; CoC, GE, PSAVT, RoL, RQ, VaA – index point, range <–2.5, 2.5>.

Source: own elaboration based on FDI – UNCTAD; EER – Bank for International Settlements; GDPGR, GDPPC, INF, POP – IMF; VaA, PSAVT, GE, RQ, RoL, CoC – World Bank.

Table 2. Descriptive statistics emerging markets

Variables	Mean	Median	Std. Dev.	CV
FDI	11,218.10	4,864.64	18,779.30	1.6740
EER	94.93	95.70	23.79	0.2506
GDPGR	3.94	4.47	4.16	1.0576
GDPPC	7,430.00	5,719.00	5,765.00	0.7759
INF	11.32	5.04	50.75	4.4845
POP	144.764	380.230	320.969	2.2172
VaA	0.25	0.36	0.68	2.7822
PSAVT	–0.17	0.01	0.87	5.0726
GE	0.27	0.18	0.58	2.1287
RQ	0.37	0.41	0.66	1.7736
RoL	0.06	–0.01	0.71	12.2265
CoC	–0.04	–0.16	0.60	14.0014

Note: unit variables: FDI – million USD; POP – million; GDPPC – USD; GDPR, INF – percentage point; EER – index point; CoC, GE, PSAVT, RoL, RQ, VaA – index point, range <–2.5, 2.5>.

Source: own elaboration based on FDI – UNCTAD; EER – Bank for International Settlements; GDPGR, GDPPC, INF, POP – IMF; VaA, PSAVT, GE, RQ, RoL, CoC – World Bank.

6. Empirical results

Impact of analysed variables upon FDI was examined along three lines. To start with, research sample included all analysed countries and then the analysis was repeated for developed economies and emerging markets.

In the case of the analysis of the total research sample composed of 51 countries, Breusch-Pagan and Hausman tests suggested we should apply the fixed effects model. Estimated values of independent variables for FDI are presented in Table 3. Out of analysed variables, seven had statistically significant impact upon the dependent variable, i.e. GDP growth (positive impact), GDP per capita (positive impact), population (positive impact) voice and accountability (positive impact), political stability & absence of violence/terrorism (positive impact), rule of law (positive impact), and control of corruption (negative impact). The accuracy of the model measured with adjusted *R*-square amounted to 68.89%.

The first hypothesis (H1), which assumed a positive relationship between economic performance of a country and FDI inflows was confirmed by our analysis. GDPGR and GDPPC, the two variables that describe the dynamics and tendency of economic growth, were found to be statistically significant. We also need to stress the importance of the size of a country as an important determinant of FDI inflows. For the second hypothesis (H2) conclusions are no longer so unambiguous. Out of six examined WGI indices, four: VaA, PSAVT, RoL, and CoC were statistically significant. However, we need to bear in mind that the impact of VaA variable was different from what we assumed in the hypothesis. Negative influence of the VaA index in the estimated model suggested increased FDI inflows to countries where the quality of democracy is lower and media freedom restricted. Analogous situation was revealed for CoC. Corruption problems posed no barrier to FDI inflows. On the other hand, however, investors paid attention to political stability, absence of violence, and adequate quality of legal solutions.

The same test was conducted for developed economies. Independent variables for FDI were estimated using fixed effects model (Table 4). The choice was dictated by Breusch-Pagan and Hausman tests. Five independent variables had statistically significant impact upon FDI: GDP per capita (positive impact), population (positive impact), voice and accountability (negative impact), political stability & absence of violence/terrorism (positive impact), control of corruption (negative impact). The accuracy of the model measured with adjusted *R*-square amounted to 65.29%.

Table 3. Determinants of FDI inflows for the entire research sample

Variables	Coefficient	Stand. error	*t*-Student	*p* value
const	–11,651.55	9,106.41	–1.2790	0.2011
EER	–12.47	61.33	–0.2033	0.8390
GDPGR	463.43	222.57	2.0820	0.0377**
GDPPC	0.4177	0.0971	4.3000	<0.0000***
INF	–37.84	98.96	–0.3823	0.7023
POP	257.99	47.68	5.4110	<0.0000***
VaA	–18,702.00	5,850.50	–3.1970	0.0014***
PSAVT	10,288.70	3,334.76	3.0850	0.0021***
GE	4,764.52	5,458.58	0.8729	0.3830
RQ	1,474.92	4,960.29	0.2973	0.7663
RoL	13,657.10	6,956.65	1.9630	0.0500**
CoC	–9,871.71	4,874.72	–2.0250	0.0432**
	R-square = 0.7123			
	Adjusted *R*-square = 0.6889			
	F test = (61, 752) = 30.5193 ($p < 0.00001$)			
	Breusch-Pagan test LM = 1,718.97 ($p < 0.00001$)			
	Hausman test H = 39.53 ($p = 0.00004$)			

Note: significant variable at * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: own elaboration based on FDI – UNCTAD; EER – Bank for International Settlements; GDPGR, GDPPC, INF, POP – IMF; VaA, PSAVT, GE, RQ, RoL, CoC – World Bank.

