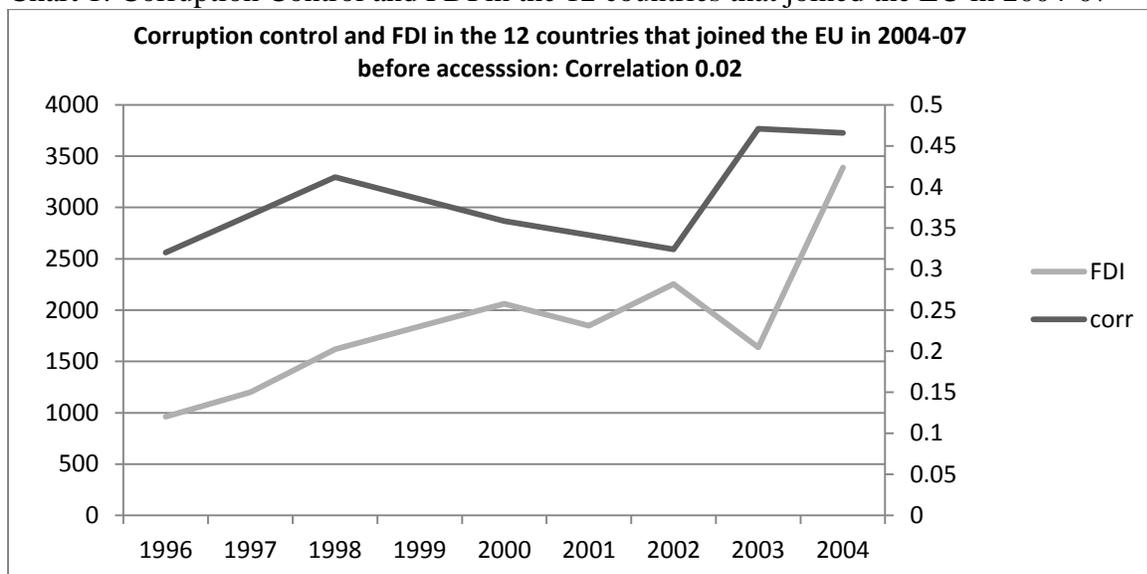


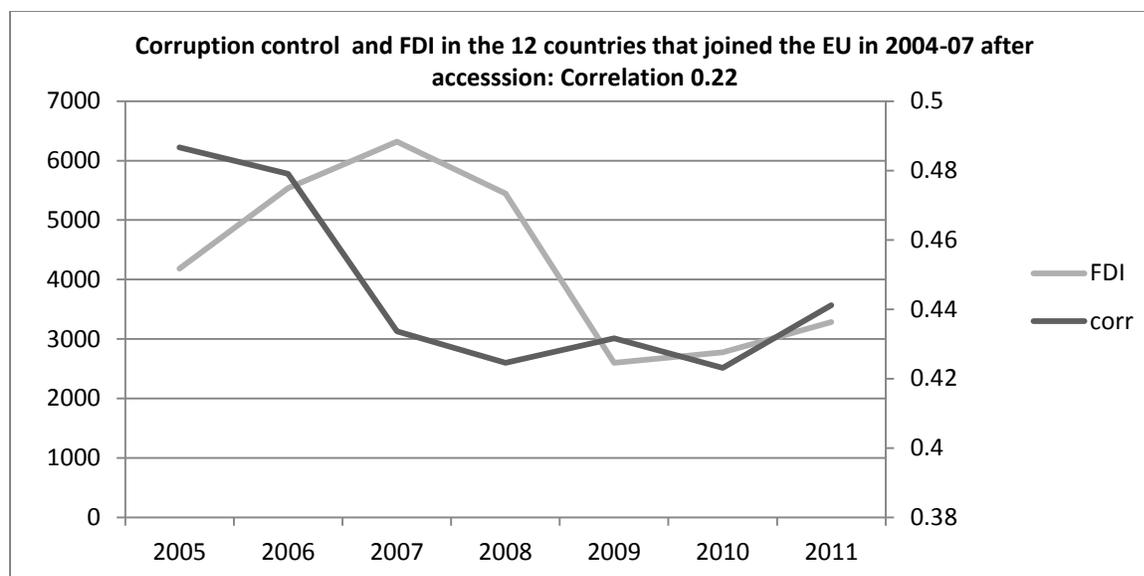
Beneath the Veil of Hope: The effects of EU signaling on foreign investors' sensitivity to corruption before and after EU membership

The literature on the effects of corruption on Foreign Direct Investment (FDI) does not point to a conclusive causal logic. Some studies show that high corruption discourages FDI since it is perceived as an additional tax on doing business. Others suggest that it is irrelevant and other factors matter more. Still others argue that it can actually help FDI since it “greases the wheels” of the system. Looking at the relationship between corruption and FDI in the context of the 12 countries which joined the EU in 2004-07 one can make a puzzling observation (Chart 1). During the pre-accession phase, despite the fact that corruption control was poor over long periods, FDI kept steadily increasing. Post-membership, however, deteriorating corruption control was punished by foreign investors and corruption and FDI were more closely correlated. Why did investors shift from disregarding it to being sensitive to it? In light of the established effect of EU signaling on investor confidence in CEE (Bevan and Estrin, 2000; Gray, 2009), I hypothesize that (1) positive signaling during the pre-accession process trumped other important factors for FDI, such as corruption; (2) these factors then resurfaced after membership was granted (and signaling was over) and had the expected impact on investor confidence.¹

Chart 1: Corruption Control and FDI in the 12 countries that joined the EU in 2004-07



¹ The slowdown (or lack of growth) of FDI after accession is unlikely to be the result of saturation effects, the possibility that the majority of the opportunities are already captured and there is little more room for investment. For example, in spite of the large stock of FDI that has entered CEE to date, on a per capita basis this stock is in fact not great when compared with other European nations or the EU's average. Only Malta and Cyprus have FDI stock per capita that is higher than the EU's average. For more information, see Appendix C (United Nations Conference on Trade and Development).



Correlation coefficient before accession: 0.02. Correlation coefficient after accession 0.22. (World Bank's World Governance Indicators, United Nations Conference on Trade and Development)

I base this intuition on works on institutional signaling and cognitive psychology. Julia Gray (2009) shows that signaling alone, rather than *real* policy reform, can account for increased investor confidence when looking at spreads on sovereign debt. I use this argument and extend it by suggesting that (1) positive signaling can also mask slow (or insufficient) reform and (2) once signaling is over, investor guidebook consideration again become important for economic decision makers and they punish countries that lag behind or backslide. In other words, when signaling is gone, *real* performance matters. In constructing these arguments I also refer to the literature on how inferential shortcuts, such as the availability heuristic, help people process complicated information and navigate uncertainty (e.g. as the one prevalent in information-scarce environments like the non-OECD countries) (Gilovich, Griffin, and Kahneman, 2002). Despite its numerous practical uses, the availability heuristic may cause decision-makers to overestimate the significance of events that tend to be particularly memorable or vivid, such as a positive endorsement by a powerful international institution like the EU. This may in turn affect their risk-versus-reward calculus and make them less risk-averse.

To test my hypotheses I use a mixed method approach. First, I run a time-series analysis covering data from 1996 to 2011 to establish that corruption did not have a significant impact on FDI before accession but did afterwards. Then, I present the results of an expert survey and a brief case study to demonstrate how signaling caused investors to be less risk-averse prior to EU membership by activating a specific psychological mechanisms, namely the availability heuristic. There are two main contributions that I make to the literatures on international institutions, FDI, and corruption. First, I show that corruption matters for FDI differently in different contexts and while it has a clear negative effect when rational guidebook principles dominate decision-making, its significance could be muted by positive signaling by international institutions, such as the EU. Second, I suggest that cognitive shortcuts, such as the availability heuristic, help explain foreign investor's behavior when investors operate in information-scarce environments as they tend to assign disproportionate weight to signals perceived as legitimate.

The rest of this article is organized as follows. First, I review the literatures on EU integration and FDI and corruption and FDI and explain how my arguments and findings contribute to both. Second, I outline the theoretical background informing my hypotheses. Third, I explain my methodological approach, discuss some of the difficulties associated with it, and present the results from the time series analysis, the survey, and the case study. I end by summarizing my contributions to the academic literatures on FDI, EU signaling, and corruption

EU accession, corruption, and FDI

By focusing on corruption and progress towards EU accession, this article contributes to the wide literature on the impact of EU integration on FDI flows. This section outlines the main findings in this literature and explains how my arguments fill some of the existing gaps.

The positive effect of the EU on the quality of the investment climate in a country is well-established. Several studies have found that joining the EU has been beneficial for Western European countries attracting FDI. Similarly, others have explored the Central and Eastern European (CEE) countries and have established that the prospect of membership has led to increased FDI inflows. What the literature on EU integration and FDI has not addressed so far is whether FDI flows to new member states continue to be influenced by the same drivers after accession as the ones that mattered before. Numerous challenges associated with the legacy of communism (corruption, state ownership, less stable banking sector) suggest that the dynamic in Eastern Europe, once EU leverage and signaling are gone, can make these countries more susceptible to regression or slowdown. If this is true, foreign investors in the region should have a higher threshold of fundamental justifications for their decisions after accession. No academic study so far has explored this possibility.

This section outlines some of the key arguments and findings about the effects of European integration on FDI in Western Europe. After the foundation of the EU, a notable increase of intra- and inter-regional FDI flows was observed among the member countries. Barry (2002), for example, shows that Ireland has experienced a significant FDI boom after its EU accession in 1973. In this study he traces how a number of US-based MNCs have chosen Ireland as their starting point to expand in Europe. He further demonstrates that FDI has contributed to economic growth, better export sector performance, the reduction of unemployment, and the development of the high-tech sector. Similarly, Barrios (2002) investigates the effects of EU integration on the Spanish economy since its accession in 1986 and calls this story the “Spanish Economic Miracle”. He finds that the high FDI inflows resulting from the EU integration process have been responsible for the strong economic performance of the country. Galego (2002) makes a similar contribution to the literature showing that Austria, Finland and Sweden, who joined the EU in 1995, have since also become more attractive to foreign investors and are actually the main destination for FDI in the EU. Importantly, these studies are confined to the Western European context, explore only the effect of membership rather than the process of accession, and claim that membership brings more FDI to new members. My study suggests that membership in the context of the 5th enlargement may have actually raised the bar for FDI in CEE from the perspective of investors.

Many authors have also researched the effects of the EU integration process on FDI flows into CEE candidate countries. While these are more directly related to the research question this study poses, they have focused mainly on the accession process, rather than to what happens after membership. Bevan and Estrin (2000), for example, specifically analyze the impact of the

early accession process on FDI flows into the CEE countries and find out that the Essen Council announcement (1994) was associated with a significant increase of FDI received by the three most likely candidates for EU accession (Hungary, Poland, and the Czech Republic). Similarly, Claessens, Oks and Polastri (1998) examined capital flows to 21 transition countries over the 1990s and determined that countries that applied for EU membership attracted more FDI. Finally, Kaminski (2001) compares FDI inflows between CEE countries and former Soviet republics and concludes that the possibility of and progression towards EU accession explains the high level of divergence in FDI inflows between these groups. Although these studies do not address the effect of EU membership on FDI in CEE, they clearly demonstrate that signaling during the accession period is key to FDI inflows. My study confirms this finding by focusing on a longer period (1996 to 2011), but also takes this a step further and argues that signaling may cause investors to temporarily discount other important factors through the availability heuristic.

Finally, my arguments also contribute to the literature on the effects of corruption on FDI. The level of corruption in the host country has been introduced as one factor among the determinants of FDI location since it is perceived as a source of uncertainty and an additional cost of doing business or a tax on profits (Al-Sadiq, 2009; Bardhan, 1997). Thus, countries with lower corruption attract more per capita FDI (Abed and Davoodi, 2000). An array of other studies confirm this finding (Wei and Wu, 2001; Lambsdorff and Cornelius, 2000; and Wei, 2000). Importantly, corruption also discourages FDI indirectly by adversely affecting other conditions that matter for investors. It has a negative effect on the level of investment and economic growth (Mauro, 1995), on the quality of infrastructure and productivity of public investment (Tanzi and Davoodi, 1997), on income inequality (Li, Xu and Zou, 2000), and on health care and education services (Gupta, Davoodi and Tiongson, 2000). All those factors affect investors' perceptions of stability and profitability, thus making them less likely to engage in FDI activity.

Nevertheless, several studies fail to confirm the claim that corruption affects FDI negatively. Wheeler and Mody (1992) and Akcay (2001) find no evidence of a negative relationship between corruption and FDI. Wheeler and Mody combined corruption with 12 other indicators to form a latent variable and Akcay focused only on developing countries. Given these differences in their methodological approach, it is not surprising why their results were different. My study contributes to the debate on the effects of corruption on FDI, by introducing an argument as to when it may and when it may not matter, thus providing a more nuanced view to the question.

There has been plenty of work on how the EU affects FDI levels for acceding members and how corruption affects FDI in general. However, no study has so far attempted to evaluate whether EU signaling can mute the effect of corruption temporarily, but then allow it to resurface as markets realize that the EU's pre-accession process has not addressed the problem in a systemic way. It is this main argument that I contribute to the literatures on EU enlargement, FDI and corruption.

Theoretical Framework

This section explores the theory behind institutional signaling from which I derive my hypotheses about the differential effect of corruption on FDI before and after accession. It is organized in three parts. First, I briefly explain how joining an international institution increases investor confidence by reducing uncertainty. Then, I review some of the social and cognitive

psychology literature on how signaling affects behavior and explain why certain signaling may sometimes lead to overconfidence. Third, I explain how the EU's eastern enlargement is a particularly good test case for examining whether positive signaling can mute the importance of other factors, such as corruption.

A lot of the literature on international institutions claims that they can reduce uncertainty (Axelrod, 1981; Keohane, 1984; Koremenos, Lipson, and Snidal, 2001; Morrow, 1994; North, 1990). The main argument in these studies is that by imposing rules and requirements, international institutions regularize members' future behavior resulting in more predictable interactions between members. Similarly, institutions increase the costs of non-compliance as violations of commitments damage a country's reputation and make further cooperation difficult or impossible (Abbott and Snidal, 2000, 427; Simmons, 2000, 594). Therefore, it will not be surprising if investors respond positively to positive signals regarding candidate countries' progress towards joining an institution like the EU. Moreover, EU conditionality covers an array of economic issues that can make the investment climate in these countries more stable and predictable, thus strengthening investor trust even more. In this way, good news about countries closing chapters and moving forward encourages investors. In their attempt to capture a first-mover advantage and be ahead of the competition, they may then pay less attention to certain fundamentals (e.g. progress against corruption).

