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The Effects of Transition and Political Instability On Foreign Direct Investment Inflows: Central Europe and the Balkans

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The Effects of Transition and Political Instability

On Foreign Direct Investment Inflows:

Central Europe and the Balkans*

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Abstract
This paper examines the effect of transition and of political instability on FDI flows to the transition economies of Central Europe, the Baltics and the Balkans. We find that FDI to transition economies unaffected by conflict and political instability exceed those that would be expected for comparable West European countries. Success with stabilization and reform increased the volume of FDI inflows. In the case of Balkan counties, conflict and instability reduced FDI inflows below what one would expect for comparable West European countries, and reform and stabilization failures further reduced FDI to the region. Thus we find that the economic costs of instability in the Balkans interms of foregone FDI have been quite high.
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Key Words: foreign direct investment, transition, political instability, political risk

I. Introduction

The transition economies of Eastern Europe have seen a large upsurge in foreign direct investment (FDI) during the past decade (Henriot, 2003, EBRD, 1999). These inflows have been dramatic both because of their dynamism, as these countries began the 1990s with practically no stock of FDI, and because FDI had important consequences for the transition process and for these countries' economic performance (see, e.g., Bevan and Estrin, 2000). This upsurge of FDI into the transition countries has spurred a large empirical literature on the determinants of FDI into the region. Virtually all of these studies are motivated by an interest in the effects of "starting conditions", progress in economic transition to capitalism, economic policies toward FDI, general macroeconomic economic performance, and political stability on FDI flows.[1] Other studies, in addition to the foregoing explanatory variables, have also examined in greater detail the role of natural resources, agglomeration economies and infrastructure (Campos and Kinoshita, 2003); of corruption (Smarzynska and Wei, 2002); of the methods of privatization, of specific policies that affect profitability of FDI and of host-country labor skills (Carstensen and Toubal, 2004). Yet other studies have been motivated by the desire to identify the long-term potential for FDI in the transition economies (Henriot, 2003), and to determine whether current FDI flows to these countries come at the expense of other potential host countries (Buch *et al*., 2001, Galego *et al.,* 2004).

A common characteristic of most of these studies is that they follow a modeling strategy for explaining FDI inflows of the transition economies that combines explanatory variables suggested by the theory of FDI, such as host-country GDP, factor endowments, etc., with variables that serve as proxies for host-country transition strategies, policies and performance. As such, these specifications serve as useful ways of capturing the dynamics of FDI into the transition economies during the past decade. However, such an approach raises some methodological or conceptual questions that this paper seeks to address. The first of these is that the parameters of regressions that include both explanatory variables reflecting economic

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[1] A sample of such recent work includes Bevan and Estrin (2000), Brenton et al. (1998), Deichman *et al.* (2003), and Resmini (2000).

fundamentals as well as variables that reflect progress with transition are subject to significant instability over time. In an insightful paper, Polanec (2004) demonstrates that, from the start of transition through as late as 1998, important macroeconomic phenomena in transition economies were basically unrelated to economic fundamentals as proxied by variables suggested by economic theory, but easily explained by initial conditions and progress in reform and transition. Subsequent to that period, the variables suggested by economic theory play the dominant explanatory role, while transition progress becomes much less relevant. This suggests that, while a combination of economic and transition-related variables may well do a good job of explaining FDI flows to East Europe in the 1990s, these explanatory variables and parameter estimates may not be appropriate for explaining FDI performance in the future. In some of these countries, transition is largely complete, at least in terms of the transition progress indices often used in the empirical literature on FDI, so that retaining such indices in forecasts of future flows may miss many of the more subtle institutional changes taking place in these countries, particularly in the ones that have already joined the European Union. More important, parameter estimates of the economic drivers of FDI may be biased due to the inclusion of these reform variables in the specification.

Another problem is that specifications that mix economic fundamentals and transition variables to explain FDI inflows are unable to answer the question of whether or not the observed FDI flows to transition economies have been abnormally high relative to flows experienced by non-transition economies of similar economic characteristics because of transition factors, such as the large number of firms available for acquisition through privatization, or abnormally low because of the lack of institutional infrastructure, etc., that characterize transition economies. While the presumption is that the conditions created by transition have been a barrier to FDI, some of the transition economies have had inflows of FDI in the 1990s that rival or even exceed those of similarly sized but wealthier and more institutionally developed capitalist neighbors. Whether such flows can be sustained in the future is thus an important issue.[2]

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[2] Compare, for example, Henriot (2003) who argues that some transition economies are already oversaturated with FDI, with Sinn and Weichenrieder (1997) who believe FDI in transition economies to be well below its potential and EBRD (1999) which finds FDI inflows to be high but not excessively so in the more attractive transition economies.

Finally, we note that some of the transition economies have faced political instability of a fundamentally different nature from that faced by other countries. All transition economies have been plagued by some measure of uncertainty about the evolution of democracy, the stability and effectiveness of governments and the danger of social unrest, and many of the papers cited here introduce variables to capture the effect of such uncertainty on FDI inflows. However, some transition economies, specifically those in the Balkans, have faced a different type of political risk, caused by actual or potential warfare, whether interstate, intrastate or inter-ethnic as well as foreign economic and military interventions. Such risks are of a different order of magnitude from ordinary civil tensions and discord, and separating them from the "normal" political uncertainty that accompanies transition requires a more explicit recognition of the problem and modeling strategies that reflect the unique situation of the countries affected by such events.

