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# CORRUPTION AND FOREIGN DIRECT INVESTMENT. EVIDENCE FROM CENTRAL AND EASTERN EUROPEAN STATES

Cristina Mihaela Amarandei\*

**Abstract:** *This paper examines the impact of corruption on foreign direct investment inflows for ten Central and Eastern European states. The paper attempts to answer the question: what is the role of corruption in attracting foreign direct investments? Using the data from UNCTAD for foreign direct investment and Corruption Perception Index from Transparency International, for a period of 12 years, 2000-2012, we evaluate the specific impact of corruptions on FDI using GDP as control variable. Our results confirm the majority of literature and show a negative significant relation between the variables analyzed, but at a lower intensity than expected.*

**Keywords:** foreign direct investment; institutions; corruption.

**JEL Classification:** D73; E02; F21.

## INTRODUCTION

Taking into consideration the CEE states, after the 1989 moment, foreign direct investment was seen as the best solution for national economic development. As Dunning (1993, p. 20), for example, has argued that multinational companies „are uniquely able to supply many of the necessary ingredients for economic growth, a reshaping of attitudes to work and wealth creation, the redesigning of the business and legal framework, especially with respect to property rights and contractual relationship”.

Institutions have an essential role in setting the „rules of game” by which individuals interact in a market economy (North, 1990), especially by ensuring the competitiveness of markets.

After the 1989 events, the countries from Eastern Europe looked at foreign examples in building its institutions and reforming their economies. Still, new institutions were created without taking into consideration that the distinct cultural and systematic inheritance influences especially informal institutions such as norm and values. In many countries weak legal framework permitted a large extent of opportunistic behavior, bribery and corruption (Nelson et al., 1998).

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Looking at the literature that examines in which extent the quality of institutions plays an important role in the development of an economy we found conflicting results. In general, many studies demonstrated that bad governance fosters corruption and can lead to inefficient allocation of resources and impede economic progress. Many authors, such as Gyimah-Brempong (2002), Mo (2001), Li et al. (2000) and Mauro (1995) had found that corruption has significant adverse effects on economic growth.

Corruption can also create obstacles to doing business, according to World Bank (2002), deter foreign direct investment flows (Wei, 2000), cause misallocations of public expenditures (Mauro, 1997; Tanzi and Davoodi, 1997) or reduce rates of investment.

There are many ways in which corruption can impact on economic behaviour and impose economic losses on society: it can damage incentives and destroy opportunities; it can distort price signals and deplete resources; and it can create uncertainty and compromise public policy.

Our study presents the effect of corruption and market potential on foreign direct investment for 10 Eastern European countries for a period of 12 years. The results show that the level of corruption deters foreign investment inflows.

The research has the following structure. Section 1 presents the theoretical approach on foreign direct investment, corruptions and a short literature review of econometric studies on the subject. Methodological aspects and results are presented in Section 2 and conclusions in Section 3.

## **1. THEORETICAL APPROACH ON FOREIGN DIRECT INVESTMENT, CORRUPTION**

### **1.1. Determinants of FDI**

The process of economic globalization appears in the form of international trade in goods in services, short-term capital movements among countries and a rapid increase in foreign direct investment (FDI). FDI refer to long term cross-border investment with a substantial influence both on receiving country and on the investing multinational company.

Two main types of determinant factors: the gravity factors and the policy related factors are suggested by the empirical literature regarding the determinants of FDI. The gravity factors refer to issues such as market size and the proximity of the host country to the source country and have been found to explain a big part of FDI flows. Policy related factors regard overall macroeconomic

stability, trade policies (trade costs, openness degree), fiscal policies (average taxation rate or the fiscal burden, tax incentive), labour policies (labour costs and skills), the degree of regional integration, infrastructure and institutions.

Concerning the magnitude and sign of FDI determinants for Central and Eastern European States, many of the studies show ambiguous results when analyzed the mode of entry, the type of FDI or the target industry.

Regarding to the relation between determinants of FDI, the table below summarize some empirical studies:

**Table 1 - Determinants of foreign direct investment**

Variables	Sign of the relation		
	Positive	Negative	Insignificant
GDP/capita	Schneider and Frey (1985) Birsan and Buiga (2009)	Jaspersen et al. (2000)	Wei (2000) Hausmann and Fernandez-Arias (2000)
Political risk		Schneider and Frey (1985) Edwards (1990) Gastanaga et al. (1998) Moosa and Cardak (2006)	Loree and Guisinger (1995) Jaspersen et al. (2000) Hausmann and Fernandez-Arias (2000)
Corruption	Egger and Winner (2005)	Wei (2000)	Akcay (2001)

Source: author representation based on the studies presented.

