DETERMINANTS OF FDI INFLOWS TO POLAND, CZECH REPUBLIC AND HUNGARY IN CONTEXT OF INTEGRATION INTO EUROPEAN UNION

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Abstract

The economic transformation of Central European countries is inextricably linked to the inflow of foreign direct investment. Since opening their economies to inflows of foreign direct investments, Poland the Czech Republic and Hungary have attracted the largest FDI stock among all transition countries in Europe. The size of received FDI is affected not only by cost factors and market conditions, but also by the overall investment climate and political stability in the host country. Integration with the European Union is one of the important factors that reduce transaction costs (by removing internal barriers to free movement of goods, services and capital) as well as reducing overall investment risk.

The purpose of this article is to determine the influence of selected factors on FDI inflow in Poland, Czech Republic and Hungary during the period 1996–2012. The model besides traditional factors such as market size, labor costs, and the openness of the economy, also takes into account the "EU factor".

Conducted analysis allowed to determine whether the signing of European Union Association Agreement has brought the candidates countries benefits in terms of FDI inflows. There have also been assessing the impact of full membership in the European Union on the ability of countries to attract inward FDI stock.

Key words: foreign direct investment, EU accession, transition economies, transnational corporations

JEL Code: F15, F21, F23

Introduction

Ten years will have passed in 2014 since some of the countries undergoing economy transformation, including Poland, the Czech Republic and Hungary, became rightful members of the European Union. The fact that these states joined the Community brought opportunities

for increased inflow of foreign capital in the form of direct investments to these countries. This was caused by two factors. Firstly, according to J.H. Dunning's eclectic theory (Dunning, 1988, p. 4), if a state joins a large integrative grouping, it increases its location advantage. Secondly, presence in EU structures increases the risk of undertaking investments in such a country as it requires the adoption of commercial and civil law regulations mandatory in the EU, including the principles regulating trade, the issue of financial transfers and competition policy.

The objective of this article is to determine the influence of selected factors on FDI inflow in Poland, Czech Republic and Hungary during the period 1996–2012. The model besides traditional factors such as market size, labor costs, and the openness of the economy, also takes into account the "EU factor".

The paper is organised as follows. In the next section we provide a brief literature review on determinants of FDI location. Then the importance of European integration for FDI inflows is described. Data, concise description of the model adopted and empirical results are presented in section 3. The last section contains the main conclusions.

1   Determinants of FDI location from the point of view of the host country – theoretical framework

The issues related to determinants of foreign direct investment location are strongly grounded in the theory of economics. The location factors, which enable answering the question why foreign investors choose a specific country or region for their investment location, have become the subject of interest of, for example, the following theories: K. Kojima's theory of comparative advantages, R. Vernon's product life-cycle theory, J.H. Dunning's eclectic theory of international production (OLI paradigm).

From a different perspective, J.P. Agarwal (1980, p. 742) mentioned only two groups among the factors decisive for the FDI location in a given country: system of investment incentives used in the country and supply of cheap labour force. M. Casson (1990, p. 32) also divided location factors into two groups. One group involves supply factors, including easy access to resources and lower costs of obtaining these resources. The other group, in turn, includes market size and market development prospects.

The division of factors, considering the motifs of conducting FDI by transnational corporations and facilities offered by a host country to foreign entrepreneurs, can also be found in works by J.H. Dunning (2003, 2004). Dunning presented an extensive list of location

factors. He classified these factors into three elementary groups: policy framework for FDI, economic determinants and business facilitation (tab. 1). The second of these groups is most numerous and, as mentioned above, covers motifs that drive multinational corporations to take decisions on the choice of the country to invest in.