This is also consistent with a strand in the cognitive and social psychology literature (Kahneman, Slovic, and Tversky, 1982; Gilovich, Griffin, and Kahneman, 2002) which argues that actors rely on inferential shortcuts, such as the availability heuristic, to streamline the processing of overabundant information and navigate uncertainty. The availability heuristic causes people to assign disproportionately higher weight to events that tend to be particularly striking or vivid, such as the positive signaling of a powerful international institution like the EU, and to overestimate their significance, especially if others are doing it too. The prominent example of this heuristic is how drivers react to seeing an accident. In this moment the inferential logic of bounded rationality activates, and they slow down. Based on limited but vivid data they exaggerate the statistical likelihood of crashing and conform to the appropriate speed limit. As time passes and no more car crashes are observed, the drivers' comprehensive rationality kicks back in and provides a more accurate estimate of the probability of an accident, causing them to speed up again. Similarly, faced with a decision-theoretic problem, investors in the pre-accession stage assigned a greater (than warranted) weight to announcements by the EU which enjoyed high levels of publicity and perceived credibility. With positive signaling out of the picture in the post-accession period, the return of comprehensive rational analysis meant that investors would then once again pay due attention to all factors that should matter for their decisions (e.g. corruption).

At the same time, in information-scarce environments, such as non-OECD countries, markets pay special attention to events that can be "easily and uniformly interpreted," visible acts, such as joining an international institution (Gray, 2009; Rodrik, 1989). Bordo and Rockoff (1996) argue that signing onto the gold standard in the nineteenth century served as an endorsement for developing countries. Moreover, the authors show that markets validated close shadowing of the standard almost as much as actual adherence to it. This implies that policy change influenced investors less than nominal membership (Gray, 2009). Thus, one could speculate that it may have been possible for investors to be less concerned with actual reforms than with these countries' "progression" towards the risk-minimizing international institution.

Thinking about corruption in CEE, this may be especially relevant. None of the 31 chapters of the *acquis* or the Copenhagen criteria focused explicitly on corruption and compliance tends to be the weakest in the areas where no explicit conditionality was applied (Epstein and Sedelmeier, 2008). Thus, corruption should have been an important factor for foreign investors both during the pre-accession process and after. Nevertheless, it is likely that, by the logic of the availability heuristic, they might have overlooked its importance, focusing instead on the positive signals from the EU allowing countries to advance in their negotiations. Julia Gray provides some background to this intuition. She finds that it was not actual policy reform that underpinned investor confidence in terms of spreads on sovereign debt, but merely positive signaling from the EU. Thus, while some of these countries were perhaps not accomplishing enough in terms of corruption control, this was compensated for by their moving further along the pre-accession process. Once membership was granted, real performance regained its relevance and centrality. There are, of course, many other factors that could account for this investor behavior. Lower labor costs before accession and rising wages after, the financial crisis of 2008, or lack of reform in other areas certainly also played a part in first encouraging and then discouraging investors after accession. My research design, however, controls for the independent effects of these factors and isolates the unique effect of corruption.

In terms of case selection, the 5th enlargement is a particularly appropriate setting for examining the effect of institutional signaling on investor confidence. First, although these countries had different levels of wealth and economic conditions in the 1990s, they all (except Cyprus and Malta) emerged from planned economies and needed to undertake a similar set of policy reforms around the same time (Pridham, 2005). Secondly, given that they all represented poorer and politically diverse countries, convinced of the economic necessity EU membership, the EU was able to exercise a stronger and more comprehensive conditionality on them as opposed to previous rounds (Vachudova, 2005) adding credibility to its signaling. Last, Brussels applied *ex ante* conditionality to the aspiring states and monitored their progress closely by *publicly* assessing their efforts (Vachudova, 2005). Thus, the eastern enlargement constitutes a convenient framework to test whether signaling can sometimes cause investors to discount otherwise important factors, such as corruption.

At the same time it is possible that it is exactly because of the “asymmetrical interdependence” between the CEE countries and the EU that EU signaling may have been perceived as more powerful than it would be in other contexts. There was hardly any aspect of public or private life that remained untouched during the conditionality period. Total overhaul is not easy in an environment of falling incomes, weak institutional capacity, and insufficient familiarity with modern practices. In such a difficult and all-encompassing effort, it was inevitable that the CEECs would falter in some aspects of reform – and it therefore made sense to seek the expert help of the EU. For example, Bulgaria, which experienced a hyperinflation crisis in 1996-97 decided to implement a currency board and deliberately surrender the conduct of monetary policy to the Bundesbank and, later, the European Central Bank. The point here is that countries not undergoing complete systemic change may be less in need of EU help and expertise and therefore less responsive to EU conditionality than the CEECs were. In such cases EU signaling may not represent such a meaningful endorsement to a country’s progress. To control for this possibility, I also include Cyprus and Malta in my study since they were applying at the same time as the CEECs, yet they were not undergoing complete systemic change.

In terms of the time-period of this analysis it is likely that risk was perceived as declining during the entire candidacy period, as Brussels made clear public assessments whether a

candidate's policy reforms in various areas conformed to EU standards. Signaling by the EU served as reliable public information in an information-scarce environment. When a country's progress got validated by the Commission, this translated into a big decrease in perceived risk. Investors stopped viewing these countries as emerging markets but as stable OECD countries, regardless of the fact that their levels of development might have been the same as before (Gray, 2009). This suggests that markets may pay less attention to the actual reform course than to EU pronouncements on it (Gray, 2009). The universal availability of this information and the credibility of its source were considered enough for investors to make more confident choices.

Hypotheses

This section outlines the institutional specifics of the pre-accession period in the context of the EU's ability to convey credible signals. The EU's influence varied across the different stages of conditionality but the inclusion of a country in the "credible candidate" stage was perhaps the first credible enough signal. During the next stage, the negotiation phase, the EU and the candidate country agree that the rules pertaining to a specific chapter have been transposed and the EU announces this publicly. Studies on signaling in diplomacy (Fearon, 1994) have shown that states act in a way to reveal information about their "type" to international audiences in order to enhance their credibility in diplomatic relations. Thus, by cooperating with the Commission and working diligently to close the chapters, CEE governments also signal that they could be trusted in the future. Thus, in light of the concrete signals that publically deeming a country a credible candidate and announcing its progression along the chapters of the *acquis* constitute, I propose the following hypothesis:

H1: Positive signaling during the entire pre-accession period overrides otherwise important guidebook considerations for foreign investors, including corruption.

Upon the successful conclusion of the negotiations and the ratification of the Treaty of Accession, a country becomes a full-fledged member of the EU. This is the end of signaling as the granting of membership signifies the full incorporation of the given country into the economic and political structures of the EU. While this means that political risk is now at its lowest relative point, the leverage of the EU to demand further reforms is more limited. Since investors at this point could not reasonably hope for institutional improvement of the same scale and pace, they now return to their rational guidebook style of evaluating whether investments should or should not be made. In light of this intuition, I propose the following hypothesis:

H2: After membership, investor guidebook principles, such as corruption, resurface as important. Corruption control has a positive effect on FDI inflows.

Methodology

The purpose of this section is two-fold. First, I outline the way the dependent variable, FDI inflows, the independent variables of interest, the stages of the EU accession process and corruption, and all the relevant control variables have been operationalized. Then, I present the findings of the statistical analysis, explain the results, discuss their robustness, and analyze the mechanisms behind them.

FDI inflows

This study defines the dependent variable as the annual FDI inflows from 1996 to 2011. This is the sum of every year's new direct investments in a given "host" country by foreign capital owners. The measure of FDI inflows comes from the United Nations Conference on Trade and Development²: "An investment involving a long-term relationship and reflecting a lasting interest of a resident entity in one economy (direct investor) in an entity resident in an economy other than of the investor. The direct investor's purpose is to exert a significant degree of influence on the management of the enterprise resident in the other economy. FDI involves both the initial transaction between the two entities and all subsequent transactions between them and among affiliated enterprises, both incorporated and unincorporated. FDI may be undertaken by individuals, as well as business entities."³ The data is expressed in 2011 US dollars.

Corruption

In order to specify corruption, I refer to the Control of Corruption (CC) index, which is part of the World Bank's World Governance Indicators (WGI). Kaufmann, Kraay, and Mastruzzi (KKM), who have developed the index, define CC as an index "capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests" (KKM, 2008, p.8). Per the existing literature, higher levels of corruption are associated with perceptions of greater political risk and lead to less FDI. Wei (2000), Habib and Zurawicki (2002) and Voyer and Beamish (2004) all find a statistically significant negative relationship between corruption and FDI inflows.

EU Signaling

As discussed previously there are several reasons to expect that positive EU signaling in terms of progress towards accession matters for attracting FDI. First, entrance in to the EU means free access to the Single European Market, the largest commercial market in the world. Second, it means access to a cheaper but skilled labor force. Third, accession will reduce risk by providing more macro-economic, political, institutional, and legal stability. Thus, studies (Bevan, Estrin and Grabbe, 2001; Gray, 2009) have confirmed that announcements of progress towards EU accession have had an impact on investors' attitudes towards these countries.

To operationalize EU signaling, I assigned conditionality dummies to the 12 Eastern Enlargement countries in accordance with the stages outlined above. A country receives a 1 for the "credible candidate" stage if it has signed an association agreement with the EU but has not yet entered accession negotiations; it receives a 0 otherwise. The "accession negotiations" dummy assigns a 1 to countries that have begun accession negotiations but not yet signed a Treaty of Accession, and 0 otherwise. Finally, there is no "membership" dummy since the second statistical design includes only the years in which all 12 countries have already become members. The conditionality dummies are based on the table below.

² Developing countries look favorably upon UNCTAD, and these data are least affected by intentional non-reporting

³ <http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Foreign-Direct-Investment-FDI.aspx> (accessed on July 21, 2014).

Table 1: Stages of Conditionality and When They Applied to Particular Countries

Stage	Candidate Country and Period
Credible Candidate	Bulgaria 1996-99, Cyprus 1996-97, Czech Republic 1996-97, Estonia 1996-97, Hungary 1996-97, Latvia 1996-99, Lithuania 1996-99, Malta 1998-99, Poland 1996-97, Romania 1996-99, Slovakia 1996-99, Slovenia 1996-97
Accession Negotiations	Bulgaria 2000—04, Cyprus 1998--04, Czech Republic 1998--04, Estonia 1998--04, Hungary 1998--04, Latvia 2000--04, Lithuania 2000--04, Malta 2000--04, Poland 1998--04, Romania 2000-04, Slovakia 2000-04, Slovenia 1998-04
Full Membership	Bulgaria 2007-12, Cyprus 2004-12, Czech Republic 2004-12, Estonia 2004-12, Hungary 2004-12, Latvia 2004-12, Lithuania 2004-12, Malta 2004-12, Poland 2004-12, Romania 2007-12, Slovakia 2004-12, Slovenia 2004-12

Alternative Explanations

The literature on FDI has identified a number of relevant variables affecting FDI into transition economies. These include an array of indicators concerning the health and stability of the economy and the political system: market size, openness of the economy, inflation, foreign reserves, government spending, unit labor costs, and structural reforms providing for a free and predictable investment climate. These alternative explanations are incorporated in the analysis.

Host market size

Host market size is important for FDI for two distinct reasons. First, it can enable investors to capture potential economies of scale in terms of production (Bevan and Estrin, 2000; Bueth and Milner, 2008; Ang, 2008). Secondly, firms can be drawn to bigger markets in search of new market opportunities and consumers (Lankes and Venables, 1996). I operationalize host market size using the World Bank's GDP index (converted into US dollars).

Trade Openness

Trade openness is another factor that influences FDI in that investors often seek to produce for other markets and/or need to import raw or materials for their production from abroad (Caves, 1996; Singh and Jun, 1995). In that sense the presence of tariff or non-tariff barriers to trade can be detrimental for FDI and FDI and openness of the economy will be positively related. I operationalize trade openness as the percent change in volume of imports in a given year (Bevan and Estrin, 2000). The measure comes from the World Bank database.

Macroeconomic Indicators

Inflation and foreign reserves also influence FDI (Bevan and Estrin, 2000; Jimborean and Kelber, 2011) as low inflation and high reserves signify macroeconomic stability. To

operationalize these variables I refer to the World Bank's World Development Indicators. Thus, I define inflation as percent change in annual average consumer prices and reserves as total reserves including gold and denominated in current USD.

Government Spending

Levels of government spending also affects FDI in that in an attempt to attract FDI governments decrease levels of capital taxation which leads to less government spending (Jensen, 2006). While there is mixed evidence on this intuition, many studies include this control. I operationalize government spending as the percent change in government total expenditure (World Bank).

Unit Labor Cost

Profitability from the perspective of foreign investors is intrinsically connected to unit labor costs (Holland and Pain, 1998). Access to an affordable labor, exhibiting high levels of skill and training and a solid scientific base (EBRD, 1999), is considered a fundamental comparative advantage of the region (Maeyer, 2006; Bevan and Estrin, 2000). Importantly, investors are attracted to cheap labor only if it is not crowded out by lower productivity or an overvalued currency. Thus, I include gross average wages, denominated in US Dollars, as indexed by the United Nations Economic Commission for Europe.

Structural Reforms

Another possible alternative explanation is that markets simply respond to policy reform by governments and not merely EU signaling. During the negotiations phase of conditionality, many countries underwent stringent periods of policy reform in order to qualify for membership (Schimmelfennig and Sedelmeier, 2005). Therefore, increasing FDI may be just a function of the introduction of or perceived effectiveness of a reform (Forbes, 2006; Campos and Kinoshita, 2008), rather than merely signaling.

To assess the role of reforms I use several EBRD reform indexes, which I average out: large scale privatization, small scale privatization, governance and enterprise restructuring, competition policy, price liberalization, and trade and forex reform. Importantly these measures reflect the degree of reform and not necessarily its effectiveness. The degree being important in its own right, I take additional steps to isolate the effect of structural reforms on the investment climate.

The investment freedom index produced by the Heritage Foundation seems particularly relevant in terms of how reforms have affected the investment environment of a country.⁴ The index is based on several assumptions: "In an economically free country, there would be no constraints on the flow of investment capital. Individuals and firms would be allowed to move their resources into and out of specific activities, both internally and across the country's borders,

⁴ The Heritage Foundation produces the index based on information from a variety of sources including the Economist Intelligence Unit, Country Commerce, 2010–2013; Office of the U.S. Trade Representative, 2013 National Trade Estimate Report on Foreign Trade Barriers; and U.S. Department of Commerce, Country Commercial Guide, 2010–2013.

without restriction. Such an ideal country would receive a score of 100 on investment freedom.”⁵ In reality countries impose an array of restrictions to investment behavior and the index takes many of them into account: investment restrictions based on nationality, burdensome foreign investment code in terms of transparency and bureaucratic structures, restrictions on land ownership, various sectoral restrictions or barriers, commonality of expropriations of investment without due compensation, foreign exchange controls, capital controls in terms of instances of repatriation of profits or need for government approval for various transactions. These are all factors that cater directly to the quality of the investment environment both in terms of its legal underpinning and its practical suitability.