Results of analysis for developed economies were close to those for the entire research sample although some differences were observed. GDPPC index, which is one of macroeconomic parameters was statistically significant and exerted positive impact upon FDI but GDPGR index did not explain FDI in a statistically significant way. POP index was found to be statistically significant, however, at *p* below 10%. Some differences were also observed for institutional indices. Three of them were statistically significant: VaA, PSAVT, and CoC, while RoL turned out to be insignificant. Results obtained for developed economies, similarly to the results for all of the research sample, did not confirm positive impact of the quality of state performance upon FDI inflows. Although PSAVT index had positive effect upon FDI, VaA and CoC indicators had negative impact meaning some aspects of high quality state performance are not fundamental for decisions on capital allocations.

Our last analysis focused on emerging markets. We started with Breusch-Pagan and Hausman tests, which recommended fixed effects model, similarly to the earlier direction adopted in the study. Estimated independent variables for FDI are included in Table 5. Results demonstrate that the constant and five variables had statistically significant impact upon the dependent variable: GDP growth (positive impact), GDP per capita (positive impact), population (positive impact), voice and accountability (negative im-

pact), and rule of law (positive impact). The accuracy of the model measured with adjusted *R*-square amounted to 82.68%.

Table 4. Determinants of FDI inflows for developed economies

Variables	Coefficient	Stand. Error	*t*-Student	*p* value
const	–8,257.52	36,694.70	–0.2250	0.8221
EER	–119.95	175.74	–0.6826	0.4953
GDPGR	769.40	536.30	1.4347	0.1522
GDPPC	0.4175	0.1567	2.6647	0.0080***
INF	1,224.42	896.57	1.3657	0.1729
POP	914.47	478.24	1.9122	0.0566*
VaA	–27,594.90	14,541.00	–1.8977	0.0585*
PSAVT	21,934.40	7,558.14	2.9021	0.0039***
GE	7,588.36	10,034.90	0.7562	0.4500
RQ	11,677.00	10,524.30	1.1095	0.2679
RoL	3,576.45	13,606.10	0.2629	0.7928
CoC	–14,363.70	8,582.37	–1.6736	0.0950*
R-square = 0.6830				
Adjusted *R*-square = 0.6529				
F test = (36, 379) = 22.6803 ($p < 0.00001$)				
Breusch-Pagan test LM = 80.27 ($p < 0.00001$)				
Hausman test H = 33.66 ($p = 0.00041$)				

Note: significant variable at * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: own elaboration based on FDI – UNCTAD; EER – Bank for International Settlements; GDPGR, GDPPC, INF, POP – IMF; VaA, PSAVT, GE, RQ, RoL, CoC – World Bank.

The results of studies for emerging markets have turned out to be largely convergent with the results for the entire sample. The GDPGR and GDPPC exerted statistically significant impact upon FDI, which allowed confirming the first hypothesis (H1) concerning positive impact of the host country economic performance upon FDI. Also the size of the host country was important. Yet, the assessment of the second hypothesis (H2) on the quality of state upon FDI was ambiguous. The VaA had negative influence upon FDI, while RoL's impact was positive. The effect of the other institutional variables was statistically insignificant.

Analysis conducted along all of the lines helped assess the third among formulated hypotheses (H3) about FDI determinants that are different for developed countries and for emerging markets. The above discussed descriptive statistics for both groups of economies revealed rather substantial differences in their investment profiles, as well as in the organisational and functional quality. Panel analyses of FDI determinants confirmed some divergences between developed economies and emerging markets. The effect of GDPPC, POP, and VaA on FDI was statistically significant.

Table 5. Determinants of FDI inflows for emerging markets

Variables	Coefficient	Stand. error	*t*-Student	*p* value
const	–30,398.40	4,239.41	–7.1704	<0.0000***
EER	48.11	31.87	1.5097	0.1319
GDPGR	308.19	117.09	2.6321	0.0089***
GDPPC	0.7039	0.1466	4.7998	<0.0000***
INF	–37.49	46.34	–0.8092	0.4190
POP	240.19	21.28	11.2874	<0.0000***
VaA	–10,488.20	3,235.71	–3.2414	0.0013***
PSAVT	2,049.11	1,804.98	1.1353	0.2570
GE	–4,003.34	3,848.81	–1.0402	0.2990
RQ	–2,534.04	2,897.53	–0.8746	0.3824
RoL	14,662.40	4,579.66	3.2016	0.0015***
CoC	–4,048.78	3,327.49	–1.2168	0.2245
R-square = 0.8421				
Adjusted *R*-square = 0.8268				
F test = (35. 362) = 55.1519 ($p < 0.00001$)				
Breusch-Pagan test LM = 249.14 ($p < 0.00001$)				
Hausman test H =110.65 ($p < 0,00001$)				

Note: significant variable at * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Source: own elaboration based on FDI – UNCTAD; EER – Bank for International Settlements; GDPGR, GDPPC, INF, POP – IMF; VaA, PSAVT, GE, RQ, RoL, CoC – World Bank.