In the next section of the paper, we briefly examine the pattern of FDI inflows for a sample of transition economies to show both its evolution over time and its geographic distribution. Then we briefly review the literature that relates political risk to investment decisions. In Section IV we propose a way of disentangling the effects of economic factors and transition and political instability on the flow of FDI to transition economies. We do so by first estimating a benchmark model that yields estimates of FDI inflows to non-Balkan transition economies as if they were European economies not affected by transition. By comparing these benchmark estimates with actual flows of FDI to these countries, we are able to estimate the effects of their transition policies and achievements on FDI. Our results are in general consistent with other studies of the effects of transition policies and outcomes on FDI. Finally, we use our estimates of transition effects on FDI to estimate expected flows of FDI to the Balkan countries, and argue that the large shortfalls from expected FDI inflows that we find are attributable to the added risks caused by regional strife. In Section V, we sum up our findings, and we argue that the costs of FDI shortfalls are likely to exceed their monetary magnitude by briefly reviewing the literature on the effects of FDI in the transition economies of Eastern Europe.

II. FDI Flows to Transition Countries

Figure 1 shows FDI inflows into four Central European economies. All have experienced a rapid increase in FDI. Hungary was an early leader in FDI inflows, in part because of its more sophisticated economic relations with the West before the transition, which led many foreign investors to view Hungary as a country that had the infrastructure and economic savvy to accept foreign investments. Another reason for Hungary's early lead was its privatization strategy, which made sales of state-owned firms to foreign investors the preferred path to privatization. Poland's FDI inflows began to grow somewhat later than Hungary's, in part due to the delays in the privatization process in Poland as well as to its design. Nevertheless, for the second half of the decade, Poland experienced the largest FDI inflows of this group of countries, as it is also the largest economy in this sample group. Czech FDI inflows began to accelerate even later than Poland's due to the fact that the voucher privatization in the Czech Republic tended to favor domestic ownership over acquisitions of state-owned firms by foreigners. Thus, it took longer before foreign investors could come to own Czech firms through acquisitions, and, consequently, more foreign investment took the form of greenfield investments, which have a much longer gestation period.[3] The Slovak Republic has the lowest levels of FDI, and it was also the last country to see a sharp upsurge in investments. These lower FDI inflows reflect the Slovak Republic's smaller size as well as the negative image that foreign investors formed of Slovakia's domestic politics, its ability to manage its economy, to proceed with meaningful economic reforms, and to manage its external relations with neighboring countries and with the EU. Since the defeat of the Mečiar government, investor sentiment has improved, aided no doubt by the objective fact that the Slovak economy has performed quite well relative to its transition-economy neighbors.

Figure 1 also shows the volatile nature of FDI inflows into these countries. This volatility results from the fact that international mergers and acquisitions, a key vehicle for FDI, are greatly influenced by stock market fluctuations. In these transition economies, an additional source of volatility has been the

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[3] Greenfield investments mean the construction of new production facilities by the foreign investor while acquisitions involve the purchase of a controlling interest in an existing local firm. There were, of course, important acquisitions in

privatization through FDI of large assets such as national telephone companies (Matav in Hungary, SPT Telekom in the Czech Republic) and other large firms and banks.

Foreign direct investment inflows into the Balkan region are lower than those to the Central European countries, and, as Figure 2 shows, there are greater inter-country differences in the volume of FDI inflows. Romania, Bulgaria and Croatia emerged as significant host countries for FDI in the second half of the decade. Progress with economic stabilization and economic and political reform no doubt played a role in these trends. However, at least Bulgaria and Romania are considerably bigger than the other Balkan countries, so an inter-country comparison of the levels of FDI requires some scaling to account for country size. Figure 3 provides the cumulated FDI from 1991 to 2001 divided by nominal GDP in 2001 for the Central European countries. With such a scaling, the Czech Republic and Hungary surpass both Poland and the Slovak Republic by a wide margin. Figure 4 provides a scaling based on population, providing cumulated 1991-2001 FDI inflows per capita. These reveal much the same picture, with the Czech Republic and Hungary leading Poland and the Slovak Republic on a per capita basis.

In the case of the Balkan countries, scaling becomes even more important given the greater differences in country size. Figure 5 provides data on cumulative 1991-2001 inflows relative to nominal GDP, and Figure 6 provides the same information on a per capita basis. A number of conclusions can be drawn from an examination of Figures 3-6. Perhaps the most striking is the gap in FDI inflows between the Balkan countries and their counterpart transition economies in Central Europe when we account for country size. Whether scaled by GDP or by population, with the exception of Croatia and, on a per capita basis, of Slovenia, the levels of FDI in the Balkan region fall far short of those found in the Central European transition economies. Only Croatia's FDI inflows relative to GDP and population are comparable to those of Poland and the Slovak Republic, although they fall well short of the inflows achieved by Hungary and the Czech Republic. Slovenia does poorly when scaled by GDP because of high per capita GDP levels, but it does better on a per capita basis, achieving levels comparable to those of Poland and the Slovak Republic.

Nevertheless, given Slovenia's and Croatia's level of economic development, the strong influence

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the Czech Republic as well, including VW's purchase of Škoda, the sale of SPT Telekom, the country's telephone

of foreign trade with Western Europe and even of foreign investors in these countries in the 1980s, the relative sophistication of their economic and financial institutions, and the experience of managers in these countries with market mechanisms, one might have expected these countries to do at least as well as, if not better than, the Czech Republic and Hungary as hosts for foreign investors. The performance of the other former Yugoslav Republics is much worse, especially when considered on a per capita basis, and Bulgaria and Romania do not have FDI inflows that distinguish them from this latter group of countries. Thus, the data clearly reveal what can reasonably be termed a shortfall in FDI for the Balkan countries.