In addition to these specific indicators of degree and practice of reforms, some studies have also suggested an alternative method to evaluate the effectiveness of reform. They include macroeconomic indicators, such as inflation, as proxies for reform given that they represent an economic reality that is directly the result of government policy choices or lack thereof. Such economic indicators are already present in my models.

The Financial Crisis

The credit crunch and recession that ensued coincided with a collapse of FDI inflows to CEE. In 2009, FDI inflows to the CEE region were 50% lower than in 2008 (Economic Review, PriceWaterHouseCooper, 2010). In order to control for the independent adverse effects on FDI inflows generated by the financial crisis of 2008, I employ two strategies. First, I include a control variable for every country for every year measuring the presence and magnitude of the crisis. The variable comes from the Luc Leaven and Fabian Valencia (2012) dataset which covers the universe of systemic banking crises for the period 1970-2012, and also includes data on the resolution and fiscal and economic costs of banking crises. Second, I include a measure for global FDI inflows for every year, thus accounting for the global-level fluctuations of FDI, which are profoundly affected by financial crises, such as the one of 2008. The inclusion of these variables in the time series controls for the negative effect of the financial crisis on FDI inflows.

Time Series Analysis

The statistical part of this article utilizes a time-series cross-sectional regression analysis to examine the effect of EU signaling before and after accession on investor confidence in the 12 countries of the 5th enlargement. Data on FDI inflows and a number of variables which may affect them are available over the period 1996-2011. Pooled time-series datasets such as this one introduce great challenges for researchers. The presence of relationships within countries and in particular time periods means that there will be serial correlation among observations (as confirmed by the Woolridge test), as well as structure in the error terms. To tackle autocorrelation (and any other unspecified spurious correlation) I employ two methods. First, I include a lagged dependent variable in both the pre- and post-accession models (Keele and Kelly, 2006; Beck and Katz, 2011).⁶ Additionally, I utilize panel-corrected standard errors to reduce the possibility for biased standard errors and inefficient estimates resulting from contemporaneous correlation across units and unit level heteroskedasticity (Beck and Katz,

⁵ <http://www.heritage.org/index/book/methodology> (accessed on July 23, 2014).

⁶ In addition to addressing this methodological challenge, including a lagged FDI is theoretically justified since researchers have consistently found FDI to be self-reinforcing (Wheeler and Mody 1992).

1995). To cross-validate the results of this approach I also use Prais-Winsten transformations, which allow for estimations in the presence of auto-correlated errors, again with panel-corrected standard errors. Finally, I also include a fixed effects model as an additional method to control for potential structural issues in the dataset. The main substantive results are consistent across estimations which serves as a robustness check for the findings. Additionally, the findings do not change under bootstrapping and jack-knifing.⁷ Table 1 below presents the results of the six quantitative models.

⁷ Using subsets of available data (jackknifing) or drawing randomly with replacement from a set of data points (bootstrapping) produces estimates of the precision of coefficients.

Table 2: FDI Drivers Before and After EU Accession

Drivers	Before Accession			After Accession		
	Model A LDV	Model B Prais- Winsten	Model C Fixed Effects	Model D LDV	Model E Prais- Winsten	Model F Fixed Effects
Lagged FDI	.210 (.258)		-.123 (.178)	.427*** (.180)		.189** (.101)
Credible Candidate	1342.716*** (365.209)	1260.529*** (325.051)	1380.85** (712.937)			
Accession Negotiations	1145.011*** (194.969)	952.090*** (205.957)	992.047** (551.348)			
Corruption Control	147.773 (348.738)	-170.028 (370.491)	330.821 (1057.837)	3179.355*** (987.865)	4007.583** (1789.634)	3695.363* (2698.353)
Structural Reform	38.169* (24.164)	59.410** (28.582)	107.362 (98.777)	-69.024 (101.140)	-87.496 (142.060)	-57.682 (351.086)
Investment Climate	7.010 (11.991)	18.961** (10.393)	1.611 (21.799)	-52.689** (24.949)	-83.627** (39.419)	.373 (51.409)
Market Size	-.276 (1.645)	.339 (2.338)	-11.484 (50.741)	-4.678 (3.921)	-9.732** (5.222)	-4.714 (16.668)
Trade Openness	.803 (10.220)	-8.347 (6.840)	-3.277 (12.038)	25.862** (13.677)	27.163** (10.778)	44.013*** (18.243)
Inflation	2.010 (2.091)	2.486** (1.300)	-.129 (9.908)	-.972 (1.272)	-1.374 (1.348)	-6.794** (3.505)
Reserves	1.530** (6.860)	1.960*** (3.960)	1.560 (8.710)	9.760*** (3.900)	1.380*** (3.680)	-2.510 (3.680)
Unit Labor Costs	-.220 (.473)	-.329 (.432)	.702 (1.742)	-2.303*** (.534)	-3.084*** (.732)	-4.670*** (1.953)
Government Spending	-7.890 (9.742)	-21.741** (10.773)	-17.605 (38.639)	-51.252** (22.779)	-77.645*** (32.850)	-43.316 (54.503)
Global FDI	.001 (.001)	.001 (.001)	-2.470 (.001)	.002*** (.001)	.003*** (.001)	.004*** (.001)
Financial Crisis	767.455 (1023.969)	453.752 (437.931)	-302.200 (864.3414)	-494.907 (666.477)	-82.174 (874.730)	1839.152 (1235.37)
Constant	-2876.364** (1308.769)	-3829.83*** (1093.076)	-3625.707 (6409.586)	8065.217 (4276.881)	11962.01** (6207.93)	7752.874 (14473.02)
R-squared	77	83	13	75	61	36
Wald Chi2	355.42	834.31		491.46	85.55	
Number of Observations	72	80	72	95	95	95

Models A (*pre-accession*) and D (*post-accession*) are LDV regressions with panel-corrected standard errors; models B (*pre-accession*) and E (*post-accession*) are Prais-Winsten regressions with panel-corrected standard errors; models C (*pre-accession*) and F (*post-accession*) are Fixed Effects models. ***p < .01; **p < .05; *p < .10. One-tailed test where appropriate.

The results of all the LDV, the Prais-Winsten, and FE models confirm the hypotheses that corruption control has a positive and significant effect on FDI after accession but is insignificant before, when EU signaling is a strong (the strongest) predictor of FDI inflows. A number of

other important factors for investors, including trade openness and unit labor costs, exhibit the same relationship – insignificant, while the countries were applying to the EU and were receiving positive endorsements from the EU about their progress, and significant after membership, when signaling was no longer present, and investors no longer felt that they can discount guidebook principles in the short-run in the name of a more hopeful promise for the future.

The results from the pre-accession models provide some evidence of how the availability heuristic might have affected investors' attitudes and decision making in this period. Looking at the more restrictive LDV and FE models one can see that while most investor guidebook considerations are insignificant in the pre-accession period, EU signaling in both the “credible candidate stage” and during the “accession negotiations” had positive and significant effects on investor confidence. All three model specifications focusing on this time period demonstrate that positive signaling inspired investor confidence to an extent that overshadowed a wide array of other considerations that should theoretically matter (trade openness, market size, wages).

There are a few other insights based on the LDV and Prais-Winsten models worth mentioning. First, both return significant results for foreign reserves. Expectedly, *ceteris paribus* higher foreign reserves served as ground for greater investor confidence in the macroeconomic resilience of a country and encouraged more FDI inflows. One can also notice that the two models provide some evidence that structural reforms mattered in the pre-accession period. Expectedly, to the extent that the degree of reforms, as defined by the EBRD, affected investors, these effects were positive and FDI increased as a result of the introduction of the various structural reforms.⁸ Last, the pre-accession Prais-Winsten model also provides some support for the conjecture that increased government spending would have a negative effect on FDI inflows.

The results from the post-accession models add further insights into the psychological state of foreign investors making decisions in evolving investment environments. With EU signaling no longer available to help investors filter information, channel inferences, and form (positive) expectations, the natural biases and distortions that come with the availability heuristic are now gone. Traditional guidebook approaches to investment, based on comprehensive rationality rather than bounded rationality, resurface in this time period and a great number of theoretically relevant FDI drivers again become significant. Greater openness to trade, higher reserves, lower government spending, lower wages, and notably, better corruption control ($p < 0.10$ in the FE model), each lead to more FDI inflows, all else equal. These variables come with signs and levels of statistical significance consistent with theory and prior studies.⁹

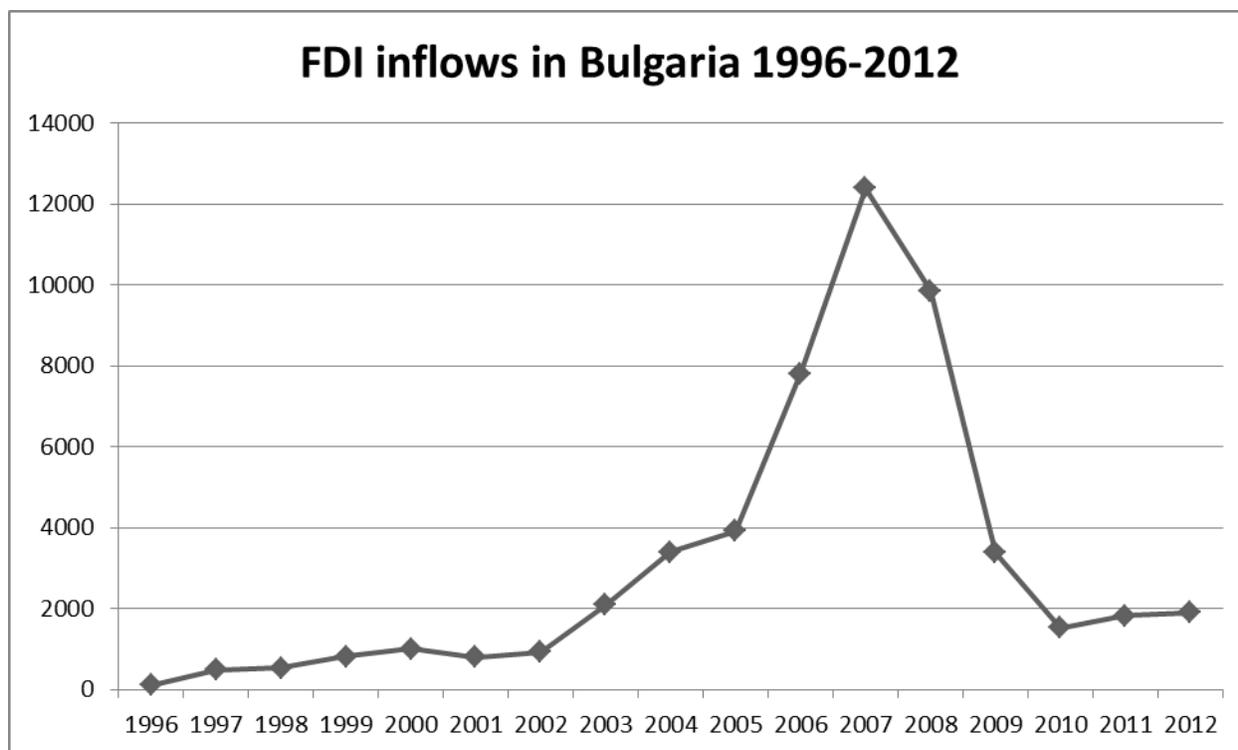
⁸ Large scale privatization, small scale privatization, governance and enterprise restructuring, competition policy, price liberalization, and trade and forex reform.

⁹ Interestingly, the variable estimating the friendliness of the investment climate comes with a negative sign and is also statistically significant. The index (investment freedom), produced by the Heritage Foundation, deals with issues, such as restrictions based on nationality, expropriations of property without due compensation, and various capital and exchange rate controls. One interpretation would be that in the post-accession period most of these considerations have been addressed to a satisfactory degree in the context of the Single Market. If so, attempts at further liberalizations, perhaps to capture more FDI, may at this point not be as impressive to investors as other factors, such as wages or reserves, both exhibiting very high levels of statistical significance. Thus, for example, if we compare the performance of the three least restrictive countries Estonia (average score of 90), Hungary (average score 73) and Latvia (average score 73), and the most restrictive one, Bulgaria (average score of 55) in the post accession period, one can notice that Bulgaria attracted more FDI than each of the three and it also had lower wages (roughly 30% of wages in Estonia and Hungary and 45% of wages in Latvia) and higher reserves.

Survey ¹⁰

In order to explain how signaling affected the way investors perceived the importance of corruption and other factors, I now turn to a discussion of the survey I was able to administer. The survey attempts to shed more light into the psychological state of investors and explain to what extent corruption mattered and matters for their decisions and affects trends in FDI.

Table 3: FDI in Bulgaria in millions of USD 1996-2012¹¹



(United Nations Conference on Trade and Development: <http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Interactive-database.aspx>, accessed in July 2014)

¹⁰ Although the results discussed here feature the answers of 32 respondents who are engaged in FDI activity in Bulgaria, I also got responses from four businessmen in Cyprus. Their answers suggest the same logic of thinking about EU signaling and corruption.

