ATTRACTIVENESS OF PUBLIC POLICIES FOR FDI IN CENTRAL AND EASTERN EUROPEAN COUNTRIES

Popovici Oana Cristina
Bucharest Academy of Economic Studies, Faculty of International Business and Economics

Călin Adrian Cantemir
Bucharest Academy of Economic Studies, Faculty of International Business and Economics

The paper builds on the burning issue of the attractiveness of the location for foreign direct investments (FDI), assuming its positive and substantial economic impact on the development of the host country. The location decision for FDI in Central and Eastern European (CEE) countries is investigated based on the attractiveness framework designed by policy makers: infrastructure endowment, institutions' quality, labour market conditions and level of taxation. The analysis assesses the FDI inflows in a country in three years: 2004, 2007 and 2010. Thus the FDI evolution relative to public policies attractiveness is seized starting with the European Union (EU) integration and after the crisis started. The paper follows the literature on the determinants of the FDI related to the L (location) factor described in the eclectic paradigm of Dunning (the OLI model), but focuses on the role of public policies in attracting FDI and captures two of the recent major turning points faced by the CEE countries, scarcely tackled in the literature: the EU integration and the recent economic crisis.
We compute a public policy index, constructed as a composite measure, based on the four pillars mentioned above, in order to test the public policies attractiveness in the CEE countries. Moreover, we develop an attractiveness matrix starting from the public policy index, and we rank the most attractive countries for FDI in the three years. We analyze the matrix based on the FDI inflows per capita.
We found a positive relation between the increase in the public policies attractiveness and the inward FDI. The increase of the FDI per capita since the EU accession year is, at least partially, due to the increasing attractiveness of the public policies. The crises worsened the CEE countries' attractiveness. Still, the winners in the race for FDI remained those countries that improved the infrastructure, the institutions' quality and the labor market conditions. Therefore, short and medium term policy directions can be emphasized. Infrastructure and institutions' quality can be improved for further attracting FDI during rough budgetary constraints. The literature is enriched with the empirical analysis of the FDI determinants in the recent years. Our paper takes into account the major events faced by the CEE countries in the last years and checks for potential methods of attracting FDI even during difficult economic conditions.

Keywords: foreign direct investments, public policy, Central and Eastern Europe countries, attractiveness matrix

JEL code: C43, F21, H11, O52

I. Introduction

There is a wide literature on the positive and substantial economic impact of FDI on the development of both the host and the home country of FDI. In times when the economic stability is endangered and growth remains under pressure, foreign investments are the gate to a healthy economic development. Enhancing attractiveness for FDI became a priority on the national agenda, especially as the crisis tested the strength of the traditional determinants of FDI and

enhanced the occurrence of new opportunities. For the CEE countries, relying only on the market size and low wages is no more an option.

The signal of entering in a new era of FDI determinants was drawn years ago. In the attempt to determine the decisive factors for attracting FDI, a number of studies have illustrated the growing importance of political factors, especially the institutional determinants in the host country. Other papers developed at the beginning of this decade revealed that the factors influencing the attractiveness of a region, particularly for the East European countries, are no longer the natural resource endowments, but the created resources, such as the quality of infrastructure and institutions. Goodspeed, Martinez-Vazquez and Zhang points out that in order to be more effective in attracting FDI, government officials in developing countries should pay more attention to policy programs aimed at improving governance institutions and public infrastructure (Goodspeed, Martinez-Vazquez and Zhang 2009: 22). The taxation is important for FDI choices, but only after more fundamental institutional governance issues are addressed and public infrastructure is developed. The countries, especially those in CEE, started to tackle the public policy instruments in order to attract more FDI: to improve the infrastructure, to reduce the administrative burden and to increase the efficiency of institutions, to make more flexible the labor market and, where possible, to address the taxation and the cost level for companies. The EU adhesion facilitated their approach and the results corresponded to the expectations, but the crisis hampered the FDI inflows.

The aim of this paper is to analyze the impact of infrastructure, of institutions' quality, of labor market and of taxes on CEE strategies for attracting FDI since the EU adhesion year and during the crisis; it also aims to determine if there is room for further improvements on the public policies side. As all these factors are under the immediate control of the public officials, the paper's objective is to assess the state's role in attracting FDI. The study employs a composite index to rank the most attractive countries for FDI, as regard the public policy framework.

II. Literature review

Dunning eclectic paradigm or the OLI model sets the basic framework for the analysis of the FDI determinants. This paper focuses mainly on the L (location) factor, explaining where a multinational company will locate its activity.