Tab. 1: Determinants of FDI from the perspective of the host country

I. Policy framework for FDI			
▪ economic, political and social stability, ▪ rules regarding entry and operations, ▪ standards of treatment of foreign affiliates, ▪ policies on functioning and structure of markets (especially competition and M&A policies), ▪ international agreements on FDI, ▪ privatization policy, ▪ trade policy (tariffs and NTBs) and coherence of FDI and trade policies, ▪ tax policy (including tax credits), ▪ industrial/regional policies.			
II. Economic determinants			
A. Market-seeking	B. Resource-seeking	C. Efficiency-seeking	D. Asset-seeking
▪ market size and per capita income, ▪ market growth, ▪ access to regional and global market, ▪ country specific ▪ consumer preferences, ▪ structure of markets.	▪ land and building costs, rents and rates, ▪ cost of raw materials, components, parts, ▪ low-cost unskilled labor, ▪ availability and cost of skilled labor.	▪ cost of resources and assets listed under B adjusted for productivity of labor inputs, ▪ other input costs (e.g. transport and communication costs to and form and within host economy), ▪ membership of regional integration agreement conducive to promoting a more cost-efficient inter-country division of labor.	▪ technological, managerial, relational and other created assets, ▪ physical infrastructure (ports, roads, power, telecommunications), ▪ macro-innovatory, entrepreneurial and educational capacity or environment.
III. Business facilitation			
▪ investment incentives and promotion schemes, ▪ reduced information costs, ▪ local amenities (bilingual schools, quality of life, etc.), ▪ pre- and post investment services (e.g. one stop shopping), ▪ good infrastructure and support services (e.g. banking, legal accountancy services) ▪ social capital: economic morality, ▪ region-based cluster and network promotion.			

Source: (Dunning 2003, p. 11; Dunning 2004, p. 5).

When discussing location factors, attention should be paid to the fact that with the progress of transnational corporations, which involves, among others, extension of the geographic range of production and trade links of these business entities (thanks to progress in science and technology as well as increased liberalisation of the flow of goods, services and capital), the interest of these corporations in location factors also changes. Apart from the specific advantages of a country, which so far involved basic production resources (e.g. natural

resources or cheap labour force with low qualifications), the availability of advanced production factors in a host country, i.e. state-of-the-art technologies, high-class specialists from various fields, well expanded modern transportation and information infrastructure, grows in importance in terms of attracting FDI.

2   The importance of European integration for FDI inflows

The participation of a given country in the process of regional integration is a factor improving the location advantage of a host country. This is particularly important from the perspective of the further analysis conducted in this paper. The liquidation of internal barriers to the flow of goods, services and capital stimulates the inflow of FDI to the host country – both from outside and inside of the integration region – as this considerably reduces transaction costs (Dunning, 1997, p. 6; Dunning, 2004, p. 17).

The literature on the subject recognises arguments justifying a positive impact of EU integration on the volume of foreign direct investments of a country joining the Community. The major of these arguments are as follows (Walch & Wörz, 2012, pp. 11–12):

- decreased investment risk. EU integration requires full adaptation of the *acquis communautaire* of the European Union. New members of the grouping have to adjust their legislation to the legal order mandatory in the Union. This allows for achieving greater political, economic and legal stabilisation. Being member of the grouping reduces the risk of unexpected changes in the legal system, industrial standards and administrative procedures, which, in turn, leads to improved conditions of conducting business in a new member state*;*
- belonging to supranational economic structures significantly reduces the costs of transportation between foreign production and export. Not only does EU membership allow for overcoming commercial barriers but it also ensures access to additional markets;
- new EU member states are subject to rights and obligations resulting from conventions concluded by the European Union with third states, so presence in the grouping not only facilitates trade with other member states but also gives new members entitlement to enter into commercial agreements with third states on more favourable terms negotiated with these states by the EU;
- the fact that some countries undergoing economy transformation (including Poland, the Czech Republic and Hungary) have become full members of the European Union entitles them to participate in EU's decision-making mechanisms. Furthermore, they also

participate in the Community's budget. They can take advantage, for example, of structural funds under the cohesion policy. In the perspective for the years 2014–2020, Poland has become the greatest beneficiary, having been granted the sum of EUR 77.57 billion from the Cohesion Fund. The Czech Republic and Hungary are granted funds at a similar level: EUR 21.98 billion and 21.91 billion, respectively (ec.europa..., retrieved: 20.03.2014). These countries will be able to invest these funds in scientific research and its commercialisation, key transportation links, development of business, environmentally-friendly transport, digitalisation of the country and employment support. Funds intended for the objectives mentioned above create the perspective for improving the conditions for FDI in terms of physical and human capital in the states which have access to them;

- full EU membership may also contribute to strengthening the position of new member states in the European investment market as the presence in EU structures reduces the probability of applying administrative protectionism towards countries that do not belong to the grouping. This factor is particularly important in case of Central and Eastern European states that undergo economy transformation as the current geographic structure of FDI inflow to this region suggests the dominance of European Union countries, which may result from the fact that the application of protectionist practices inhibits the flow of capital from other regions. Reduced protectionism should lead to greater direct investments by attracting them from the states that do not belong to the European Union.