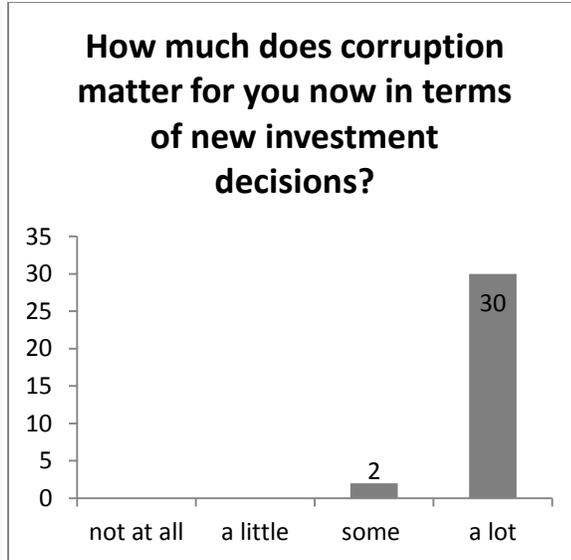
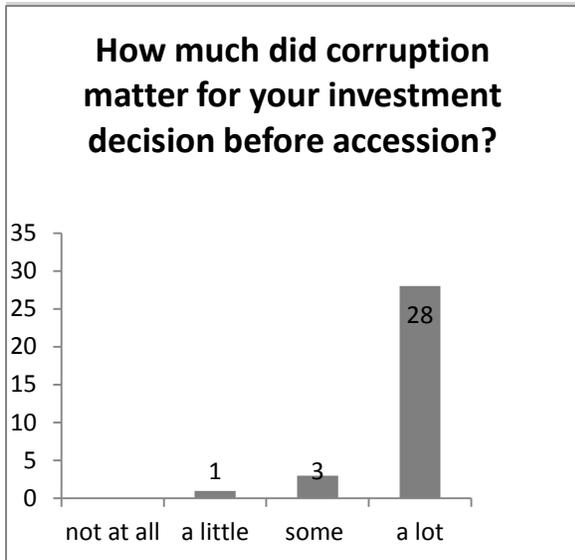
¹¹ This trend is generalizable to all 12 countries that joined in 2004-07 as FDI inflows declined post-accession in Cyprus 2007, Bulgaria 2007, Latvia 2007, Lithuania 2007, Poland 2007, Romania 2008, Slovenia 2008, Malta 2006, Slovakia 2006, Estonia 2005, Hungary 2005, and Czech Republic 2005. Importantly, all but two (Slovenia and Romania) of these declines took place soon after these countries' accessions, but before the financial crisis (Note: Slovenia's and Romania's FDI as a percent of GDP had actually also started to decrease before the crisis in 2007 and 2006 respectively). Even in the five cases when the decline is shown to have started in 2007 (also the accession year for Bulgaria and Romania), the monthly data on the downward trend in 2007 precede the crisis's beginning, which can be dated August 9, 2007, when BNP Paribas stopped withdrawals from three hedge funds citing "a complete evaporation of liquidity" (Elliot 2012, available at: <http://www.theguardian.com/business/economics-blog/2012/aug/05/economic-crisis-myths-sustain>). Relatedly, the crisis truly peaked in 2008 and FDI by nature does not respond to market trends as instantaneously as the stock market. In the other cases the decline started within one or two years after accession and before the crisis.

The results of the survey confirm the findings from the regression analysis. They show that although corruption mattered for investors both before and after accession, the perceived economic and institutional benefits of membership were high on investors' minds before accession and disproportionately affected their decisions. The questions asked focused on two broad categories – investors' attitudes toward corruption before and after accession as an important factor for FDI and their susceptibility to EU signaling as a trigger to activating the availability heuristic. The survey was administered in person and via email in the summer of 2013 and featured 32 respondents representing several countries, including the USA, Greece, Germany, Austria, and the United Arab Emirates, with investments in core sectors of the economy, such as real estate, financial services, communications, agriculture, and retail.¹² The respondents occupied mid and high-level management positions and were involved either in the initial investment decision or current decisions about further investments.

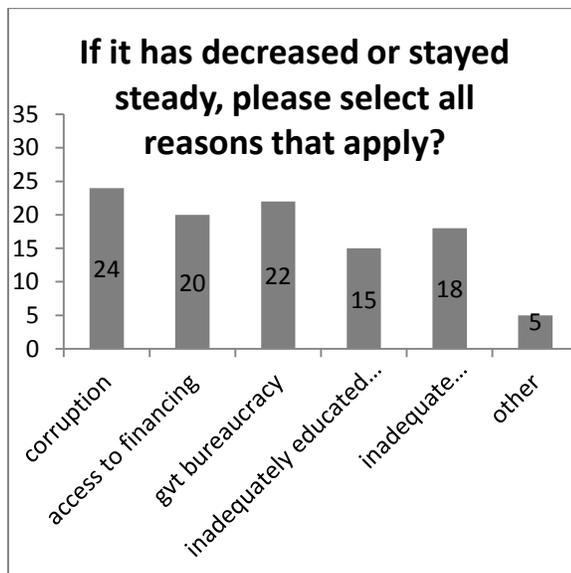
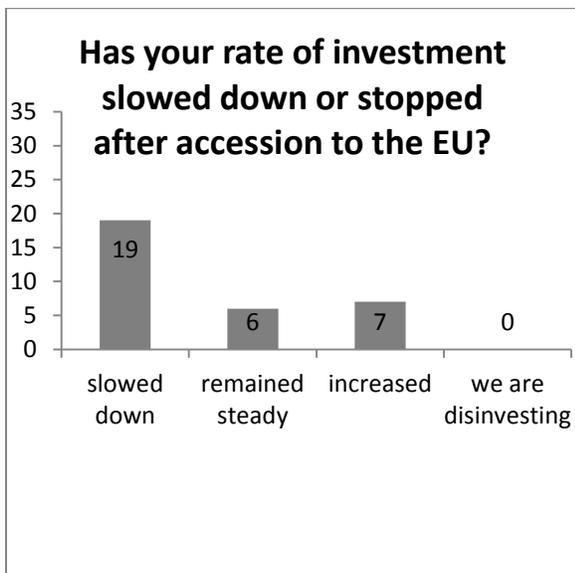
The first round of questions assesses attitudes towards corruption before and after accession. Notwithstanding the limitation that questions like that are prone to "backward" misremembering or biased updating, the results reveal an interesting story. The majority of respondents confirm that corruption was an important consideration for them both before and after EU membership, a finding that should not be surprising, given that Bulgaria and most of the other post-communist countries have had on-going problems with corruption control since the fall of communism.¹³

¹² The sample frame included 54 potential respondents, representing firms with investments in four of the top five sectors of the Bulgarian economy (Real Estate (1st), Financial Intermediation (2nd), Retail (4th), and Communications (5th) as well as four of the top ten investing countries (Austria (2nd), Greece (3rd), Germany (6th), USA (10th)). Source: US Department of State 2013 Investment Report on Bulgaria. Available at: <http://www.state.gov/e/eb/rls/othr/ics/2013/204610.htm> (accessed on January 9, 2015).

¹³ A review of a number of issues of the Global Competitiveness report cross-validates these findings as it shows that corruption has consistently been a top 5 or 6 "problematic factor for doing business" in the eight countries that I found information on (Czech Republic, Romania, Lithuania, Slovenia, Bulgaria, Estonia, and Latvia) during both the accession and post-accession periods (with the exception of Estonia, where it was 8th before and 10th after). The Global Competitiveness report is based on the opinions of an average of 98 experts per country representing the main sectors of the economy (agriculture, manufacturing industry, non-manufacturing industry, and services). For more info: <http://www3.weforum.org/docs/GCR2011-12/6.GCR2011-2012Chapter1.3EOS.pdf> (accessed on July 26, 2014).

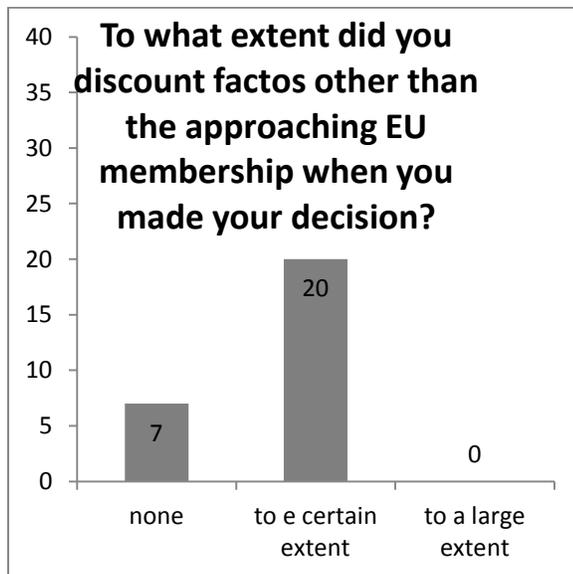
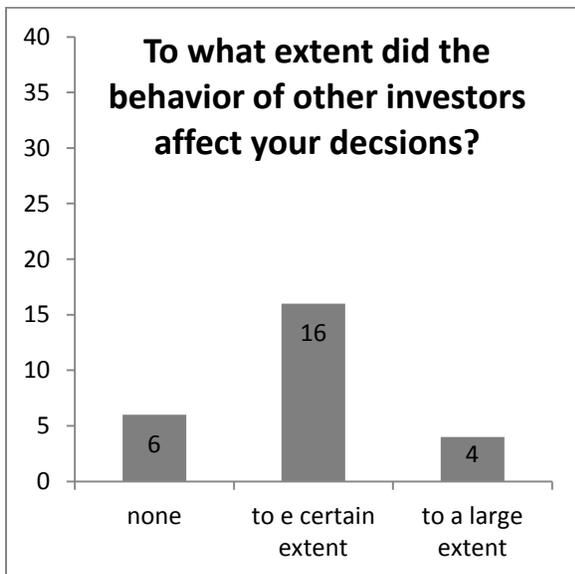
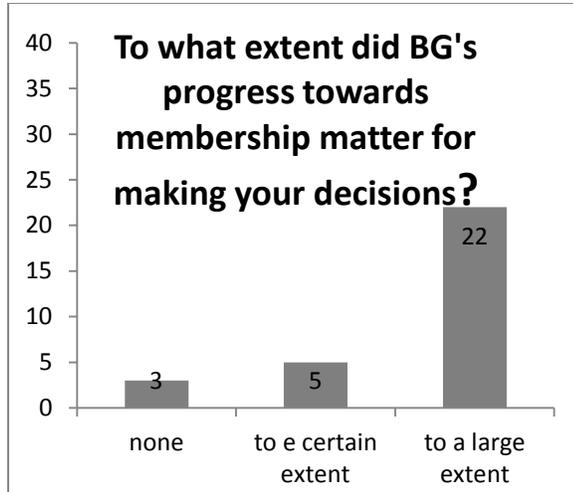
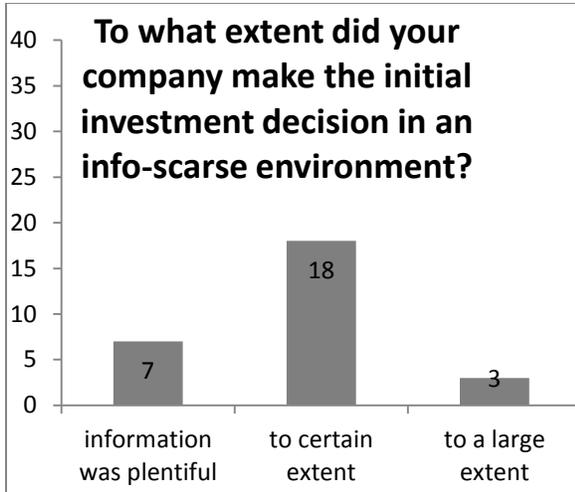


The next couple of questions try to establish the current rate and state of these investments and ask for the potential reasons for their slowdown or stagnation.



The results here are interesting. Expectedly, zero participants said that their firm was disinvesting or withdrawing since FDI tends to be very sticky (Liebscher 2007). Interestingly, however, 24 out of the 25 who said that their investment rate has slowed down or remained the same, pointed out corruption as one of the main reasons for this. In fact these people singled out corruption as the most important reason, ahead of “inefficient government bureaucracy” (22 answers) and “access to financing” (20), the main corollary of the financial crisis of 2008. These answers raise an interesting question: If corruption mattered for investment decisions before accession just as much as it matters now, and it is a top reason to slow down investment now, why did people invest back then? Why was corruption discounted? Could it be the case that as much as it mattered, or was supposed to matter, EU-related factors overrode its relevance?

The next set of questions aim to establish investors' susceptibility to signaling as well as the rationalized effect of signaling on their behavior. The first four questions attempt to directly assess the possibility of behavior having been driven by the availability heuristic. They try to answer the question of how signaling affected behavior.

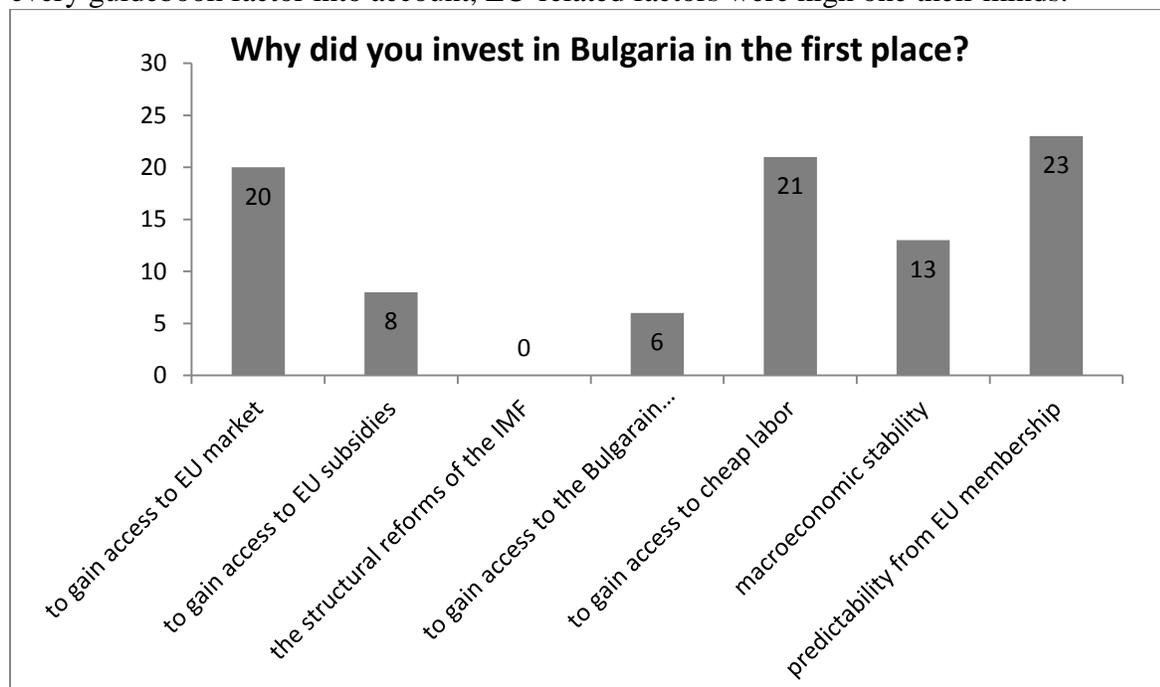


About two-thirds of the respondents did think that they were making the initial decision in an information-scarce environment (at least to a certain extent) and more than two-thirds were influenced by Bulgaria's progress towards membership, both constituting necessary conditions for the availability heuristic. There are two psychological states that these two answers point at. As reform often preceded the actual closure of negotiating chapters, those who felt that their access to reliable information was good or adequate (7), saw the EU's endorsements as credible public knowledge and felt encouraged. At the same time those who felt that the information environment in a young democracy was uncertain (21), elected not to search for more information as comprehensive rationality would entail, but turned to the inferential strategies of bounded rationality and perceived the EU signals as fundamental information in its own right. In