Some FDI theories point out the companies' behavior of searching attractive environments. The theory of international production states that a firm decision to initiate foreign production depends on the specific attractions in its own country compared to the resources and benefits involved by locating in another country (Morgan and Katsikeas, 1997). Therefore, the foreign government actions significantly affect the attractiveness of a country. In describing the public policy actions for attracting FDI, the studies focus on the infrastructure, good governance, level of taxation and labor market (Bellak, Leibrecht and Liebensteiner, 2010: 38; Goodspeed, Martinez-Vazquez and Zhang, 2009: 5; Bellak, Leibrecht and Stehrer, 2008: 1). Groh and Wich compute a comprehensive composite measure to determine a host country‘s attractiveness for FDI and take into account the labor costs, the quality and endowment of infrastructure and the quality of the legal system (Groh and Wich, 2009: 7).

We assist today at a "caravan capitalism". For the transitional economies in CEE, the level of wages was one of the most important factors affecting the investment decision. The re-location of labor–intensive activities in countries with low wages was and remains a common trend nowadays. This evolution is captured by the literature. Benacek, Gronicki, Holland and Sass survey the literature until 2000 and found that the CEE countries were targeted for investments due to their favorable combination of low wages and relatively skilled workforce (Benacek, Gronicki, Holland and Sass, 2000: 15). Since then, other studies revealed the same results. Botric and Skuflic signal that labor costs, represented by wages, are still important for foreign investors (Botric and Skuflic, 2006: 20). The labor market costs, expressed as the compensation of

employees per total hours worked, discourage FDI (Bellak, Leibrecht and Stehrer, 2008: 11). Also for assessing the attractiveness of the labor market, several proxies are used to express skilled workforce, such as the average years of schooling or the number of technical workers (Benacek, Gronicki. Holland and Sass, 2000:4).

In assessing the impact of institutions on FDI, one indicator is the freedom of FDI as calculated by the Heritage Foundation. The indicator captures the legal barriers to inward FDI, namely the restrictions on FDI limiting the inflow of capital and thus hampering the economic freedom. The econometric results show that more restrictions are equivalent to a reduced level of foreign investment (Bellak, Leibrecht and Stehrer, 2008: 11). A relevant proxy in the literature for measuring good governance is the corruption level, as provided by "Corruption Perception Index" from Transparency International (Goodspeed, Martinez-Vazquez and Zhang, 2009: 6).

The infrastructure endowment is a precondition for firms to conduct their businesses in a foreign country. A larger infrastructure endowment, including both transport infrastructure and Information and Communications Technology (ICT) is generally considered to have a positive impact on FDI. The countries on the top positions for FDI attractiveness are those with a better infrastructure for ICT (Botric and Skuflic, 2006: 20; Goodspeed, Martinez-Vazquez and Zhang, 2009: 6). A positive result is obtained between FDI and ICT-infrastructure, measured as the sum of telephone mainlines, mobile phone subscribers, internet connections and personal computers per 1000 inhabitants (Bellak, Leibrecht and Stehrer, 2008: 11). Other results indicate that information and telecommunication infrastructure, followed by the transport infrastructure, are of a special significance in attracting FDI (Bellack, Leibrecht and Damijan, 2009).

At the same time, econometric studies of the past 15 years show that both the level and location of FDI are highly sensitive to the treatment of taxes (Gordon and Hines, 2002: 42-49). Bénassy-Quéré, Fontagné and Lahrèche-Révil indicate that high relative corporate taxation discourage FDI inflows and maintain a significant role in the attractiveness of a country (Bénassy-Quéré, Fontagné and Lahrèche-Révil, 2003). Anastassopoulos takes into account the effect of the corporate tax rate on profit and find a negative and statistically significant impact on FDI (Anastassopoulos, 2007: 45). Among the most problematic factors for doing business in the CEE countries are tax rates and tax regulations, accompanied by the inefficient government bureaucracy or corruption (the Global Competitiveness Report 2010-2011).

III. Methodology

The present study assesses the attractiveness of 10 CEE countries (Bulgaria – BG, the Czech Republic – CZ, Estonia – EE, Latvia – LV, Lithuania – LT, Hungary – HU, Poland – PL, Romania – RO, Slovakia – SK and Slovenia – SI) based on the public policy approach in the EU accession year (2004 or 2007) and in 2010. The analysis allows the taking into account of the impact of both EU integration and crisis in evaluating the countries' evolution.

The attractiveness matrix is constructed based on the public policy attractiveness index, which aggregates four sub-indices, identified as key-drivers for this study, representing the institutions' quality, the infrastructure endowment, the labor market conditions and the taxation level. This approach allows a deeper analysis of the strengths and weaknesses of the policies carried out by the governments. Each sub-index consists of relevant proxies identified in the literature for reflecting the above mentioned key drivers.

The infrastructure index (II) is proxied by the number of main telephone lines per 1000 inhabitants and the level of internet access of households as percent of the total population, both provided by Eurostat. For the first variable, we use the last data available for 2009.