It should be emphasised that the mere membership in the EU does not mean only benefits in terms of FDI for a given country. K. Kalotay (2006, pp. 491–494) demonstrates examples when integration may have a negative impact on the flows of direct investments. According to him, the adaptation of *acquis communautaire* may increase the costs of running business in a new member state. Especially the implementation of environmental protection standards and regulations governing the labour market may lead to the weakening of initial competitive advantages as a result of the integration process. The author also points at the risk of decreasing the investment attractiveness of the countries joining the Monetary Union. If a given country has achieved the last stage of integration evident in the joining of the eurozone, this restricts its autonomy in terms of the possibility of affecting the exchange rate of its own currency whereas the possibility to influence the exchange rate level is a tool used to maintain production at competitive costs. The loss of the price advantage aspect in the form of production costs would mean that valuable competitive advantage characteristic of countries undergoing economy transformation and joining the EU becomes weaker or is totally eliminated. R. Narula and C. Bellak (2009, p. 76), in turn, claim that advantages in the context

of FDI resulting from membership in the EU decrease with the number of countries joining this grouping and one cannot unequivocally state whether this factor will also act as an impulse in case of successive states becoming full members. Negative phenomena occurring in the global environment may impact the decrease of benefits from integration, commonly known as "EU bonus." Empirical research conducted, for example, by Walch and Wörz (2012) has shown that this factor has distinctly lost its strength during the recent global financial and economic crisis.

Despite the existence of threats to the inflow of FDI to new EU member states, as presented above, it is emphasised in the literature that positive effects significantly outweigh negative effects (Kalotay, 2006, p. 487).

A. A. Bevan and S. Estrin (2004, p. 779) stress that EU membership is also evidence that a given country has achieved the suitable economic quality and institutional development as well as in a way gives a guarantee that EU member states (especially those aspiring to the eurozone in the future) must meet specific criteria (price stability, fiscal criteria, interest rate and exchange rate) that ensure macroeconomic and political stabilisation. What is more, the extension of the European Union with new member states is a factor that increases the chances of transferring production to countries of lower labour costs, increases the potential of using positive effects of scale as well as leads to greater effectiveness of production in consequence of intensified competition. Production reorganisation resulting from the creation of trade and investments, benefits from the expansion of the internal market, increased efficiency as a result of cost reduction and greater competition are all factors that additionally stimulate investments.

However, it must be stressed that the EU membership determinant ("EU factor"[1]) may differently affect the behaviours of investors deciding about FDI location. This is caused by the fact that the impact of this factor depends to a considerable extent also on other conditions. The location attractiveness of a host country is a resultant of political, social and economic conditions characteristic of a given country. The most frequently mentioned conditions include: market size and its development prospects, labour costs and productivity, availability of natural resources, foreign debts, political stabilisation, quality of infrastructure, corruption level, tax rates, openness of economy, real effective exchange rate (REER) and many others (Alam & Shah, 2013, p. 516). In case of countries undergoing economy

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[1] This notion has been introduced to literature by B. Kaminski (2001). The author understands this factor as benefits from joining the European Union by countries undergoing economy transformation in the context of increasing the location attractiveness for foreign investors.

transformation, also the privatisation offer and the quality of institutional infrastructure are of considerable importance (Dunning, 2003). B. Kaminski (2001, p. 38) claims that success taking the form of increased inflow of FDI to the economy is attained only by those countries which have implemented radical economic reforms, maintained macroeconomic stabilisation, opened all economy sectors to foreign investors and actively sought foreign strategic partners to participate in privatisation programmes.

3   Data, model and empirical results

This part of the paper is aimed at conducting a statistical analysis of selected factors influencing the inflow of FDI to Poland, Hungary and the Czech Republic in the period 1996–2012. FDI inflow data has been taken from UNCTAD statistics.

The analysis considers six independent variables: GDP growth rate (in %), wage per hour in manufacturing in USD (current price), imports of goods and services in GDP, higher education students (incl. universities) in thousands, status of EU integration (such notation adopted: 1 = potential candidate, 2 = candidate, 3 = negotiations, 4 = EU Member State) and time variable. Data has been taken from Eurostat, Euromonitor International from International Labour Organisation and the World Bank Development Indicators.