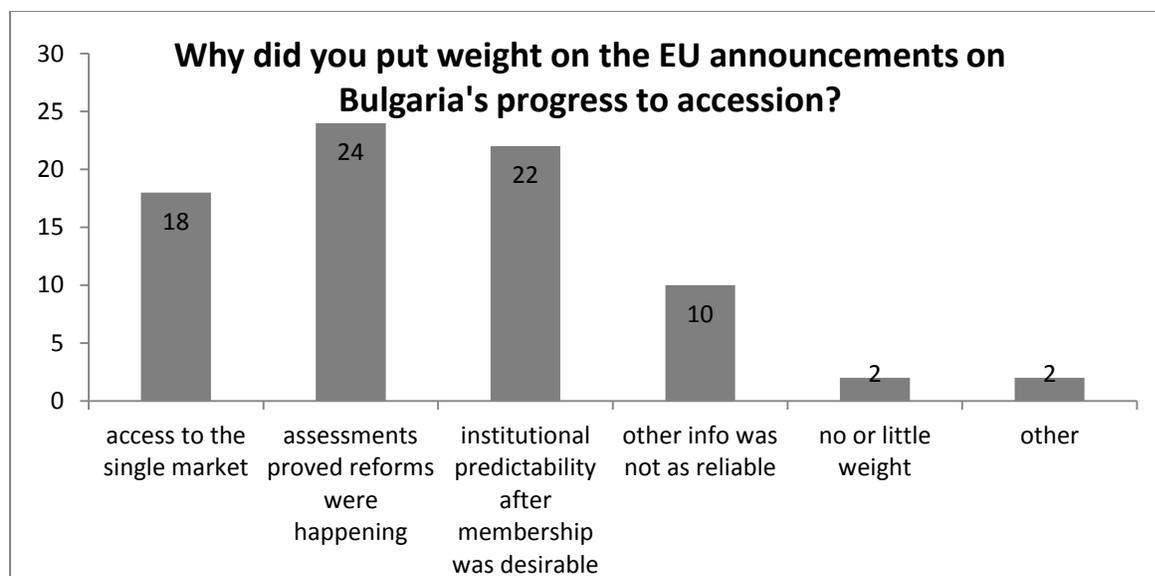
both cases then investors were affected by signaling, either more than, or as well as by their individual (objective) assessment of the actual quality of the investment environment.

The other two questions in this section look at other, more obvious aspects of the availability heuristic, namely the influence of the behavior of others and the tendency to exaggerate the importance of vivid information, such as EU endorsements. Only a small minority of investors say that they were influenced by others to a large extent, but half admit that they were influenced at least to a certain one. This is not surprising because from an economic perspective the CEE countries constituted new markets where a first-mover advantage could be crucial. Similarly, from a psychological perspective the (herding) behavior of groups in its own right can be seen as legitimating, as evidenced by the wide and growing literature in behavioral economics (Banerjee, 1992; Shiller, 1995). Finally, although some investors expectedly refuse to admit that they discounted factors other than the EU when making their decision, about two-thirds says that this might have been the case, though only to a certain extent.

The last two questions in this section try to answer the question of why signaling had the strong and positive effect it did. When asked why they invested in Bulgaria in the first place, two of the top three reasons pointed at have something to do with the EU – predictability from EU membership and access to the single market, with low wages being the other important factor. Thus, it is evident that although investors say that they cared about everything and they took every guidebook factor into account, EU-related factors were high on their minds.



The next question asks about the reasons why the EU announcements had an effect on their decision-making.



There are a couple of observations worth noticing here. A great majority (24) accepted the EU assessments as proof that reforms were happening. Indeed, the accession process was highly meritocratic (Vachudova, 2005) and it made sense for investors to take progress as valuable information. However, more than a third of these 24 respondents (10) also said that other information was not reliable, which means that they did allow the EU signals to trigger the availability heuristic, which helps channel information but also creates the risk of significant distortions of and biases against other sources of information, such as other fundamentals. Finally, more than two-thirds of investors also said that the promise of institutional stability and predictability mattered to them, an argument firmly in line with established theories of international relations (Keohane, 1984; Morrow, 1994; North, 1990).

Interviews

To supplement the findings from the statistical analysis and the survey I also conducted interviews with Greek and American investors who are engaged in FDI activity in Bulgaria. The interviews showed that investors did indeed resort to using the inferential shortcuts that the EU progress reports provided during the accession period and selectively discounted other information in the hope for post-accession appreciation of their assets and more streamlined penetration of their services. The interviewees were involved in several sectors of the economy including real estate, financial services, construction, agriculture, and energy. All interviewees were univocal that the investment environment in the country was uncertain until 1997 as Bulgaria had no specific legislation on FDI. In October 1997 the Foreign Investment Act (FIA) created the first legal framework for foreign investment which was up to par with accepted international standards. This precedent as well as the aggressive privatization reform of the late 1990s created a fertile ground for investment. One of the companies, a fund of funds, which I interviewed, invested a total of \$250 million between 1999 and 2006. This company provided me with specific data regarding their investments (in thousands of Euros) since 2007.

Table 4: FDI Post-accession of a Fund of Funds

Year	2007	2008	2009	2010	2011	2012	2013
FDI	44,445	25,533	2,416	1,339	2,086	1,426	300

One can notice the sharp slowdown of the investment rate following the accession of Bulgaria to the EU (2007) and the beginning of the financial crisis (2008). Following the hypotheses of this article, I asked about the major investment drivers before accession and the main reasons for the slowdown: “It was easier to sell ideas to investors [before accession], both because we had the EU accession chip to play and because credit access conditions at home were more favorable...Now, even when money is available, the bar is higher and the corruption-ridden energy sector is raising questions with our investors,” said the manager of this fund which manages an array of investments in several sectors (Interview summer 2013). Evidently, before accession US investors were eager to invest and were encouraged by the prospect of membership. After accession, capitalizing on “hope” was more difficult even if funding was available. Thus, in 2008 this fund created a platform that secured €50 million in equity to invest in renewable energy projects (solar, wind, geothermal, and hydroelectric). With the money secured, however, the project was put on hold due to corruption considerations (amidst otherwise strong macroeconomic fundamentals). Such strict due-diligence was not the norm before accession when corruption was just as relevant and influential in the Bulgarian market. Since 2008 the company has slowed down its investment rate, employed less staff, and actively sought other sectors of the economy to invest in where predictability is high, barriers to entry low, and the government involvement less.

Such marked change in attitudes towards investing in Bulgaria is not unique to just this fund of funds. Twenty-two out of the twenty-five investors I interviewed stated that the prospect of EU accession was overwhelmingly more important for their companies than other factors and that positive EU announcements encouraged investments. Nineteen defined decision-making now using words such as “more structured”, “risk-averse”, “unemotional”, “critical”, “rational”, “objective”, “straight-forward”, “cautious”, “programmatic”, and “piecemeal”, alluding to the return of the more rational approach to investing in the absence of vivid endorsements stimulating the availability heuristic. Importantly, when asked whether they regret investing in Bulgaria or feel misled by the EU accession process, again twenty-two said that they had higher expectations for corruption control post-accession and that their companies probably overinvested in the years leading to membership. This intuition can be corroborated by comparing the average FDI inflows in the new EU post-communist members before and after accession to the FDI inflows in post-communist countries that have never been part of the accession process.

Table 5: FDI in EU and non-EU post-communist countries¹⁴

Foreign direct investment, net inflows (% of GDP)		
	New EU post-communist member avg	Non EU post-communist country avg
Before Accession	5.63	4.74
After Accession	6.48	7.20

¹⁴ The non-EU post-communist countries here are: Russia, Ukraine, Moldova, Georgia, Armenia, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Tajikistan, Belarus, Kyrgyzstan, and Serbia. The time period is 1998-2011.

EU applicant countries attracted significantly more FDI as they were moving along the accession process (5.63% vs. 4.74%) due to the “EU bump” – the fact that investors anticipated economic gains associated with EU membership. Interestingly, however, non-EU post-communist countries have attracted more FDI (7.20% vs. 6.48%) in the post-accession period suggesting that when signaling (and hope) is out of the picture FDI rates in post-communist EU members are actually lower than those in a peer group with a similar communist legacy.

Commenting on the change in the investment climate in Bulgaria after its accession, some foreign investors have publically singled out corruption as an impediment to their operations. Complaining about the business environment in the film industry, David Varod, CEO of Nu Boyana Film Studios¹⁵, recently said that, “Corruption eats the country.” Similarly, Alex Nestor, vice president of the American Chamber of Commerce in Bulgaria, admitted that “The investment climate in the country is not something we can be proud of,” when speaking precisely of the corruption-ridden energy sector (New York Times, July 7, 2014).¹⁶

The interviews, therefore, also provide credence to the notion that before accession progress towards the EU encouraged investors and might have caused them to discount or overlook otherwise important factors. Similarly, when the hope for further improvements decreased after membership as a result of lower EU leverage, other (“more structured”, “rational”, and “straight-forward”) factors, and corruption in particular, reemerged as influential considerations for FDI.

Conclusion

This article shows that corruption has a differential effect on FDI inflows in the countries of the 5th enlargement before and after their accession to the EU. The main finding is that when the EU sends clear positive signals during the accession period, foreign investors’ confidence gets boosted to the extent that they discount an array of fundamental considerations that are otherwise important, such as corruption. The situation changes after accession as the EU no longer sends such signals. Thus, once a country is part of the bloc, fundamental factors reemerge as important and investors may choose to punish countries that are perceived as lagging behind, static, or backsliding. There are several contributions that this article makes. First, it introduces the possibility that the post-accession FDI dynamic might be different for Western and Eastern Europe. FDI in Western European democracies became easier after these countries joined the EU but in the East countries had to in some ways satisfy stricter criteria after their accession. While the EU integration literature has established a definite positive and lasting effect of EU membership for Western European countries, there has been no systematic study evaluating the membership effect on CEE. Second, this article sheds more light on the question whether corruption matters for FDI. Although the consensus seems to be that it does, there are some dissenting voices. What my argument contributes to this debate is that different conditions may make corruption more or less salient of an issue for foreign investors. Finally, my arguments contribute to the literature on institutional signaling. Building on it I show how signaling progress and granting actual membership may have differential impact on investor confidence through first triggering psychological inferential shortcuts, such as the availability heuristic, but then returning the levers of decision making to comprehensive rational analysis.

¹⁵ This was the venue where “The Expendables 3” starring Sylvester Stallone and Arnold Schwarzenegger, was shot.

¹⁶ http://www.nytimes.com/2014/07/08/business/international/bank-runs-in-bulgaria-expose-fragility-and-flaws.html?_r=4 (accessed on July 26, 2014).