The causes of this Balkan shortfall are manifold.[4] Some of them can be attributed to the lower levels of development of some of the former Yugoslav Republics, though even Slovenia and Croatia, which have high levels of per capita income, also exhibit this shortfall. Some of the Balkan countries are small by any standard, which may limit FDI inflows relative to countries that can offer a large domestic market, but even large economies such as Bulgaria and Romania suffer shortfalls in FDI. Many, although by no means all, Balkan countries have been unable to implement or sustain cohesive reform strategies.[5] Moreover, many Balkan countries are small and on the periphery of the EU.[6] Some of the shortfall may be caused by failures in stabilization, such as those experienced by Bulgaria and Romania, but FYROM (Macedonia), Slovenia and Croatia have had low levels of inflation and relatively stable exchange rates, yet they have fared no better in attracting foreign investors. There were also problems in privatizing firms, with many of the former Yugoslav Republics relying on variants of the so-called Markovic Law on privatization, which effectively put much of the productive property in these countries in the hands of insiders.[7] Yet, different means were used in Bulgaria and Romania, with little evident effect on FDI inflows.

One common element affecting the Balkan region has been political instability, both among countries of the region and within many of the countries themselves. The early and partly violent breakup of the

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company, and, more recently, the sale of large commercial banks such as Komerční banka.

[4] For a thoughtful survey, see Slaveski and Nedanovski (2002).

[5] Claessens *et al*. (2001) and Lankes and Stern (1999) stress the importance of reform progress in attracting FDI to transition economies.

[6] On the geographic handicaps faced by the Balkan countries, see Petrakos (2002).

[7] For some telling insights into the workings of privatization in the former Yugoslav Republics, see Šuklev (1996), Slaveski, (1997), Franićevič (1999) and Hadzič (2002).

Republic of Yugoslavia and the continued fragmentation of what remained as Yugoslavia, culminating in the NATO intervention, are but the most visible example of political instability in the region. FYROM has suffered from inter-ethnic strife, a blockade by Greece, as well as from the enforcement of the blockade against Serbia. Albania, too, has experienced tensions with both FYROM and Greece, while Croatia has had continuing conflicts with Serbia in addition to its involvement in Bosnia. There have also been domestic instabilities, some based on inter-ethnic tensions or assassinations of political figures, others on failures in regime change and yet others on weak or ineffective governments that were unable to deal with domestic unrest and violence.

III. Political Instability as a Barrier to FDI

Investment, including FDI, is a forward-looking activity based on investors' expectations regarding future returns and the confidence that they can place on these returns. Thus, by its very nature, the FDI decision requires some assessment of the political future of the host country. There are two principal risks stemming from political instability in the host country that the investor faces. The first is that domestic instability or civil war or conflict with neighboring countries will reduce the profitability of operating in the host country because domestic sales or exports are impaired, or production is disrupted, or the facility is damaged or destroyed. The other consequence of political instability stems from the fact that it is likely to affect the value of the host country's currency, thus reducing the value of the assets invested in the host country as well as of the future profits generated by the investment.

There is a growing literature on the effects of this type of political stability on economic performance, both from a theoretical perspective and in terms of empirical work. Carmignani (2003) provides an excellent survey of the literature on the link between political instability and economic performance. The survey covers both theoretical modeling and empirical studies. Also, the papers in a supplement to *Journal of International Money and Finance,* edited by Lothian and Melvin (1991), examine the significance of political risk for investment decisions. Noteworthy individual studies include Citron and Nickelsburg (1987), who build a model of country risk for foreign borrowing that incorporates a political instability variable and Cherian and Perotti (2001), who construct a theoretical political risk

model of capital investment. Fielding (2003) constructs a model of investment in Israel that incorporates indicators of political instability and unrest. There are also related studies that examine the impact of political instability on economic growth and investment. Alesina and Perotti (1996) found that an increase in the intensity of political instability decreases investment, hence slowing down economic growth. Using a political instability index based on political assassinations, revolutions and successful coups, Campos and Nugent (2002, 2003) investigated the causal link between the index and growth and investment, respectively, using pooled panel data. Their results provide only weak evidence for the negative link running from political instability to per capita GDP but stronger causality from political instability to investment. Fielding (2003) showed that political instability during the *Intifada* had a significant effect on Israeli investment.

The link between political instability and asset markets and investment in the literature has been studied from several angles. One important strand of the literature emphasizes the importance of political risk in emerging markets. Robin, Liew and Stevens (1996) show that political risk is a more important determinant of asset returns in emerging markets than in developed markets. Bussiere and Mulder (1999), using a sample of 23 countries, conclude that including political variables in economic models significantly improves the ability of such models to explain economic crises. They also find that countries are more vulnerable to financial crises when election results are more uncertain.

Another relevant strand of the literature examines the link between political instability and the behavior of stock markets on the not unreasonable assumption that the latter are a good mirror of investor reactions to political instability. Ketkar and Ketkar (1989) investigated the determinants of capital flight from Argentina, Brazil and Mexico and found that political risk was an important factor in all three countries. Bailey and Chung (1995) studied the impact of political risk on the Mexican stock market and found a significant link between political risk and the equity premium. Kutan and Perez (2002) examined the significance of socio-political instability and organized crime in Colombia on that country's stock market prices and found a significant connection. Political instability has also been linked to the volatility of stock markets (Han and Wei, 1996; Bittlingmayer, 1998; and Aggarwal, Inclan, and Leal, 1999). Other

studies found significant evidence that political events affect asset markets are Willard, Guinnane and Rosen (1996) and Kim and Pei (2001).

There is also a large literature on the effects of political instability on foreign exchange markets, and this provides clear evidence that political instability both causes the value of country's currency to decline and makes the exchange rate more volatile. Kutan and Zhou (1993, 1995) show that the intensity of political unrest in Poland preceding and during the economic reforms introduced during late 1980s and early 1990s affected foreign exchange returns and bid-ask spreads. They found that events that reflected political turmoil caused substantial declines in the value of the zloty on the foreign exchange market and increased the bid-ask spreads on foreign exchange transactions, making them more costly for investors. Melvin and Tan (1996) studied the effects of social unrest on foreign exchange market spreads in South Africa and across 36 industrialized and developing countries. They also found that political unrest caused larger spreads. Crowley and Loviscek (2002) assessed the impact of political risk on the currency markets of six Latin American countries, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela, during the 1990s. They also reported a statistically significant relationship wherein instances of political unrest depressed a country's currency on foreign exchange markets for up to three months. The link between the depreciation of the currency and the increased foreign exchange market volatility is demonstrated in the foregoing literature, and a decline in FDI inflows in response to greater volatility is clearly shown by Kogut and Chang (1996).