Dependent variable is in natural logarithm. Model adopted is as follow:

$$\ln FDI_{it} = \alpha_0 + \alpha_1 GDP_{it} + \alpha_2 WAGE_{it} + \alpha_3 IMP_{it} + \alpha_4 STU_{it} + \alpha_5 EUF + \alpha_6 TIME + \varepsilon_{it} \qquad (1)$$

where *GDP*, *WAGE*, *IMP*, *STU*, *EUF*, *TIME* denote GDP growth rate, wage per hour, share of imports in GDP, the number of students, status of EU integration and time respectively, $\alpha_{0\ldots6}$ parameters.

Tab. 2: Determinants of FDI inflows to Poland, Czech Republic and Hungary

	α	St. error	t(44)	p-value
Constant	6,2914	0,3768	16,6978	0,0000
GDP	0,0854	0,0253	3,3708	0,0016
WAGE	0,1838	0,1225	1,5008	0,1405
IMP	0,0020	0,0006	3,1228	0,0032
STU	0,0005	0,0001	4,8626	0,0000
EUF	0,4136	0,1423	2,9056	0,0057
TIME	-0,0704	0,0439	-1,6012	0,1165
R^2= 0,6577; F(6,44)=14,093 p<0,00000				

The model developed for Poland, the Czech Republic and Hungary allowed us to evaluate the relationship between inflow of FDI and selected determinants of FDI location which are regarded as traditional.

The number of students has an influence on the size of FDI inflow to the analysed countries but the level of wages and salaries has proven statistically insignificant ($p>0.05$). These variables are positively correlated ($r=0.39$, significant at $p<0.05$ level), which confirms V. Bucevska's statement (2009, p. 280) that foreign investors should be concerned not only with the labour costs, but also with the quality of labour, since high skilled workers can learn and implement new technology and the training costs would be in that case considerably lower.

Variable GDP dynamics are also important and positively correlated ($r=0.32$, significant at $p<0.05$ level) with the inflow of FDI: increase in GDP by 1 percentage point leads to an increase in FDI by 8.5% on average. According to the economic theory of foreign direct investments, the size of the host country and its growth potential are important determinants for investors seeking investment opportunities. The impact of the variable 'share of imports in GDP' (IMP) on FDI inflow is very low: increase of percentage point of import implies an increase in FDI by 0.2% on average.

The inclusion of the EU factor in the model has confirmed a strong influence of EU membership on the inflow of FDI to Poland, Hungary and the Czech Republic. The greater the integration level, the greater the inflow of foreign investments. This dependency coincides with the results of research by A.A. Bevan and S. Estrin (2004, p. 784). It also confirms that the experiences of the earlier EU enlargements demonstrate that economic integration can contribute significantly to an increase of FDI inflows (Clausing & Dorobantu 2005). It can be assumed that the EU factor determinant represents the general political and economic stability of the state. Furthermore, the degree of association with the European Union affects the reduction of specific investment risk and the level of international trade liberalisation.

Conclusions

The developed model for Poland, the Czech Republic and Hungary has enabled us to determine relations between selected variables and the size of FDI inflow. The analysis includes traditional factors considered by foreign investors when making decisions on the location of investments. The conducted research has confirmed that the inflow of FDI to the analysed Central and Eastern European countries depends on market determinants, such as

economic potential. The dynamic of GDP plays one of crucial role as an incentive of multinational enterprises' investments. It's worth to note that there is a feedback between some of variables – for example the greater FDI inflow can stimulate GDP or import dynamics. The quality of human resources turned out to be a more powerful drive behind decisions on foreign investments. Analysis results do not lead to the hypothesis that international concerns allocate their investments in the analysed countries due to the possibility of reducing costs. It can be also observed opposite dependency – FDI has positive impact on quality of human resources and increase in long run the level of wages in host countries.

Formal EU membership gained by the analysed countries in 2004 is more attractive to foreign investors as compared to the status of a country being a potential candidate, a candidate or a state subject to negotiations. It seems that the large significance of this factor results from the fact that it aggregates many "soft" determinants of locating FDI in host countries, such as the quality of life or the risk of insolvency. The inclusion of the EU factor as a determinant of FDI flows to other Central and Eastern European countries seems interesting. This is the issue we plan to investigate in further research.

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