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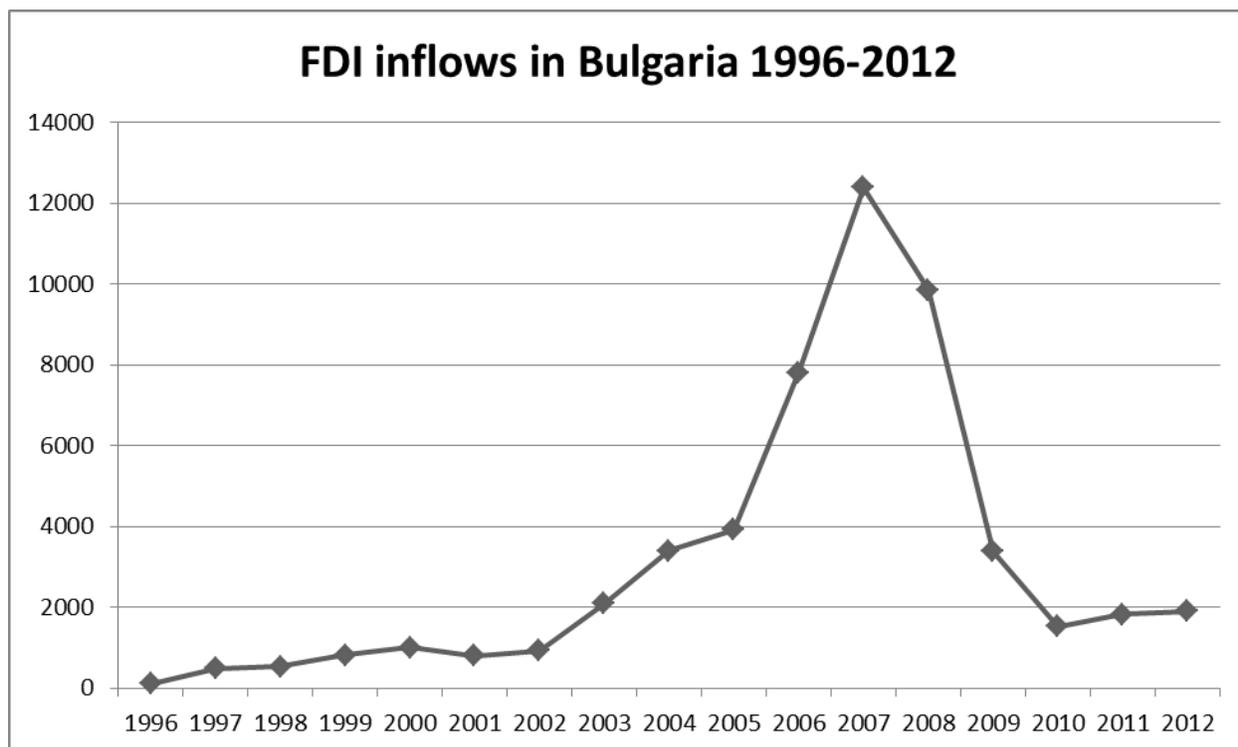
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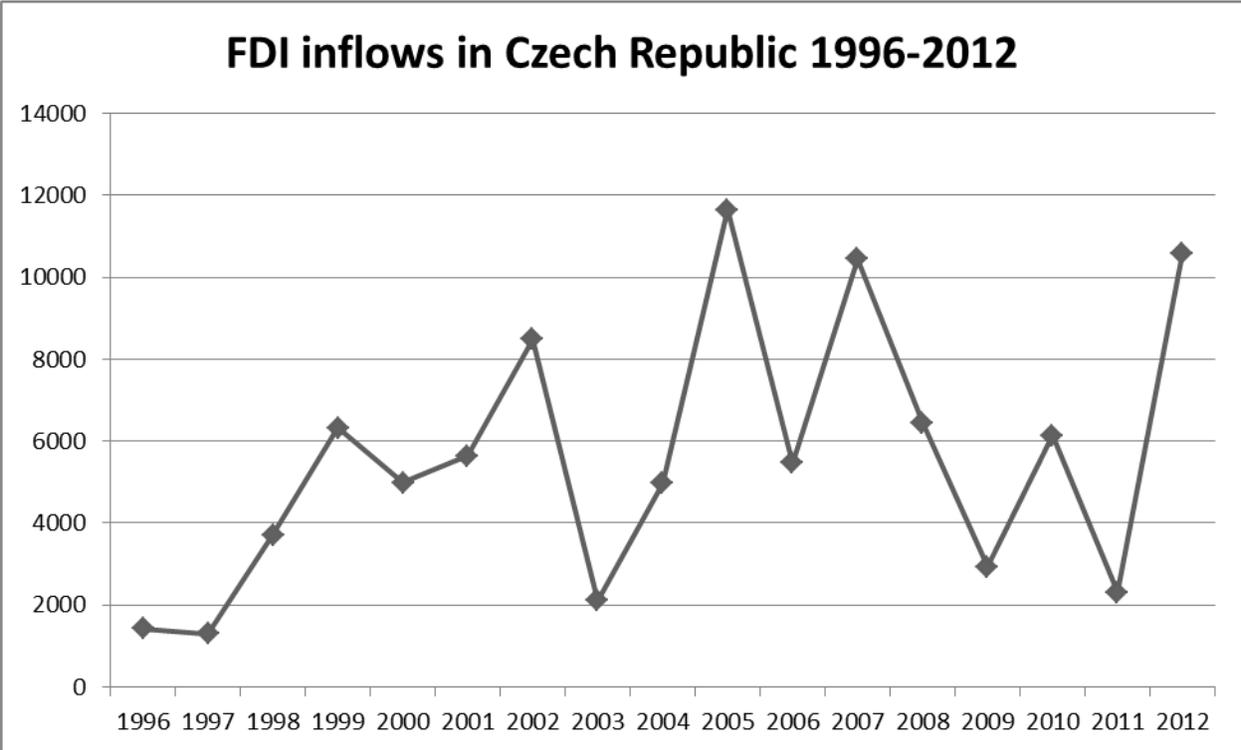
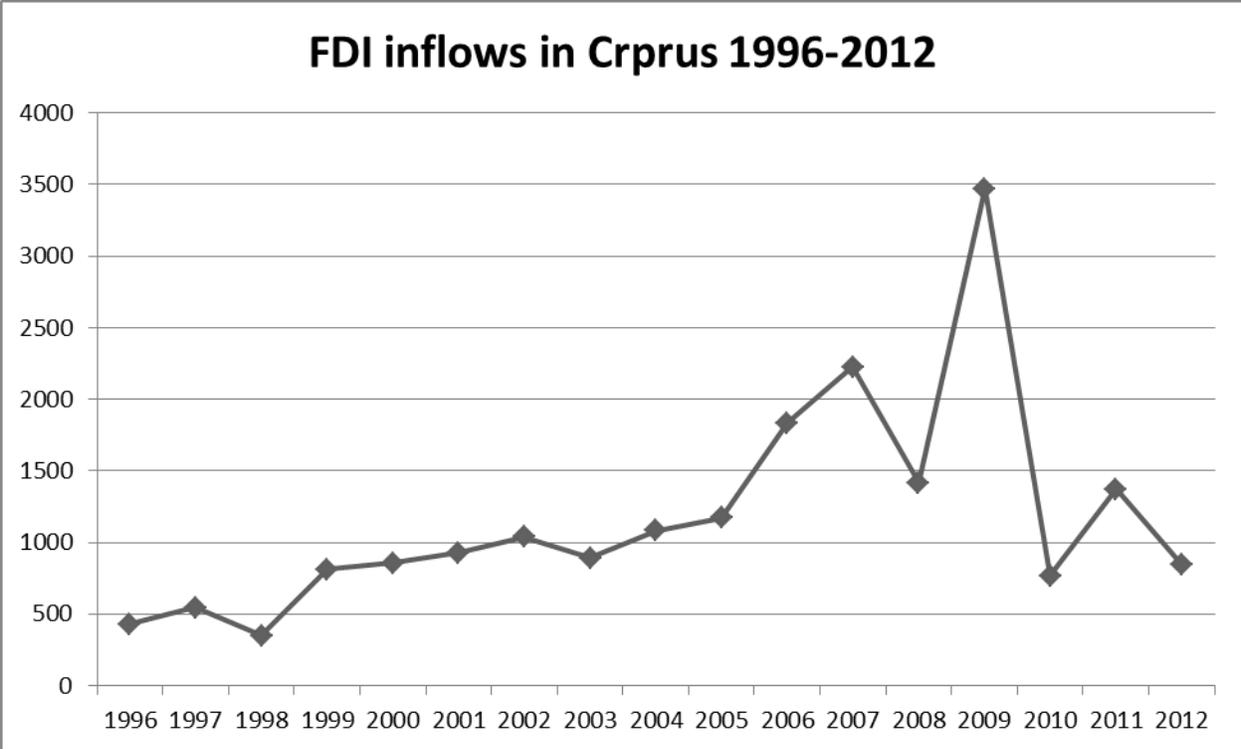
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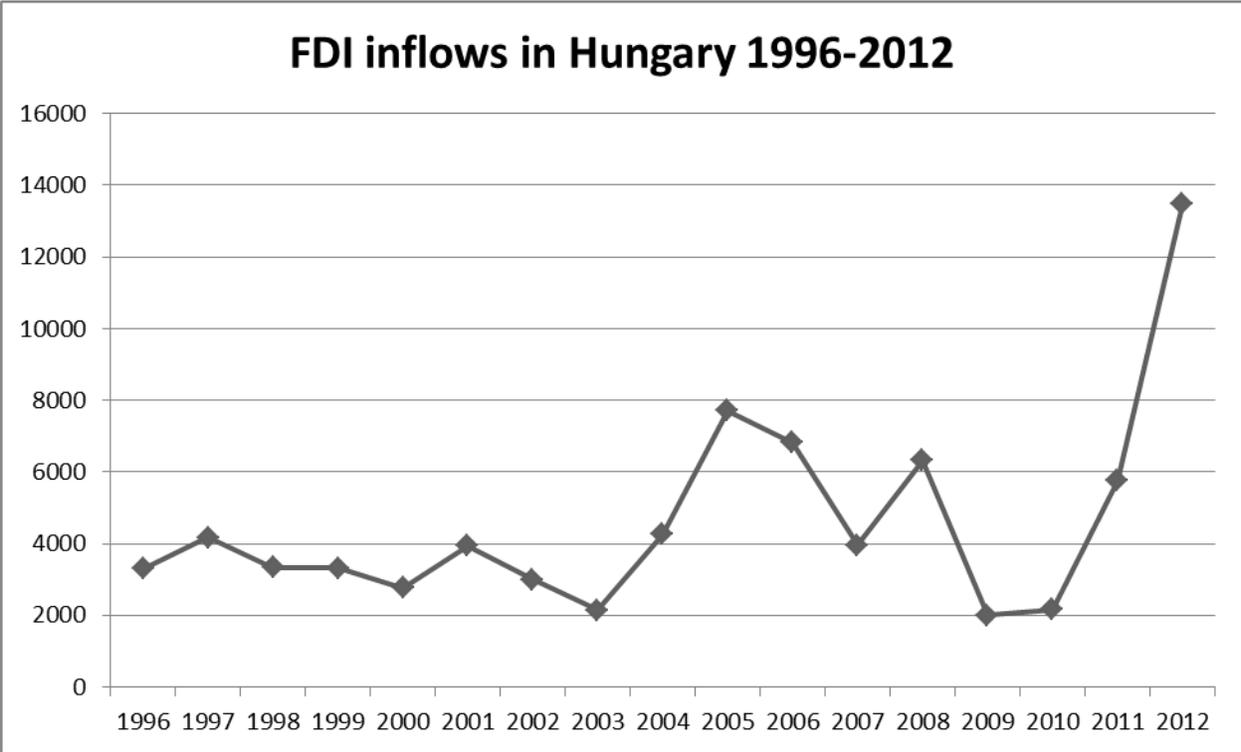
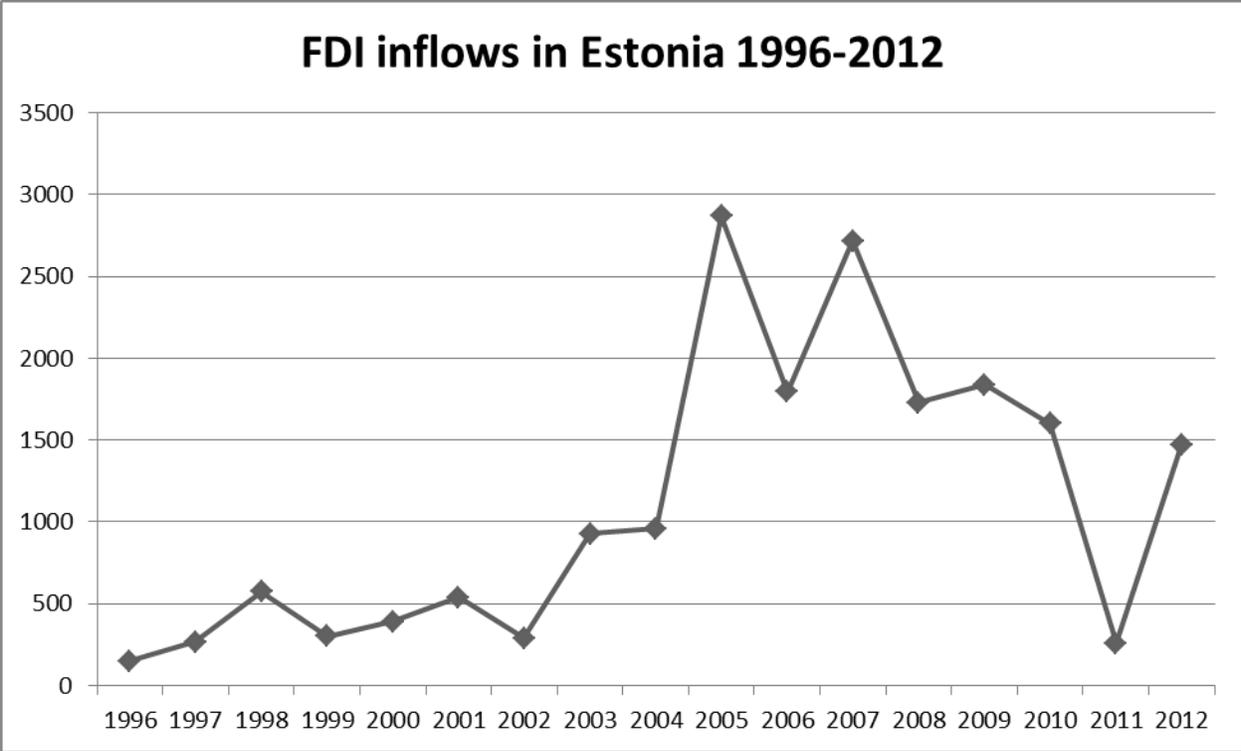
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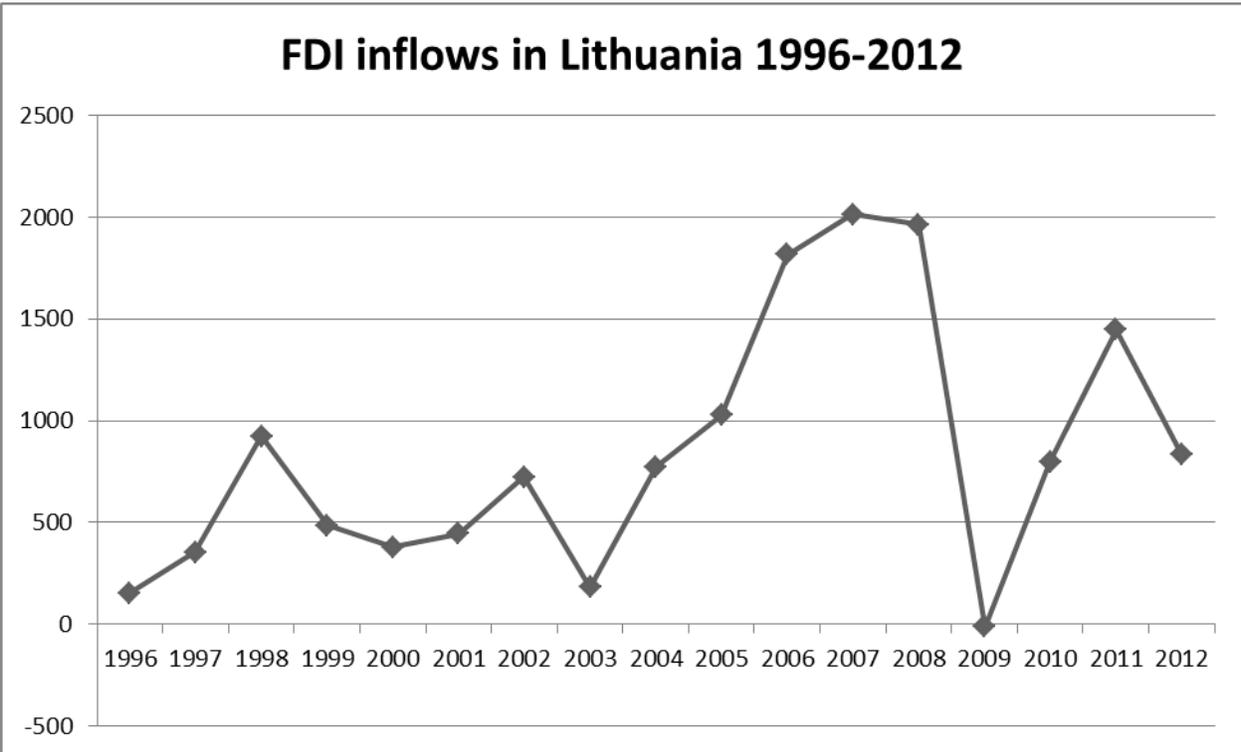
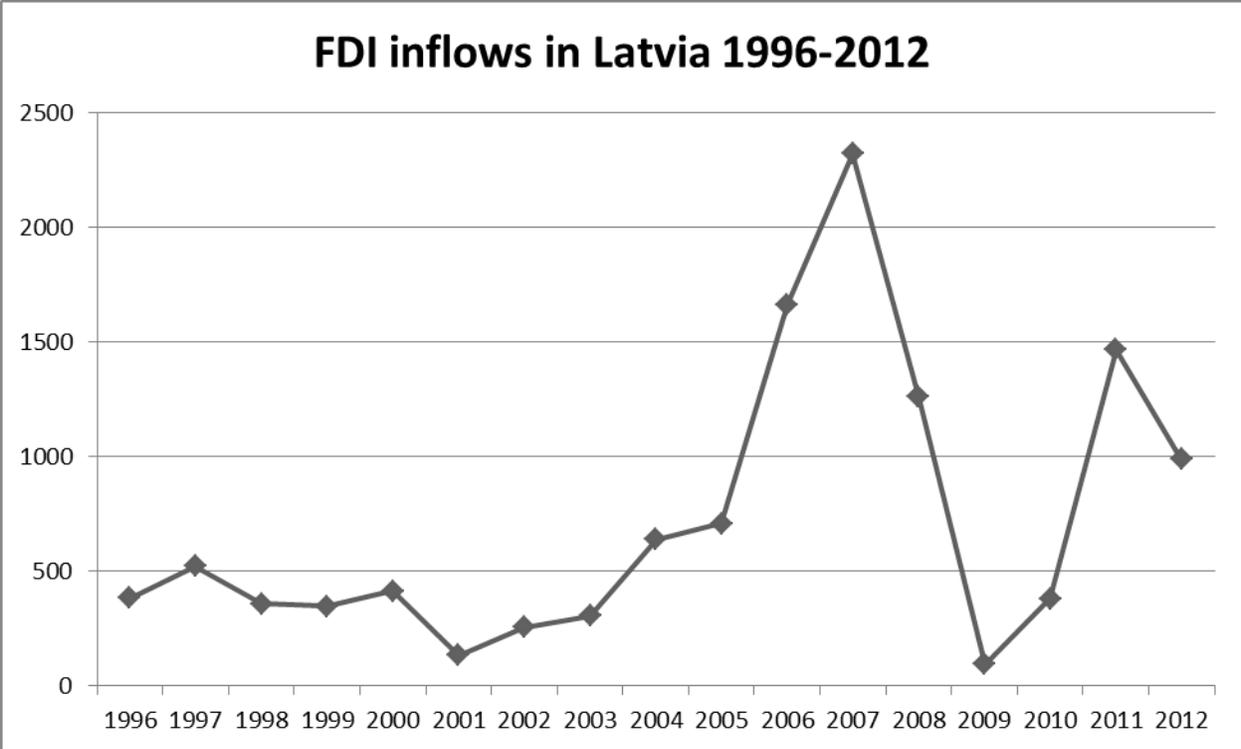
Appendix A: FDI in the 12 countries of the 5th enlargement 1996-2012¹⁷