IV. Estimating Transition Economies' FDI: Disentangling the Effects of Transition and Political Instability

A. The Traditional Approach to Measuring the Effects of Political Instability on FDI

Transition economies' FDI inflows differ from those of similar market economies due to the effects of transition, but the clear shortfall in the FDI inflows of the Balkan economies suggested by the data reviewed in Section II is related to an additional factor, the effects of political instability in the region on the decisions of potential foreign investors. The difficulty in disentangling these two effects drives our modeling strategy. One possible approach, appealing because it is direct and affords a clear test of the hypothesis that political instability has depressed FDI in the Balkans, would be to specify and estimate a model of FDI in the

Balkan countries that would have as explanatory variables not only the standard economic variables used to explain a country's FDI but also a set of variables describing the pace of system change and economic liberalization in each Balkan country as well as a final set of variables that captures the political instabilities to which each country is subject over time. The expectation would be that the coefficients associated with the political instability variables would thus provide a quantitative measure of the effect of political instability on each country's FDI inflows, holding reform and economic characteristics fixed.

Indeed, there is a well developed literature that examines the relationship between host country political instability and FDI inflows in precisely this fashion. For example, in addition to some of the studies cited in the introduction that include Balkan countries in their sample, there is a broader literature that uses this approach. Bennett and Green (1972), Schneider and Frey (1985), Singh and Jun (1995), Globerman and Shapiro (2002) and Cho (2003) all add measures that reflect domestic political instability or risk as an explanatory variable to economic characteristics of host countries, and they all find that such risk variables help explain FDI inflows because increased political risk significantly reduces FDI. Deichman et al. (2003) find that indicators of the rule of law and of "general investment climate", both of which to some extent reflect political stability, are significant factors in the determinants of FDI inflows into Eurasian transition states.

While these results are germane and instructive for our work, there is one fundamental problem in the approach used by these studies. It is that the measures of political risk used in these studies refer mainly to domestic political instability as quantified by strikes, riots, civil unrest, etc. However, these studies use no risk measures that reflect external sources of political risk, such as war or border clashes between countries, foreign trade embargos, economic sanctions or blockades, war or conflict in neighboring states, etc., that are so important for the Balkan region.

Of course, it would be possible to follow in the path of the aforementioned studies by adding indicators of external conflicts among Balkan countries to our explanatory variables. However appealing such an approach may be, it also has serious drawbacks. The first of these is that there would be a large number of parameters to estimate, while, even with a panel of all Balkan transition countries, the data set

available to estimate these parameters is limited because some countries lack data for the entire 1990s period. Moreover, the Balkan countries least affected by political instability, such as Romania, Slovenia and Bulgaria, have much longer sample periods than do the more impacted countries such as Bosnia. Thus, the regression results would be biased to reflect the experience of the former at the expense of the latter. Truncating the sample to a common time period would, on the other hand, exacerbate the problem of a small sample size relative to the number of parameters to be estimated. An additional problem is that of quantifying the concept of external political instability. While political scientists have developed both aggregate and bilateral measures of the goodness of relations of countries, using these measures is difficult in a situation where nation states are breaking up into constituent parts that have no "record" of external relations, and thus no data on them, and that may have relationships with their neighbors that differ considerably for those of the nation state from which they emerged. A good example of such a situation is that of Macedonia, whose relations with Greece were much more influenced by issues over its name and status that they had been when it was a constituent part of Yugoslavia.

B. An Indirect Approach to Measuring the Effects of Political Instability and Transition on FDI

To overcome these problems, we adopt an indirect approach to quantifying the effects of transition and political instability on FDI in the Balkans. In the first step, we establish the relationship between FDI inflows and country characteristics for European economies that are not undergoing transition and that are not subject to serious political instability. We include in our sample Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Spain, Sweden and Switzerland for the period 1980 to 2001. This panel of countries gives us sufficient observations to develop robust estimates of the relationship between country characteristics and FDI inflows in Europe. We restrict our sample to European countries because we believe these are the appropriate reference group for both the transition economies and for the Balkan countries because they are the most similar in size, location, culture, economic structure and other characteristics. The sample countries have higher per capita incomes than do the transition and Balkan countries, but our use of per capita GDP in PPP terms as an explanatory variable in our specification controls

for this fact. The results of this estimation yield the parameters for Equation 1 below, which predicts FDI inflows for a European market economy given its economic characteristics.[8]

Next, we use Equation 1 and the economic characteristics of a sample of transition economies to predict the FDI inflows that would be expected for these transition countries if they were European market economies rather than being in transition. The difference between the FDI inflows thus projected by Equation 1 and the actual inflows received by this sample of transition economies is then assumed to largely reflect the effects of the transition process on FDI inflows. None of the transition economies in this sample experienced major political instability, so the difference between the projected and actual of FDI inflows is not caused by political instability as would be the case for the Balkan economies. We next specify an equation that relates this difference between the "hypothetical" market and transition economy FDI inflows as a function of starting conditions for transition and transition progress, by which we mean both the stabilization of the economy in terms of inflation and output decline, and the creation of market institutions. We then use this relationship between transition progress and the difference between hypothetical market-economy FDI inflows and transition economy FDI inflows to project the FDI that the Balkan countries should have received given their economic characteristics and their transition progress. The difference between projected and actual inflows of the Balkan countries is then attributed to political instability.