The available empirical findings based on EU countries make it difficult to draw general conclusions about the source of heterogeneity in the determinants of FDI for Central and Eastern European countries.

## 1.2. FDI and corruption

It is a large debate surrounding the definition of corruption, many authors expressing different approaches on the subject. The narrowest approach specifies that corruption is „the use of public office for private gain”.

The abuse of not only the public office but also the private or commercial takes part of the broad approach.



Theoretically, we must distinguish between „grabbing hand” and „helping hand” influences of corruption on inward FDI.

In the short run, corruption raises the cost of a firm’s foreign investment, since (i) firms have to pay bribes (similar to taxes), (ii) they are engaged in resource-wasting rent seeking activities (Applebaum and Katz, 1987; Murphy et al., 1991; Shleifer and Vishny, 1993), and (iii) they have to bear additional contract-related risks, because corruption contracts are not enforceable in courts (Boycko et al., 1995). Corruption in the host country thus acts as a grabbing hand, reducing the profits of firms and therefore lowering a firm’s incentives to invest abroad.

Further, corruption reduces the productivity of public inputs (infrastructure) which, in turn, decreases a country’s locational attractiveness (Bardhan, 1997; Rose-Ackermann, 1999; Lambsdorff, 2003). On the other hand, multinational firms might be willing to accept paying bribes in order (i) to speed up the bureaucratic processes to obtain the legal permissions for setting up a foreign plant (Lui, 1985), and (ii) to gain access to publicly funded projects (Tanzi and Davoodi, 2000). In this case, corruption acts as a helping hand, increasing profits of multinational firms. If the revenue effects outweigh the cost effects, corruption is expected to increase FDI. In the presence of pre-existing government and/or bureaucratic failures, however, corruption may be efficiency-enhancing (Bardhan, 1997; Aidt, 2003). Corruption then may also be rent-creating, with the rents from controls over foreign investment shared by corrupt officials and foreign investors. Glass and Wu (2002) focus on the impact of corruption on FDI in a general equilibrium model with Northern innovation and Southern imitation (Grossman and Helpman, 1991).

Multinational firms are vertically organized and shift their production to the low cost country. The firms bear the risk of illegal imitation of their innovations, and of the requirement to pay bribes to public officials. Analyzing four types of bribes (bribes on sales or profits as well as repeated and one-time bribes in order to obtain a permission to sell in the foreign market), Glass and Wu (2002) demonstrate that the general equilibrium effects of corruption on FDI are in principle ambiguous, and conclude (Glass and Wu, 2002, p. 19) that „corruption need not be bad for FDI..., but rather corruption may foster inward FDI”.

## **2. ECONOMETRIC ANALYSIS**

Our model is based on theoretical approach found in academic literature. In order to isolate the effect of corruption on foreign direct investment we also use control variables such as GDP.



$$FDI_{i,t} = \alpha + \beta_1 CPI_{i,t-1} + \beta_2 GDP_{i,t-1} + \varepsilon_{i,t},$$

where  $i$  is the country subscript,  $t$  is the time subscript,  $\beta_n$  are unknown parameters to be estimated,  $\varepsilon_{i,t}$  is the usual random disturbance term. All independent variables are lagged one year in order to avoid simultaneity with the dependent variable and taking into account that decisions to invest abroad take time.

## 2.1. Data variables

FDI inflows are drawn from UNCTAD database for 10 countries from Central and Eastern Europe: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

In the examination of corruption the most used measure is the Corruptions Perceptions Index (CPI) reported annually by Transparency International. This non-governmental organization studies corruption since 1995 looking to draw attention on the damage caused by corruption and to stimulate governments to adopt and implement anti-corruption regulations. The CPI ranges from zero (totally corrupt) to ten (absence of corruption). The index is based on surveys filled by specialists and calculated annually for a wide range of countries.

We also use as control variable the real GDP for the countries analyzed.

The table below shows the variables used in our analysis.