The institutions' quality index (IQI) is a measure of the accuracy and efficiency of public administration. For assessing the institutions' quality, we use the Corruption Perception Index developed by Transparency International, which measures the perceived levels of public sector

corruption, and the investment freedom index obtained from the Heritage Foundation's Index of Economic Freedom. This index evaluates the restrictions typically imposed on investments.
The index expressing the labor market conditions (ILM) is measured using the labor cost index and the tertiary education graduates which allows for checking the degree of labor force qualification. The labor cost index indicate the short-term development of the total cost affecting the employer (including gross wages and salaries, employers social contributions and other taxes connected to employment), on an hourly basis, for employing the labor force. The tertiary education graduates per 1000 of population aged 20-29 allows for checking the degree of qualification for the labor force. For this variable, last data is available until 2009. All necessary data are provided by Eurostat.
The taxation index (IT) measures the fiscal burden borne by the investors. We firstly use the statutory level of the corporate income tax rate because it affects directly the profits generated from conducting a business. Data can be found in the Annual report of the Romanian Fiscal Council and in the study of Mintz and Weichenrieder (2010). The second proxy used is the value added tax (VAT) level, as it represents an important tool for economic and fiscal policy and it is a cost incurred by all the economic agents. The European Commission documents provide all the data needed.
The first step is to establish a common basis for data evaluation, as the actual data are differently expressed. This is done for each variable, by establishing the ratio of the value recorded by each country in the value of the best performing country. We use equal weighting for computing the sub indexes, as there is no significant difference as compared to the results obtained from factor analyses (Groh and Wich, 2009: 13). The public policy attractiveness index (IPPA) is also computed as weighted average, based on the equation:
IPPA = (II + IQI + ILM + IT) x 0.25 (1)
Finally, in order to evaluate the ranking accuracy, the results will be compared with the inward FDI flows in USD at current prices and current exchange rates per capita in 2004, 2007 and 2012, as obtained from the United Nations Conference on Trade and Development (UNCTAD).

IV. Results

The attractiveness matrix (Table no. 1) is created by ranking the countries according to the results obtained in the three years, from the most attractive (the country with the highest score) to the least attractive (the country with the lowest score).

Table no. 1. Public policy attractiveness matrix

	Rank/ Year	1	2	3	4	5	6	7	8	9	10
Attractiveness Index	2004	**PL** 0.73	**LV** 0.72	**LT** 0.71	**EE** 0.71	**SK** 0.68	**HU** 0.62	**SI** 0.59	**CZ** 0.58	**BG** 0.57	**RO** 0.53
	2007	**PL** 0.76	**EE** 0.76	**LV** 0.75	**LT** 0.75	**SK** 0.71	**SI** 0.69	**HU** 0.67	**BG** 0.65	**CZ** 0.65	**RO** 0.65
	2010	**PL** 0.83	**LT** 0.76	**SI** 0.76	**EE** 0.75	**RO** 0.73	**LV** 0.72	**CZ** 0.70	**SK** 0.70	**HU** 0.70	**BG** 0.64

Source: Authors' work

According to the results, all governments carried out policies for enhancing attractiveness in their countries since their EU accession. The intermediate results show that the infrastructure endowment improved the most.
Poland ranks first in 2010 and maintains its leader position since EU accession (2004). Slovenia improved the most its public policy attractiveness, by 0.17 points during the 6 years of its accession. The ranking obtained in 2007 allows checking for the impact of the crisis. If the ranking is almost the same in 2004 and 2007, as a consequence of the crisis, 2010 saw a total

turmoil and rearrangement of the ranking. Again, Poland leads the race of attractiveness, continuously improving its score. The result obtained can be correlated with the fine route of Poland during crisis. Still, most of the other countries worsened their score, mainly due to a rise in the taxation level (Estonia and Latvia) and the quality of institutions (Bulgaria and Slovakia). The winners relied on improvements mainly regarding the infrastructure endowments (the Czech Republic, Lithuania, Poland, Romania, Slovenia), institution quality (Poland and Romania again) and labor market conditions (Slovenia), according to the evolution of sub-indexes (Table no. 2).