1. Benchmark Estimates of FDI Inflows of Market Economies.

The specification of the equation to describe FDI inflows into our sample of non-transition European countries is drawn from the theory of foreign direct investment, and, as variants of it have been used in numerous studies, we claim no originality for it. Firms undertake FDI in order to exploit firm-specific competitive advantages that cannot be exploited as easily through foreign trade or through the licensing of technology and know-how (Dunning, 1981). Such investment can be classified as horizontal or vertical. In a horizontal investment, the firm replicates its home-country business activities in a foreign country, and thus country characteristics that describe the host country's appeal as a market, such as size, consumers' purchasing power, the pattern of consumption, and openness to trade are major drivers of FDI. While

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[8] Actual FDI for non-sample European market economies fall into the regression's 95% confidence interval.

Markusen and Maskus (2002) suggest that horizontal investment is much more important in the world economy than is vertical investment, the transition economies were seen as quite attractive as hosts for upstream vertical FDI because of their advantageous factor costs and close proximity to, and prospects for membership in, the EU. In vertical investments, the firm locates upstream or downstream production activities in the foreign country so as to take advantage of differences in resource endowments and, thus, factor costs between countries in order to reduce its global costs of production. Thus, the availability, and where appropriate, the cost, of natural resources, of economies of scale and agglomeration, and of labor skills are important drivers of vertical FDI. Our specification of the relationship between FDI inflows and a country's economic characteristics thus reflects these two forces in the following specification:

$$
\begin{aligned}
L\text{FDI}_{i,t} = \alpha_0 &+ \alpha_1 L\text{GDPPP}_{i,t} + \alpha_2 L\text{GDPPC}_{i,t} + \alpha_3 L\text{TRADE}_{i,t} + \alpha_4 L\text{SECOND}_{i,t} + \\
&\alpha_5 L\text{LAND}_{i,t} + \alpha_6 L\text{CITY}_{i,t} + u_{i,t}
\end{aligned}
\tag{1}
$$

where the prefix L indicates the log operator and:

$\text{FDI}_{i,t}$ = foreign direct investment inflow into country i in year t in billions of current US$

$\text{GDPPP}_{i,t}$ = GDP of country i in year t in billions of US $ in 1995 PPP US$

$\text{GDPPC}_{i,t}$ = per capita GDP of country i in year t in billions of 1995 PPP US$

$\text{TRADE}_{i,t}$ = ratio of the trade of country i to its GDP in year t

$\text{SECOND}_{i,t}$ = secondary enrollment (% gross school enrollment) of country i in year t

$\text{LAND}_{i,t}$ = land area of country i in year t in square kilometers

$\text{CITY}_{i,t}$ = population of the largest city of country i in year t

$u_{i,t}$ = error term assumed to be iid for each country, but possibly cross-sectionally dependent.

GDP in purchasing power parity (PPP) dollars captures the size of the host country's economy and thus the potential market for the investor's products. We use purchasing power parity GDP not so much because the nominal and PPP values of West European countries' GDPs differ excessively over the sample

period but rather because the transition economies to which we later apply the parameter estimates of Equation 1 display very large differences between official and PPP GDPs, with the latter serving a better measure of the size and purchasing power of their domestic market. GDP is an important driver of horizontal FDI, and a coefficient greater than one means that countries that offer large markets are able to attract disproportionately higher shares of FDI inflows. PPP GDP per capita income serves as a proxy for the level of development and for wages in a country, and thus reflects the purchasing power of individual consumers. Because wages and per capita GDP are highly collinear for our sample of countries, we are not able to distinguish between market-seeking FDI, which would be positively related to higher per capita incomes, and vertical FDI motivated by a search for lower wages. The trade-to-GDP variable measures the openness of the country to international trade. A low value of this variable may signal high tariff barriers, which would attract horizontal FDI, while a high value would indicate openness to trade, which the literature suggests should be attractive to foreign investors (Caves, 1996) in part because it is a sign of international competitiveness. Variables primarily associated with vertical investment include the proportion of students in secondary education, an indication of the quality of the country's labor force and thus its attractiveness as a place to manufacture goods or provide sophisticated services. Land size serves as a proxy for natural resources.[9] Finally, we use the population of the largest city to reflect agglomeration economies and congestion costs. Large cities offer external economies from backward and forward linkages between firms, from opportunities to benefit from supplies of skilled but immobile labor, and from information spillovers (Krugman, 1991); at the same time there are also congestion costs associated with large cities that may act as a deterrent to FDI.

While additional variables, such as proxies for communications and transportation infrastructure, national market structure, inflation, political instability, etc., have also been used as explanatory variables in exercises such as this, the reader should bear in mind that the sample of European countries that we use is relatively homogenous and thus, for many such additional variables, there are very small differences, if any,

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[9] Lau and Lin (1999) find that a country's area serves as a surprisingly good proxy for its natural resource endowment. We supplement their analysis by cross checking the performance of the land variable with those of "Arable Land per

over time and across the countries in our sample. Introducing such variables into the specification raised standard errors of the parameters without materially improving the explanatory power over that achieved by the more parsimonious specification.