Differences concerned the impact of one macroeconomic variable and three institutional variables. When it comes to developed countries, PSAVT and CoC significantly influenced FDI, while GDPGR and RoL were significant for the emerging markets. It is worth stressing that VaA adversely affected FDI in both groups of countries. According to the findings – over the period covered by the study and for the sample at hand – wealth measured with GDPPC and the size of the market measured with POP were relevant FDI determinants for both developed and emerging economies. Economic growth dynamics was an additional relevant variable for the emerging markets, which did not impact FDI inflows to developed countries. That would mean that investors involved in international capital allocations directed to emerging markets consider their scale, wealth, growth rate, while in developed economies they focus mainly on the size of the market and wealth. With respect to institutional variables, there were some differences in factors specific for developed economies and emerging markets. In developed countries political stability index was important for FDI inflows, while in the emerging markets similar role was played by rule of law index. It may mean that investors in emerging markets pay special attention to the quality of the judiciary, crime rates and ownership rights while in developed economies they are interested in political stability. In developed economies corruption indicator was also important but its impact was negative, meaning the bigger

problems with corruption the bigger FDI inflows. Negative FDI impact was also detected for VaA, both in developed economies and in emerging markets. We should conclude from the above that the lower quality of democracy, the less impact citizens have upon governments and the lower media freedom the higher FDI inflows. For quality variables there were some differences in answers for developed economies and emerging markets, but general conclusions about their ambiguous impact upon FDI were rather close. On the one hand, investors take account of the quality of judiciary, respect for ownership rights, political stability but on the other hand, they negate issues connected with the quality of democracy, individual freedoms or corruption levels.

7. Conclusion

Our analysis belongs to the increasingly bigger stream of studies on FDI determinants. It covers the period from 1996 to 2014, hence it considers the latest dynamic increases in global FDI as well as rapid fluctuations caused by crises in 2000 and 2007. Moreover, it compares FDI determinants for developed economies and emerging markets, which helps us analyse more in-depth the increasingly more prominent ranking of developing countries in attracting foreign investments.

Results of studies confirmed the first of our hypotheses (H1) about positive impact of economic performance of a country upon FDI inflow over the analyzed period. The GDP rate of growth, which reflects the dynamics of economic growth, exerted positive impact upon FDI. Also citizens' wealth (GDPPC) and the size of the market measured with the size of the population were significant FDI determinants.

On top of that, the studies explored the effect of institutional variables on FDI. To this end, we used six WGI indices published by the World Bank. Obtained results were rather ambiguous, which prevented us from the adoption of the second hypothesis (H2) on beneficial impact of high quality institutional performance of the host country upon FDI. Political stability (PSAVT) and adopted legal regulations (RoL) positively influenced FDI but the impact of indices reflecting the quality of democracy (VaA) and corruption (CoC) was negative. The results suggested that investors when making FDI decisions consider civil freedoms, the freedom of media, democracy or corruption only to a limited extent.

The analysis confirmed the third hypothesis (H3) about different sets of FDI determinants for developed and emerging economies. Differences concerned the impact of one macroeconomic and three institutional variables.

Speaking of emerging markets, GDP growth dynamics and the quality of regulations exerted positive impact upon FDI; for developed countries we observed positive influence of government stability index (PSAVT) and negative impact of corruption index (CoC). It would suggest that besides the size of the market, growth dynamics is an important FDI determinant for the emerging markets. With regard to institutional variables we realized that investors in developed countries are interested in government stability while in the emerging markets they take care of the rule of law, which includes the quality of the judiciary, crime levels and respect for ownership rights. Moreover, in developed economies corruption problem did not undermine FDI inflows. Summing up, we need to highlight certain limitations in drawing conclusions resulting from the study. The analysis covers a relatively short period of time and a set of eleven independent data. That is why we see the need to pursue further studies and to expand the scope of analysis.

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Determinanty bezpośrednich inwestycji zagranicznych na rynkach rozwiniętych i wschodzących

Z a r y s t r e ś c i. Badane są determinanty FDI dla 26 państw rozwiniętych i 25 państw wschodzących. Analizę przeprowadzono przy wykorzystaniu modelu regresji panelowej w okresie 1996–2014, dla zmiennych makroekonomicznych i instytucjonalnych. Stwierdzono pozytywny wpływ dynamiki wzrostu gospodarki, poziomu zamożności i wielkości rynku na FDI. Dla zmiennych instytucjonalnych odnotowano dodatni wpływ indeksu stabilności rządu i indeksu ładu prawnego na FDI. Problemy z jakością demokracji i korupcją nie ograniczały napływu FDI.

S ł o w a k l u c z o w e: gospodarki rozwinięte, rynki wschodzące, bezpośrednie inwestycje zagraniczne, determinanty instytucjonalne, dane panelowe.