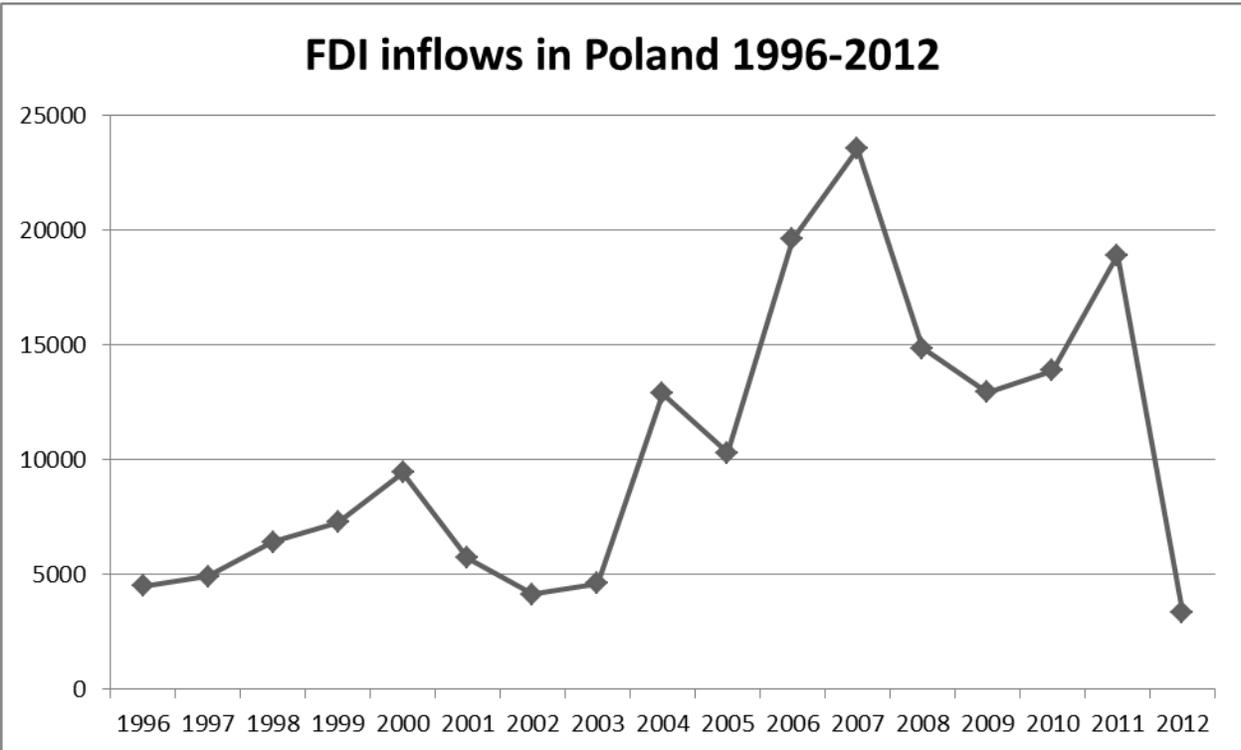
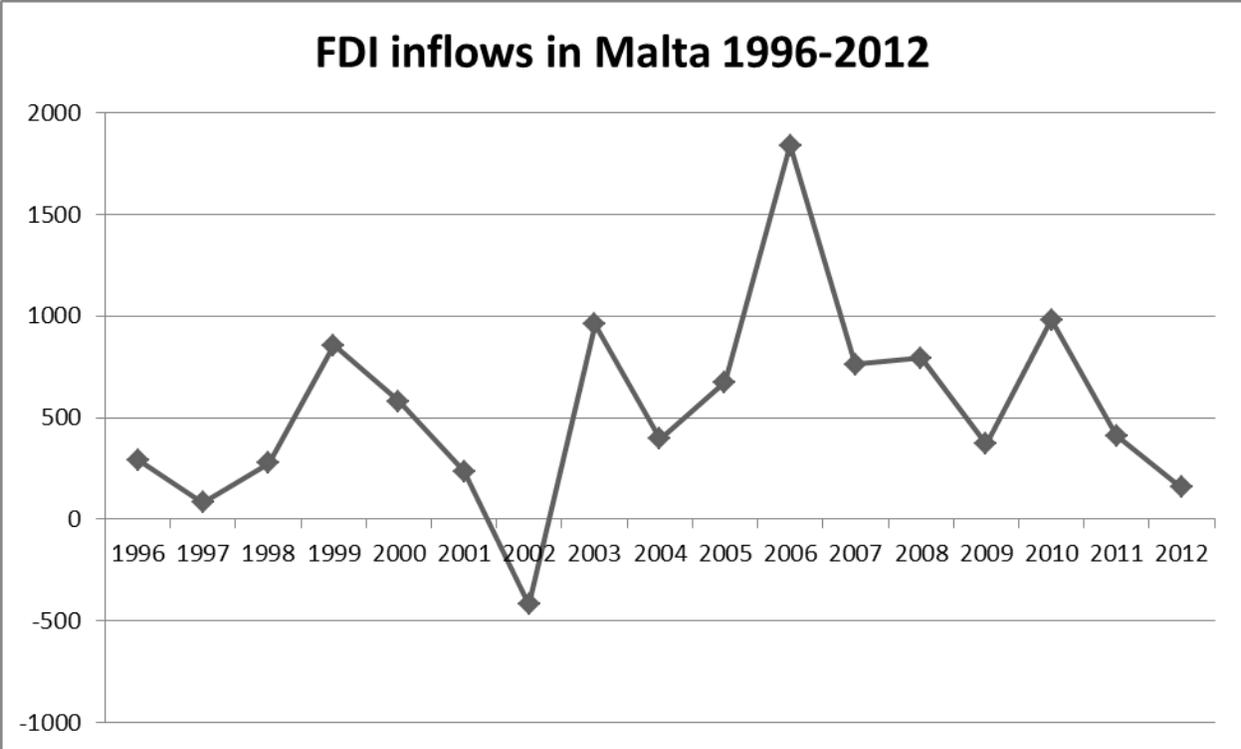


¹⁷ United Nations Conference on Trade and Development. Available at: <http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Interactive-database.aspx>, accessed in July 2014