The estimations for Equation 1, as well as for Equation 6 below, are carried out using feasible GLS (FGLS) pooled-panel regression[10]. These classes of models can be estimated using pool objects

$$y_{it} = \alpha + x_{it}{}' \beta_i + \varepsilon_{it} \tag{2}$$

where y_{it} is the dependent variable, and $x_{it}{}'$ and β_i are vectors of non-constant regressors and parameters for each cross-sectional unit $i = 1,...N$ and time period $t = 1,...,T$. We use FGLS due to the very likely cross-sectional heteroskedasticity existent in the data. The weighting and the heteroskedasticity correction, $(X'\Omega X)^{-1} X'\Omega Y$, is done by using the covariance matrix

$$\Omega = E(\varepsilon\varepsilon') = \begin{pmatrix} \sigma_1^2 I_{T_1} & 0 & \cdots & 0 \\ 0 & \sigma_2^2 I_{T_2} & 0 & \vdots \\ \vdots & 0 & \ddots & 0 \\ 0 & \cdots & 0 & \sigma_N^2 I_{T_N} \end{pmatrix} \tag{3}$$

Even though contemporaneous correlation is also highly likely as well, we refrain from using seemingly unrelated regression (SURE) due to possible problems unless T is considerably greater than N. Beck and Katz (1995) show that, in a SURE weighting, the Ω matrix turns into

$$\Omega = E(\varepsilon\varepsilon') = \begin{pmatrix} \sigma_{11}^2 I_T & \sigma_{12}^2 I_T & \cdots & \sigma_{1N}^2 I_T \\ \sigma_{21}^2 I_T & \sigma_{22}^2 I_T & & \vdots \\ \vdots & & \ddots & \\ \sigma_{N1}^2 I_T & \cdots & & \sigma_{NN}^2 I_T \end{pmatrix} \tag{4}$$

so there are $N(N+1)/2$ contemporaneous covariances to be estimated using NxT observations. This means that each element of the Ω matrix is estimated using $2T/N$ observations. This ratio is around 3 for our largest dataset, leading to significant overconfidence in the Parks standard errors. The benefits of accounting for the

capita" and "Ores and Metal Exports" but found no statistically significant changes in the coefficients of other variables. The results are available from the authors upon request.

contemporaneous correlation are dominated by the false inference probability, which causes us to only correct for heteroskedasticity in our panel FGLS.

We also avoid the introduction of any fixed effects or lagged terms or using dynamic panel data estimation to formulate a more "universal" model of FDI. Introduction of these terms might add to the explanatory power of the regression models; however, the introduction of these variables makes the projection of the estimated parameters on another set of countries that much more difficult, either due to different inertia or strength of instruments. Including time-invariant variables such as land size and population of largest city prevents us from being too vulnerable to fixed effects bias.[11]

Parameter estimates for Equation 1 are reported in Table 1. The regression achieves a satisfactory fit, with an adjusted R-squared of 0.83, and all the coefficients, save that for *Land*, are statistically significant. GDP has a positive coefficient greater than one, indicating that larger countries receive relatively more FDI than do small ones.[12] Per capita PPP GDP also has a positive impact on FDI, which indicates that high consumer incomes and the broader range of products that high income consumers demand have a strong positive impact on inward FDI, offsetting higher wage costs for our sample of countries, especially if such high wages are offset by correspondingly high productivity.[13] The trade openness variable also has a positive and significant coefficient, suggesting that, at least in Western Europe, foreign investors are more interested in seeking out locations for their production facilities in markets that are open to competition and in countries that have a demonstrated ability to compete on global markets rather

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[10] Data were obtained from the World Bank's *World Development Indicators 2002* CD-ROM. We terminate our sample in 2001 due to lack of data for some countries, especially the Balkans.

[11] Three facts discourage us from using the fixed effects specification: 1) our sample is certainly not exhaustive of every country, hence one cannot easily justify the use of "fixed" effects in a random sampling of countries; 2) random effects estimation results yield coefficient estimates are almost the same as those of the pooled panel estimation, implying that bias of ignoring time invariant effects, if any, is negligible; 3) introducing country specific effects would preclude the projection of the estimation results to transition and Balkan countries.

[12] Theory suggests that the costs of undertaking a foreign investment involve many costs that are independent of host country size, resulting in the greater attractiveness of host countries with large markets.

[13] This is not to deny that low wages in transition economies have been considered a major driver of FDI inflows to transition economies, although there is empirical evidence to the contrary, see Bevan and Estrin, 2000, p.18. We note that there has been both a rapid growth of real wages in transition economies as well as real appreciation of their currencies, and some FDI that was attracted to these countries by their low wages is now leaving because of wage increases. Thus, in the long run, we expect the relationship observed for West European countries to apply to transition economies as well.

than in leapfrogging tariff barriers. To the extent that most of the countries in this sample are members of the EU and a large share of their FDI inflows is also from other EU members, such a finding seems logical.

Of the variables pertaining to vertical FDI, *Land*, the proxy variable for natural resources, is not significant, reflecting the rather homogeneous distribution of resources in the sample countries.[14] However, because it narrowly misses significance at the 10% level and because the transition economies are somewhat more resource intensive in their endowments and production structure than are the West European countries in our sample, we retain this variable for estimating potential FDI flows to the transition economies. The proportion of eligible students in secondary education is significant and positive, reflecting the importance of an educated work force to competitiveness in modern manufacturing and service activities. Finally, the coefficient for city size is negative and significant; congestion diseconomies dominate economies of agglomeration in our sample of West European countries.[15]

A key assumption of this paper is that the parameters of Equation 1, estimated on the basis of data drawn from a sample of West European EU and non-EU member countries, can serve as an appropriate benchmark for the Central European and Baltic transition economies. Given that, by the end of our sample period, these countries were becoming EU members and that they have many economic similarities with West European countries, this assumption strikes us as reasonable, and, there is no way of determining if such a benchmark overestimates or underestimates the amount of FDI that we should expect to see flowing to these transition economies. Whether or not the entire difference between actual and projected FDI can be attributed to the fact that these countries were transition economies cannot be demonstrated in any convincing way. Certainly, for a particular transition economy or for a particular year, there were other influences as well. For example, favorable political or economic developments in one country or an exogenous shock such as the Russian crisis in a particular year would have influenced FDI inflows differently. However, within a panel setting these effects are transitory, and what

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[15] The size of the largest city also reflects the size of other cities in the country as city primacy is relatively constant in Europe. See Petrakos and Brada (1989).

should remain is the key driver of foreign investor sentiment – the movement of these countries toward fully-functioning market economies and EU membership.