**Table 2 - Description of the variables**

Measure	Data Source(s)	Calculation	Observed
Foreign direct investment (FDI)	Inward of foreign direct investment in millions USD	Log FDI	2000-2011
Corruption Perception Index (CPI)	Transparency International draws on 13 data sources from 11 globally dispersed institutions for this index. It ranges from 0 to 10, with high values indicating absence of corruption*.	The CPI is a composite index using data compiled or published between 2000 and 2001 for the 2001 measure. Specifically, it is computed as an unweighted average of all estimates for a particular country. Currently, 183 countries are assessed.	2000-2011
GDP – proxy for market potential	UNCTAD database	real GDP in millions US dollars	2000-2011

\*Transparency International Methodology, question 8, [http://www.transparency.org/cpi2011/in\\_detail](http://www.transparency.org/cpi2011/in_detail)

## 2.2. Results and interpretation

Our analysis uses the multivariate regression technique.

The results show that, according to the Correlations table, between foreign direct investment and the perceived corruption is a negative significant relation, respectively a rise in the perception of corruption for the countries analyzed deter the expected inflows of FDI for the next years.

Also it can be noticed a moderate direct relation between market potential and foreign direct investment received by the Central and Eastern European countries.

This founding can be explained by the inclusion in the sample analyzed of the Baltic states who have a small GDP compared with the rest of the sample and high levels of foreign direct investment.

**Correlations matrix**

		FDI	CPI_1	GDP_1
Pearson Correlation	FDI	1.000	-.269	.646
	CPI_1	-.269	1.000	-.105
	GDP_1	.646	-.105	1.000
Sig. (1-tailed)	FDI	.	.001	.000
	CPI_1	.001	.	.127
	GDP_1	.000	.127	.
N	FDI	120	120	120
	CPI_1	120	120	120
	GDP_1	120	120	120

Source: author calculations using SPSS 17.

Table bellow shows that the model chosen for our analysis is significant ( $.Sig < .005$ ) and adequate.

Still, the Model Summary table shows that our model could be improved in order to have better values of  $R$  and  $R$  square by adding other institutional variables in equation beside corruption like democracy, government stability, law and order, democracy and the quality of bureaucracy.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.677 <sup>a</sup>	.458	.449	3327.20174	.458	49.428	2	117	.000

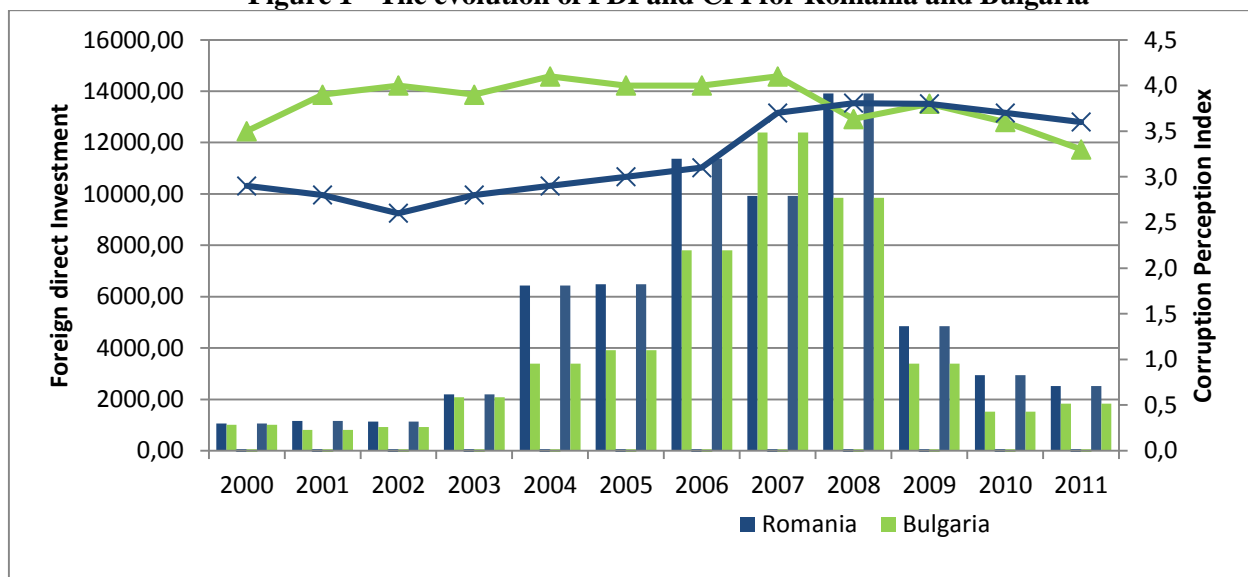
a. Predictors: (Constant), GDP\_1, CPI\_1

Source: author calculations using SPSS 17.