Table no. 2. Evolution of sub-indexes

Index	Year	BG	CZ	EE	HU	LV	LT	PL	RO	SK	SI
I_T	2004	0,83	0,74	0,79	0,83	1,00	1,00	0,80	0,77	0,87	0,75
	2007	0,95	0,68	0,73	0,70	0,83	0,83	0,67	0,79	0,74	0,67
	2010	0,98	0,74	0,71	0,69	0,79	0,79	0,69	0,71	0,76	0,71
I_{QI}	2004	0,63	0,74	0,97	0,80	0,73	0,78	0,57	0,41	0,73	0,78
	2007	0,64	0,78	0,99	0,79	0,75	0,75	0,60	0,56	0,76	0,89
	2010	0,55	0,74	1,00	0,78	0,78	0,80	0,74	0,70	0,72	0,88
I_{LM}	2004	0,60	0,49	0,72	0,57	0,95	0,92	0,78	0,70	0,59	0,53
	2007	0,75	0,73	0,83	0,71	0,95	0,98	0,93	0,84	0,78	0,72
	2010	0,65	0,77	0,76	0,71	0,86	0,98	0,91	0,88	0,77	0,88
I_I	2004	0,22	0,34	0,35	0,29	0,18	0,16	0,78	0,24	0,53	0,29
	2007	0,28	0,42	0,48	0,49	0,47	0,42	0,85	0,40	0,55	0,46
	2010	0,37	0,57	0,53	0,62	0,48	0,49	0,96	0,62	0,56	0,56

Source: Authors' work

In order to assess the accuracy of the public policy ranking, we compared it with the ranking provided by the inward FDI flows per capita (Table no. 3), a measure for evaluating the FDI inflows, given the different size of the analyzed countries. The first observation is that the two rankings are not perfectly corresponding, pointing that there are other stronger determinants influencing the FDI, such as the macroeconomic and political stability. At the same time, it must be signaled that it is difficult to measure the fiscal facilities or state aids offered by the governments to the foreign investors. In this respect, the pillar on taxation lacks information.
Still, each improvement in the attractiveness score is followed by a higher FDI per capita in 2007, the year before the crisis. This time, as the FDI level is lower due to the crisis, we will compare the countries' change of position in the ranking. Therefore, comparing 2007 with 2010, a worsening of the attractiveness score is followed by a worsening in the FDI per capita ranking in the case of Slovakia, Latvia and Bulgaria. The sole exception is Hungary and Estonia. Similarly, an increase in the ranking is observed for Lithuania, Slovenia, the Czech Republic and Romania, that also improved their attractiveness score. Poland maintained its first place in the FDI inflows ranking, as a result of its attractiveness increase.

Table no. 3. Inward FDI inflow rankings

	Rank/ Year	1	2	3	4	5	6	7	8	9	10
Inward FDI inflows	2004	**EE** 710,11	**SK** 560,02	**CZ** 487,62	**BG** 436,13	**HU** 421,92	**SI** 413,38	**PL** 337,25	**RO** 294,60	**LV** 274,48	**LT** 225,43
	2007	**EE** 2028,97	**BG** 1621,52	**LV** 1017,81	**CZ** 1012,63	**SI** 752,50	**SK** 659,32	**PL** 616,94	**LT** 596,33	**RO** 458,37	**HU** 393,41
	2010	**EE** 1147,81	**CZ** 646,29	**SI** 410,96	**BG** 289,58	**PL** 252,93	**HU** 238,10	**LT** 189,39	**RO** 166,31	**LV** 155,19	**SK** 96,21

Source: UNCTAD, Authors' work

V. Conclusions

In the present paper we have examined the impact of one country's public policies in the areas of infrastructure, institutions' quality, labor market and taxation on the FDI attractiveness. The study has examined the role of the state in creating the appropriate framework for attracting FDI. We have found that the public policies show an obvious impact on FDI, as market forces cannot substitute for the role of governments in this area. Thus, the governments in all countries must keep an eye open and pay more attention to measures aimed at improving institutions' efficiency and infrastructure in order to build sustainable basis for further attracting FDI and increasing their performance by climbing up on the value chain.

Compared with other studies in the literature, our empirical analysis takes into account the major events faced by the CEE countries in the last years. The paper adds to the literature by assessing the impact of the public policies on FDI during the crisis. The role of the governments in attracting FDI was tested during the crisis. Our main result, in accordance with the literature, is that public policies continue to influence FDI. Still, the sharp decrease in FDI inflows during the crisis was mainly determined by the investors' lack of confidence in the national economies or in the financial system.

Moreover, we have evaluated the evolution of the public policies since the year of the EU accession. A positive relation was found between the increase of the public policies attractiveness and the inward FDI.

The results underline the fact that the CEE countries have a powerful policy instrument at hand to increase FDI inflows. Some short and medium term policy issues can be emphasized. The FDI inflows rise where the local capabilities are strengthened and new capabilities are created. The economic and financial crisis has pointed out that the created resources are at least as important as the natural endowments. In the midst of the crisis, most countries seized the opportunity to improve public policies in order to attract FDI. There is room for improvements especially in the infrastructure and institutions' quality on the short run. The two areas offer in times of crisis valuable maneuvering space for attracting investors.

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