2. Benchmark Estimates of the Effects of Transition on FDI Inflows

To estimate the effects of transition on inflows of FDI, we use the parameters of Equation 1, which gives the expected FDI level for a non-transition, politically stable European market economies, to estimate the expected levels of FDI for a sample of transition economies that are experiencing less political instability than are the Balkan countries. The sample countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and the Slovak Republic, and we estimate their expected levels of FDI for the period 1993 to 2001. Although these countries followed different transition and stabilization strategies, both in terms of stabilization policies, for privatization and for the management of their foreign trade regimes, they were among the more successful countries both in terms of system change and in terms of achieving economic and political stability, and they were the first transition economies to become members of the European Union.[16] Thus these countries set a standard of perhaps the best that economies in transition could hope to achieve in achieving attractiveness to foreign investors. Nevertheless, transition measures and the effort to stabilize their economies and develop functioning democratic systems did pose specific risks for foreign investors.

We then define the transition shortfall (or excess) in FDI for these transition economies in year t as:

$$R_{i,t} = FDI_{i,t}/Expected(FDI_{i,t}) \tag{5}$$

where *Expected FDI$_{i,t}$* is calculated using the parameters of Equation 1 and the economic characteristics of country i in year t. Table 2 reports the expected and actual yearly FDI inflows for our sample of transition economies as well as the ratio of the two values, $R_{i,t}$. The expected levels of FDI based on the parameter estimates of Equation 1 are reported in the first row of each country's entry. The expected levels of FDI

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[16] Even if reformist governments were replaced by "reformed" communist politicians, political power was seen as legitimately contestable.

inflows increase steadily from 1993 to 2001 for all the transition economies in the sample reflecting improving economic performance in all of these countries. Expected FDI inflows increase two-fold for Lithuania, three-fold for the Czech Republic and from four- to six-fold for the other transition countries.[17] This is a significant finding because it shows that a large part of the growth of FDI inflows to these countries can be accounted for by the significant macroeconomic and structural progress that these countries have achieved in terms of the variables included in Equation 1. Recall that the expected level of FDI depends exclusively on the economic characteristics of these countries, and it is unrelated to the progress that these countries have made in implementing transition measures and privatizing their economies. This means that the rapid increase of FDI to these countries is not due to a pent-up desire to invest in the region caused by a stock-adjustment process to make up for the pre-1989 inability of foreign investors to undertake FDI in the region or to one-time events like mass privatization of state–owned assets. Rather, based on these countries' macroeconomic economic performance and structural characteristics, much of the growth of FDI inflows that occurred in the 1990s is what we should expect to see in any European country with similar macroeconomic performance.

Whatever the potential inflows of FDI may be for the countries in our sample, the amount of this potential realized, or more directly, the actual level of FDI observed, does depend on the kinds of transition policies that individual countries adopted and the success they had in implementing them. We report for each country the actual volume of FDI as well as R, the ratio of actual to predicted FDI. For the Czech Republic, Latvia, Lithuania and Slovakia, actual FDI inflows grew more rapidly over the sample period than did predicted inflows, suggesting that, in these countries, transition policies and their effects in general improved the possibilities for FDI over time, enabling more of the potential FDI to be realized. On the other hand, actual FDI inflows for Estonia and Hungary did not grow as fast as these countries' potential, while Poland's actual and predicted FDI inflows generally kept pace with each other over the

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[17] The rapid growth of expected FDI reported in Table 2 should be interpreted in light of the fact that foreign investors' behavior is driven by not only the levels of the explanatory variables of Equation 1 but also by their expected trends in the future. Since the limited time span of our sample does not allow us to investigate the dynamics of investor expectations, it may be that estimates of expected investment based only on the level of contemporaneous

sample period. Before concluding that transition policies in Estonia and Hungary were somehow inferior to those of the other countries in our sample, it is necessary to examine the levels of R for our sample countries as well. We note that Estonia and Hungary, along with Lithuania, had values of $R>1$ either early on in the sample period or for the entire sample period.[18] This means that, even early in the transition, these countries implemented polices that caused actual FDI inflows to be above, and in some cases well above, potential inflows. That is, because they were transition economies and because they followed a specific set of transition policies, they were able to attract higher levels of FDI inflows that we would expect to see going to a West European country with similar economic performance. Thus it should not be surprising that these countries would not be able to sustain the rapid expansion of such above-normal inflows over the entire decade. Indeed in the case of Hungary, from 2000 on, actual FDI inflows are less than the country's expected inflows, reflecting, according to some observers, the exhaustion of attractive opportunities for the acquisition of state-owned firms. In the case of the Czech Republic, Lithuania and Slovakia, early in the transition, R is less than one, but increases as FDI-friendly policies are implemented and, eventually, R approaches or exceeds one.[19] Thus, transition policies do have a strong effect on the actual FDI inflows of a country, and it is also evident that, at least for some time span, appropriate transition measures can boost FDI inflows well over what we would consider the normal level appropriate for a similar non-transition European economy. Only Poland and the Slovak Republic are exceptions to this finding. Thus both good macroeconomic performance and good transition strategies, to the extent that the two can be separated, have contributed to the growth of FDI to these transition economies. The results for Hungary, however, suggest that exceeding this expected level of FDI is unlikely to continue indefinitely. It is also not surprising, given Hungary's early success in attracting FDI, that the decline of

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values of the explanatory variables may understate favorable developments in investor sentiments based on their expectations of future progress in these economies, suggesting even higher growth rates for predicted FDI.

[18] Our finding of R>1 for the Baltic countries is consistent with Bevan and Estrin (2000), who use a different specification to reach the conclusion that "the Baltic states receive more FDI than one would expect given their fundamentals." (p. 19)

[19] If our data were to be extended, Slovakia's performance in raising its actual FDI would be more impressive. In 2003 and 2004 the country received large commitments for the construction automobile assembly plants from three automobile companies as well as numerous other smaller investments from abroad.