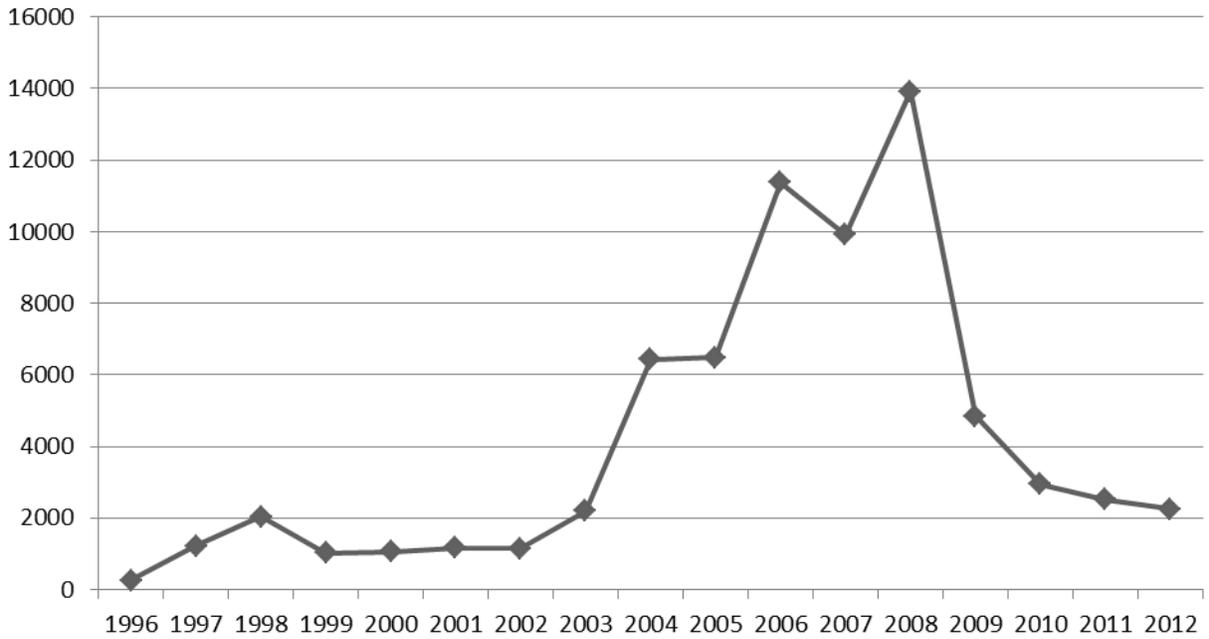




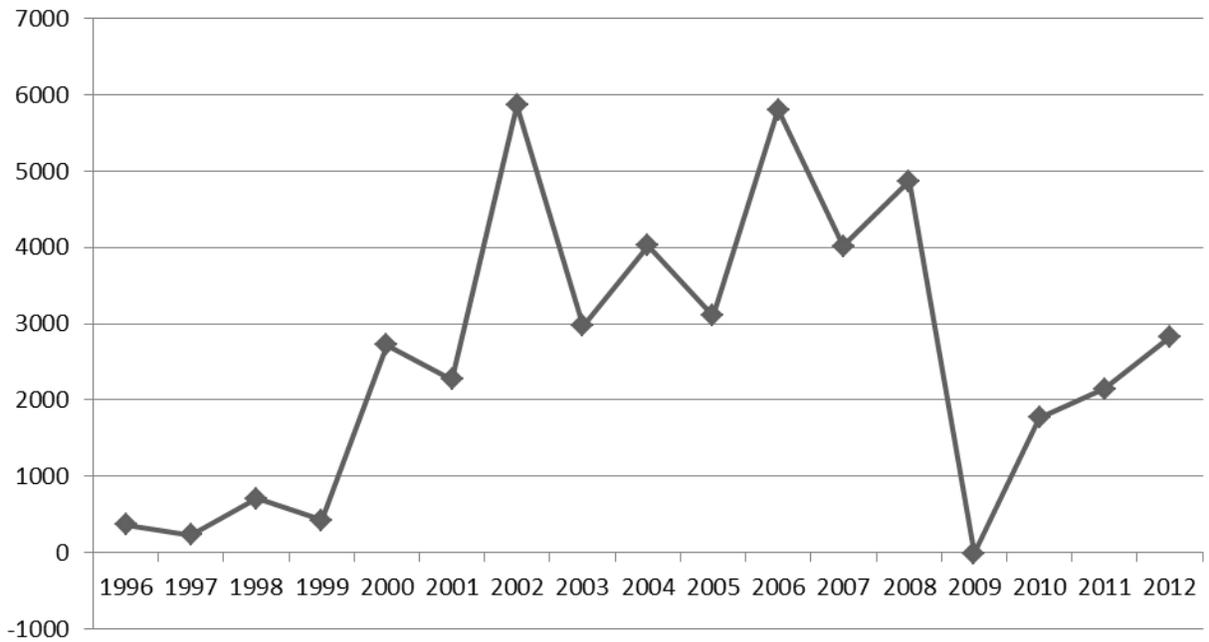




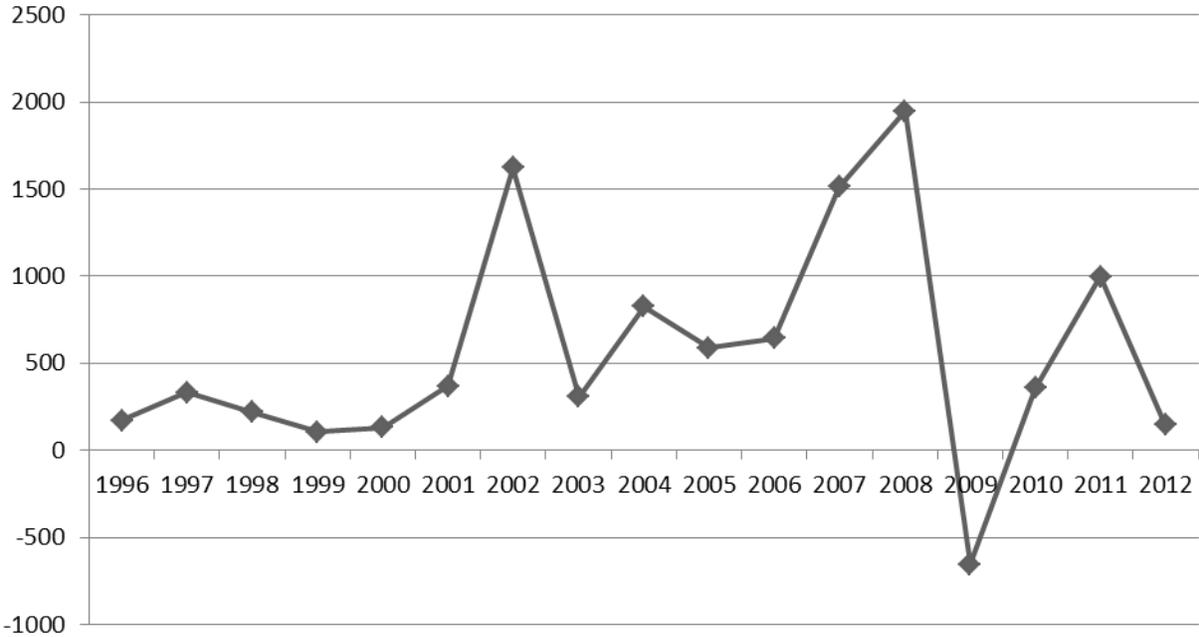
FDI inflows in Romania 1996-2012



FDI inflows in Slovakia 1996-2012



FDI inflows in Slovenia 1996-2012



Appendix B: Variable measurement and Descriptive Statistics

Table B.1: Variable Measurement

<i>Foreign Direct Investment</i>	<p>The sum of all annual new FDI inflows in US Dollars at 2012 prices and 2012 exchange rates in millions. An investment involving a long-term relationship and reflecting a lasting interest of a resident entity in one economy (direct investor) in an entity resident in an economy other than of the investor For associates and subsidiaries, FDI flows consist of the net sales of shares and loans (including non-cash acquisitions made against equipment, manufacturing rights, etc.) to the parent company plus the parent firm’s share of the affiliate’s reinvested earnings plus total net intra-company loans (short- and long-term) provided by the parent company. For branches, FDI flows consist of the increase in reinvested earnings plus the net increase in funds received from the foreign direct investor. FDI flows with a negative sign (reverse flows) indicate that at least one of the components in the above definition is negative and not offset by positive amounts of the remaining components. Source: United Nations Conference on Trade and Development: http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Interactive-database.aspx, accessed in July 2014.</p>
<i>EU Signaling</i>	<p>Signaling dummies to the 12 Eastern Enlargement countries are assigned in accordance with the application stages they were in during the respective years in the dataset. A country receives a 1 for the “credible candidate” stage if it has signed an association agreement with the EU but has not yet entered accession negotiations; it receives a 0 otherwise. The “accession negotiations” dummy assigns a 1 to countries that have begun accession negotiations but have not yet signed a Treaty of Accession, and 0 otherwise. Source: Author.</p>
<i>Corruption Control</i>	<p>The Control of Corruption Index (one of the six World Governance Indicators (WGI)). The Control of Corruption Index is a composite governance indicator based on 32 underlying data sources. These data sources are rescaled and combined to create an aggregate using an unobserved components model (UCM). The UCM assumes that the observed data from each source are a linear function of the unobserved level of governance, plus an error term. This linear function is different for different data sources, and so corrects for the remaining non-comparability of units of the rescaled data noted above. The resulting estimates of governance are a weighted average of the data from each source, with weights reflecting the pattern of correlation among data sources. The UCM assigns greater weight to data sources that tend to be more strongly correlated with each other. While this weighting improves the statistical precision of the aggregate indicators, it typically does not affect very much the ranking of countries on the aggregate indicators. The composite measures of corruption control generated by the UCM are in units of a standard normal distribution, with mean zero, standard deviation of one, and running from approximately -2.5 to 2.5, with higher values corresponding to better outcomes. The measure is useful as a tool for broad cross-country comparisons and for evaluating broad trends over time. Source: World Bank: http://info.worldbank.org/governance/wgi/index.aspx#doc, accessed in July 2014.</p>

<i>Host Market Size</i>	Gross domestic product, current prices. Values are based upon GDP in national currency converted to U.S. dollars using market exchange rates (yearly average). Exchange rate projections are provided by country economists for the group of other emerging market and developing countries. Exchanges rates for advanced economies are established in the WEO assumptions for each WEO exercise. Expenditure-based GDP is total final expenditures at purchasers' prices (including the f.o.b. value of exports of goods and services), less the f.o.b. value of imports of goods and services. Annual figures in billions of USD. Source: World Bank.
<i>Trade Openness</i>	Percent change in volume of imports of goods and services. Percent change of volume of imports refers to the aggregate change in the quantities of total imports whose characteristics are unchanged. The goods and services and their prices are held constant, therefore changes are due to changes in quantities only. Source: World Bank.
<i>Inflation</i>	Inflation, average consumer prices. Expressed in averages for the year, not end-of-period data. A consumer price index (CPI) measures changes in the prices of goods and services that households consume. Such changes affect the real purchasing power of consumers' incomes and their welfare. As the prices of different goods and services do not all change at the same rate, a price index can only reflect their average movement. A price index is typically assigned a value of unity, or 100, in some reference period and the values of the index for other periods of time are intended to indicate the average proportionate, or percentage, change in prices from this price reference period. Price indices can also be used to measure differences in price levels between different cities, regions or countries at the same point in time. [CPI Manual 2004, Introduction] For euro countries, consumer prices are calculated based on harmonized prices. For more information see http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-BE-04-001/EN/KS-BE-04-001-EN.PDF .] Source: World Bank.
<i>Government Spending</i>	Government Expenditure as a percent of GDP. Total expenditure consists of total expense and the net acquisition of nonfinancial assets. Note: Apart from being on an accrual basis, total expenditure differs from the GFSM 1986 definition of total expenditure in the sense that it also takes the disposals of nonfinancial assets into account. Source: World Bank.
<i>Unit Labor Cost</i>	Gross average wages, denominated in US Dollars at current exchange rates. Gross average monthly wages cover total wages and salaries in cash and in kind, before any tax deduction and before social security contributions. They include wages and salaries, remuneration for time not worked, bonuses and gratuities paid by the employer to the employee. For most countries wages cover total economy and are expressed per full-time equivalent employee. This enables comparison of different countries irrespective of the length of working time and the share of part-time and full-time workers. Source: UNECE Statistical Database: http://w3.unece.org/pxweb/dialog/varval.asp?ma=60_MECCWagesY_r&path=../database/STAT/20-ME/3_MELF/&lang=1&ti=Gross+Average+Monthly+Wages+by+Country+and+Year ,

accessed in July 2014.

Foreign Reserves

Total reserves (includes gold, current US Dollars). Source: World Bank.

Structural Reforms

Average of the six EBRD transition indicators: large scale privatization, small scale privatization, governance and enterprise restructuring, competition policy, price liberalization, and trade and forex reform. These have been used to track reform developments in all countries of operations since 1989. Progress is measured against the standards of industrialized market economies, while recognizing that there is neither a “pure” market economy nor a unique end-point for transition. The measurement scale for the indicators ranges from 1 to 4+, where 1 represents little or no change from a rigid centrally planned economy and 4+ represents the standards of an industrialized market economy. Source: EBRD: <http://www.ebrd.com/what-we-do/economic-research-and-data/data/forecasts-macro-data-transition-indicators.html>, accessed in July 2014.

An additional measure of the extent of structural reforms is the Investment Freedom Index of the Heritage Foundation. The *index* evaluates a variety of regulatory restrictions that are typically imposed on investment. Points are deducted from the ideal score of 100 for each of the restrictions found in a country’s investment regime. It is not necessary for a government to impose all of the listed restrictions at the maximum level to effectively eliminate investment freedom. Those few governments that impose so many restrictions that they total more than 100 points in deductions have had their scores set at zero. Investment restrictions are divided into seven categories: investment restrictions based on nationality, burdensome foreign investment code in terms of transparency and bureaucratic structures, restrictions on land ownership, various sectoral restrictions or barriers, commonality of expropriations of investment without due compensation, foreign exchange controls, capital controls in terms of instances of repatriation of profits or need for government approval for various transactions. The *index* relies on the following sources for data on capital flows and foreign investment, in order of priority: official government publications of each country; Economist Intelligence Unit, Country Commerce, 2010–2013; Office of the U.S. Trade Representative, 2013 National Trade Estimate Report on Foreign Trade Barriers; and U.S. Department of Commerce, Country Commercial Guide, 2010–2013. Source: The Heritage Foundation:

<http://www.heritage.org/index/book/methodology>, accessed in July 2014.

The Financial Crisis

A dummy variable for every country for every year measuring the presence a banking crisis. The variable comes from the Luc Leaven and Fabian Valencia (2012) dataset (Systemic Banking Crises Database: An Update) which covers the universe of systemic banking crises for the period 1970-2011. The database includes all systemic banking, currency, and sovereign debt crises during the period 1970–2011. A banking crisis is defined as systemic if two conditions are met:

- 1) Significant signs of financial distress in the banking system (as indicated by significant bank runs, losses in the banking system, and/or bank liquidations)
- 2) Significant banking policy intervention measures in response to significant losses in the banking system.

The first year of the crisis is the one when both criteria are met. Source: IMF:

<https://www.imf.org/external/pubs/cat/longres.aspx?sk=26015.0>, accessed in July 2014.

An additional control for the effects of the financial crisis on investment is global FDI. This is the sum of the FDI inflows in all countries in the world for every year in the dataset. Source: United Nations Conference on Trade and Development: <http://unctad.org/en/Pages/DIAE/FDI%20Statistics/Interactive-database.aspx>, accessed in July 2014.

Table B.2: Descriptive Statistics

Measure/Variable	Observations	Mean	Std. Dev.	Min	Max
FDI inflows	204	2,952.68	3,899.84	(652.50)	23,560.76
Lagged FDI inflows	192	2,934.99	3,887.08	(652.50)	23,560.76
Credible Candidate	204	0.17	0.37	-	1.00
Accession Negotiations	204	0.25	0.44	-	1.00
Corruption Control	192	0.41	0.49	(0.82)	1.80
EBRD Structural Reforms	204	47.14	5.81	24.00	54.00
Global FDI	204	1,106,143.00	471,895.50	391,439.30	2,002,695.00
Trade Openness	200	8.05	19.45	(61.37)	148.17
Unit Labor Cost	202	899.14	684.66	75.60	3,078.70
Foreign Reserves	204	13,000,000,000.00	18,200,000,000.00	207,000,000.00	109,000,000,000.00
Investment Freedom	204	66.67	12.15	30.00	90.00
Host Market Size	204	48.32	67.27	0.53	267.94
Inflation	204	181.93	223.08	14.35	1,688.83
Government Spending	192	28.92	13.31	12.10	82.08
Current Account Balance	204	4.44	18.91	(52.29)	50.73
Financial Crisis	204	0.14	0.35	-	1.00

Appendix C: FDI Stock per Capita in the EU28
(United Nations Conference on Trade and Development)

Country	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Luxembourg	84,701	126,027	158,864	132,312	171,589	273,874	245,322	319,968	308,586	343,854	232,385
Belgium	22,383	34,116	45,047	36,312	45,953	76,949	80,503	90,761	88,955	92,354	93,714
Ireland	46,470	55,563	50,823	39,329	37,027	47,465	43,257	56,685	63,889	55,609	65,092
Sweden	13,384	17,793	22,017	19,038	24,990	32,085	30,184	35,672	37,012	36,448	39,617
Malta	5,845	8,167	9,974	10,507	15,896	19,755	18,750	21,271	38,965	37,462	37,716
Netherlands	21,810	28,395	32,017	29,402	33,750	46,621	39,120	38,906	35,234	35,130	34,281
Denmark	15,417	18,607	21,594	21,486	24,581	29,736	28,101	28,384	25,919	25,982	26,404
Cyprus	6,783	9,374	11,532	11,191	17,841	23,165	21,023	23,020	21,600	25,690	26,016
United Kingdom	9,216	10,606	12,315	14,082	18,650	20,118	15,653	17,841	18,671	18,906	20,962
Austria	5,554	7,086	8,639	10,028	13,426	19,550	17,758	20,626	19,201	18,042	18,758
France	7,164	10,532	13,891	14,139	17,500	19,594	14,127	16,131	16,273	14,683	16,723
Finland	6,539	9,645	10,979	10,450	13,401	17,334	15,713	15,944	16,161	16,503	16,657
EU27 (European Union)	6,149	8,135	9,926	9,673	12,136	15,188	13,374	14,847	14,824	14,604	15,453
Estonia	3,119	5,188	7,449	8,380	9,450	12,482	12,209	12,531	12,449	12,478	14,052
Spain	6,216	8,079	9,536	8,861	10,485	13,135	13,044	13,853	13,637	13,391	13,567
Czech Republic	3,788	4,440	5,613	5,935	7,783	10,899	10,906	12,053	12,247	11,445	12,914
Portugal	4,282	5,789	6,374	6,007	8,363	10,870	9,400	10,764	10,462	10,461	10,950
Hungary	3,566	4,770	6,089	6,058	7,964	9,506	8,781	9,878	9,079	8,475	10,408
Slovakia	2,300	4,025	5,209	5,465	7,113	8,785	9,265	9,636	9,206	9,375	10,185
Germany	3,613	4,783	6,205	5,767	7,166	8,429	8,096	8,509	8,708	8,639	8,737
Slovenia	2,065	3,163	3,799	3,626	4,478	7,144	7,748	7,502	7,128	7,424	7,611
Croatia	1,360	1,930	2,790	3,275	6,173	10,180	6,992	8,299	7,944	7,022	7,205
Bulgaria	516	813	1,298	1,790	3,054	4,965	5,804	6,526	6,302	6,354	6,741
Poland	1,264	1,515	2,273	2,381	3,295	4,672	4,299	4,842	5,634	5,175	6,018
Latvia	1,171	1,404	1,953	2,138	3,260	4,752	5,080	5,131	4,774	5,391	5,931
Italy	2,343	3,252	3,978	4,048	5,289	6,328	5,475	6,049	5,418	5,581	5,854
Lithuania	1,150	1,439	1,862	2,404	3,236	4,457	3,854	3,956	3,993	4,313	4,798
Romania	356	557	938	1,186	2,094	2,909	3,146	3,343	3,270	3,328	3,468
Greece	1,405	2,021	2,555	2,610	3,680	4,728	3,376	3,717	3,083	2,561	3,310