The qualitative assessment of the impact of corruption on FDI for the countries analyzed confirms the results of empirical analysis.

First of all, the figure 1 shows that Romania and Bulgaria are considered highly corrupted countries. The evolution of the perceived corruption improved over time only for Romania, while Bulgaria marked a decrease of the CPI Index. Regarding to FDI inflows attracted by Romania and Bulgaria we can observe that are correlated with the evolution of CPI index. The decrease of the measure of corruption (meaning a rise in the perceived corruption (0-highly corrupted to 10 – very clean)), correspond with lower values of FDI inflows in the next year.

**Figure 1 - The evolution of FDI and CPI for Romania and Bulgaria**



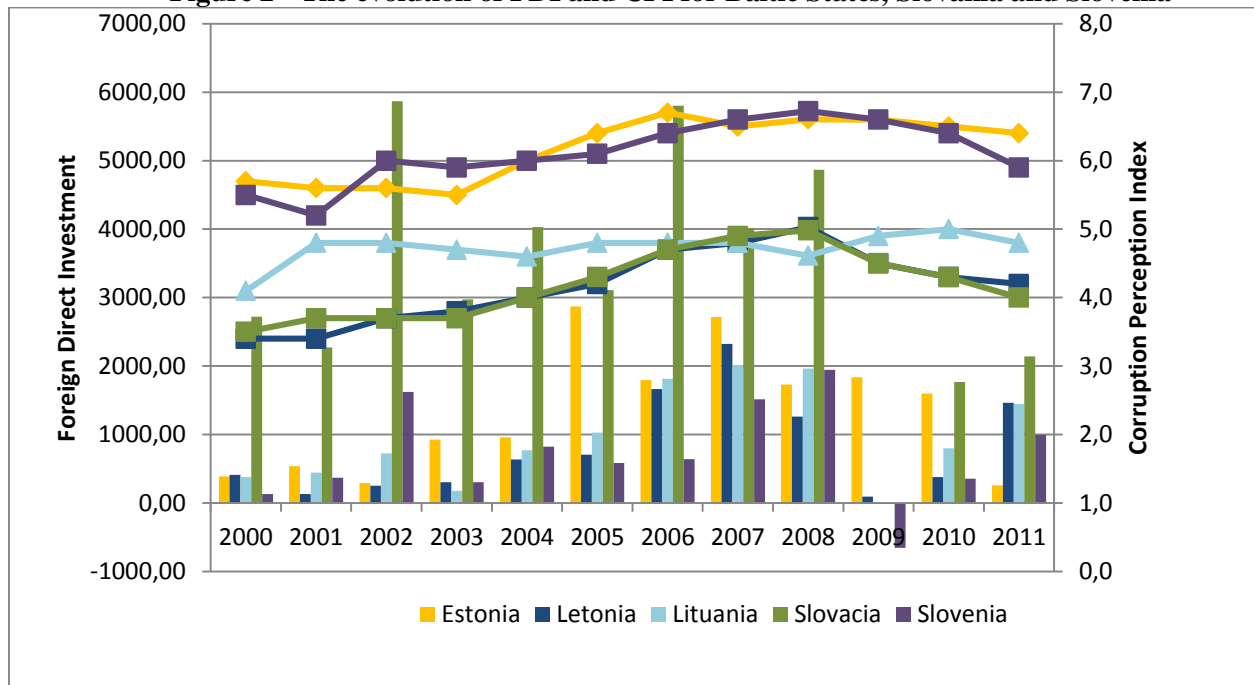
Source: UNCTAD and Transparency International.

Baltic States, Slovakia and Slovenia show the same evolution as Romania and Bulgaria (see figure 2). Still, we must mention that Lithuania, Slovakia and Latvia are perceived as more corrupted countries than Slovenia and Estonia. We must mention that the most free of corruption country of ECEC is Estonia with a CPI score higher than 6.0.



The highest level of FDI inflows are attracted by Slovakia even if the CPI index shows the lowest levels for the countries analyzed. These results can be explained by the active policy promoted by the Slovak government for attracting foreign direct investors (mainly fiscal incentives).

**Figure 2 - The evolution of FDI and CPI for Baltic States, Slovakia and Slovenia**

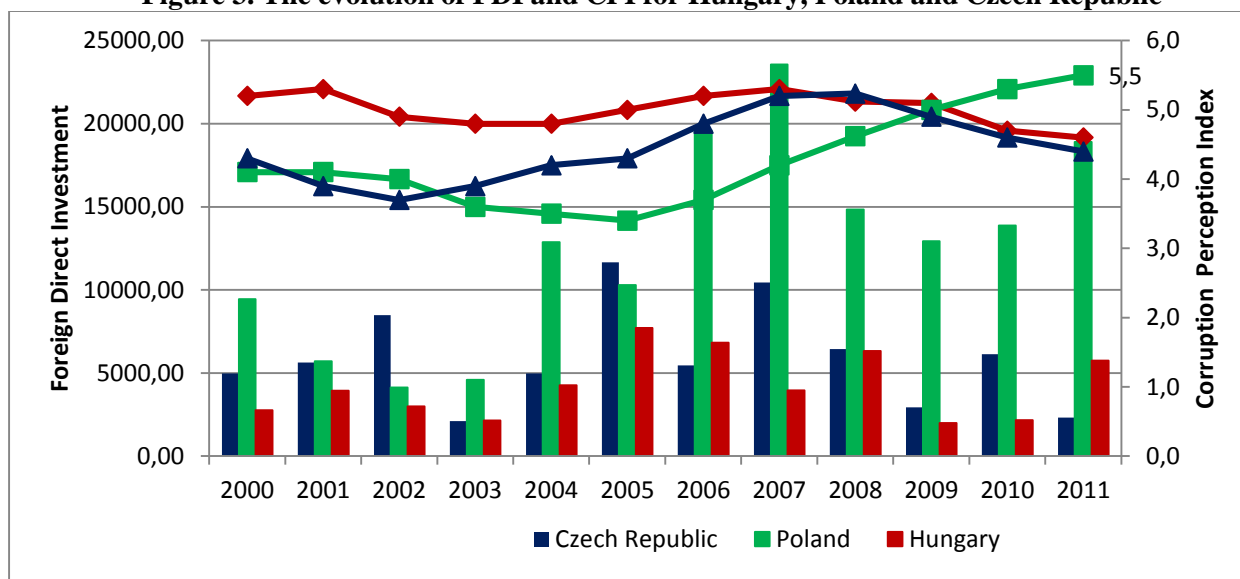


Source: UNCTAD and Transparency International.

Analyzing Poland, Hungary and Czech Republic we can observe a mainly indirect relation between foreign direct investments and CPI. Czech Republic and Hungary have a particularly trend of the perceived corruption showing the same evolution. After a period of reforms and concrete efforts in reducing corruption, the emergence of the economic crises in 2008 marked decreases in the levels of corruption perception index and in FDI inflows.

Poland stands alone in the group (see figure 3). We can see that even if the effect of the economic crises reflects in the levels of FDI inflows, the perceived corruption is constantly improving from 2005 to 2011.

**Figure 3. The evolution of FDI and CPI for Hungary, Poland and Czech Republic**



Source: UNCTAD and Transparency International.

## CONCLUSIONS

FDI receiving host countries expect foreign investments to support economic growth, competitiveness, employment and technological progress. For Central and Eastern European states it was also an expectation regarding the transition process and improve efficiency. But the transition from centralized economy to market orientated states showed many challenges handled by each country analyzed in her way. One of these challenges proved to be the emergence of systematic corruption.

Our analysis focuses on the impact of corruption on foreign direct investment flows attracted by ECE countries. Using as determinants the CPI index and GDP, our results show a negative significant relation between corruption and FDI and a mild positive significant relation between GDP and FDI. These results can be explained by the fact that the foreign direct investors decide to invest or not after a complex analysis of the business environment. So, we can affirm that for Central and Eastern European states the impact of market potential, although high, is diminished by the other factors related with stability and predictability of the regulatory system. Regarding the perceived corruption, our analysis show that are impetuous necessary reforms of public administration in order to reduce all the forms of corruption and bribery. Again, Romania, a highly corrupted country after Transparency International methodology, needs coherent reforms in reducing corruption and in the same time increase the country locational attractiveness for foreign direct investors.

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- \*\*\*UNCTADStat, available at [http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF\\_ActivePath=P,5,27&sRF\\_Expanded=P,5,27](http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF_ActivePath=P,5,27&sRF_Expanded=P,5,27) accessed on 01 July 2013.