FDI flows to levels approaching West European experience should first be evident for Hungary as well. [20]

Overall, most of the transition economies have values of R converging toward one, suggesting that the current rates of FDI inflows are sustainable for the future so long as appropriate policies are followed.

Because Equation 1 already takes into account the effect of each country's economic characteristics on FDI inflows, the difference between actual and predicted FDI for our seven transition economies should reflect the different policy paths that these countries have taken toward creating a stable and prosperous market economy characterized by private property. A transition economy's actual FDI inflows thus depend both on macroeconomic and structural characteristics captured by Equation 1 and on the pace and success of transition. Moreover, because many investments were made in transition economies with a view to their future entry into the EU, faster progress on reform was seen by investors as signal that a country would be at the head of the queue for EU membership. Bevan and Estrin (2000), who investigate the determinants of FDI in eleven transition economies of Central and Eastern Europe during the 1994-98 period, find that key announcements on progress in EU accession had a significant and positive impact on FDI inflows to these countries. The establishment of the rule of law also played an important part in investors' considerations, because the security of their investment was likely an important locational consideration. Finally, the pace of FDI should have been strongly influenced by the measures that were taken for privatization. Thus, we would expect that a country that has made greater progress in transition to a market economy should achieve inflows of FDI that are closer to its potential FDI inflows as given by Equation 1, and thus have a higher value for R, than would a country that has made little progress in transition. However, a transition economy's appeal with respect to transition characteristics depends not only on measures taken to reform and liberalize the economy; it also depends on the starting conditions from which policy makers begin the transition process.

In our specification, we take both starting conditions and progress with transition into account, and we use the following specification for the ratio of actual to predicted FDI inflows:

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[20] This is a theme raised quite emphatically by Henriot (2003) for all the advanced transition countries. While our results are somewhat more optimistic for the possibility of these countries keeping FDI inflows above the expected level in the

$$LR_{i,t} = \beta_1 \text{INIT} L \text{INF}_i + \beta_2 \text{INIT} DL \text{GDP}_i + \beta_3 \text{INIT} L \text{PRIV}_i + \beta_4 L \text{INFRA}_{i,t} + \beta_5 \text{SPREAD}_{i,t}$$
$$+ \beta_6 \text{BUDGBAL}_{i,t} + \beta_7 D \text{CURACC}_{i,t} + \beta_8 D \text{UNEMP}_{i,t} + \beta_9 DL \text{PRIV}_{i,t} + \varepsilon_{i,t} \qquad (6)$$

where L is the log and D is the difference operator and

$\text{INIT} L \text{INF}_i$ = cumulative inflation in country i between 1990-93

$\text{INIT} DL \text{GDP}_i$ = cumulative GDP decline in country i between 1990-93

$\text{INIT} L \text{PRIV}_i$ = share of private sector in GDP of country i in 1993[21]

$L \text{INFRA}_{i,t}$ = EBRD index of infrastructure reform of country i in year t

$\text{SPREAD}_{i,t}$ = lending minus deposit rates for country i in year t

$\text{BUDGBAL}_{i,t}$ = overall budget balance (% of GDP) of country i in year t

$D \text{CURRACC}_{i,t}$ = change in current account (% of GDP) of country i in year t

$D \text{UNEMP}_{i,t}$ = change in unemployment rate of country i in year t

$DL \text{PRIV}_{i,t}$ = change in share of private sector in GDP in country i in year t

ε_{it} = error term assumed to be iid within each country, but possibly cross-sectionally dependent.

By starting conditions we mean the measures that had been taken to implement transition and stabilization measures prior to the start of our sample period as well as the state of the economy, as measured by monetary imbalances and distortions in the structure of production that existed prior to transition. Many, but not all, of the transition economies in our sample pursued a policy of aggressive price liberalization at the beginning of transition. The greater the monetary imbalances in the country prior to transition and the greater the distortions in relative prices, the greater was the rate of inflation in these countries. Other countries either pursued a more gradual price liberalization strategy, or, like Hungary, had been reducing monetary overhangs and distortions in relative prices even before transition. We capture the extent of pre-transition monetary and price disequilibrium and the pace of price liberalization by means of the variable INITLINF. A

short run, they do suggest a reversion to a level of FDI that reflects economic fundamentals rather than the one-time effects of transition.

second aspect of starting conditions has to do with rapid or slow liberalization, the mismatch between emerging demand and existing production, the financial viability of firms and trade liberalization. Some transition governments acted quickly to reduce government subsidies to firms as markets were liberalized while others sought to cushion the shock of collapsing CMEA trade and falling demand for the products of heavy industry. While the "big bang" approach may have inflicted greater short-term pain in terms of production declines, it may have served as a signal to foreign investors that structural change was rapid and credible. The financial distress output declines imposed on domestic firms may have reduced their price to foreign investors as well. The final variable that we use to capture starting conditions is the share of the private sector in GDP in 1993. Foreign investors doubtless preferred to locate in an economy where private property predominated, so how fast privatization had proceeded by 1993 is an obvious marker. On the other hand, much of the early privatizations involved so-called insider privatization that put firms into the hands of workers or managers, making FDI through acquisitions difficult. Thus we cannot sign this coefficient *a priori*. We also include in our latter set of explanatory variables the year-to-year change in the level of privatization, since investors desire both a high level of, and continuing progress in, privatization.

However attractive a country may have been in 1993, FDI decisions are driven by expectations of future performance, and thus we also include important markers of current economic performance as a determinant of the ratio of actual to projected FDI inflows. Inadequate infrastructure, especially telecommunications and transportation, were seen as major barriers to doing business in the region, so we capture this by means of the EBRD index of infrastructure liberalization. Liberalization, of course, often also involved opening up sectors such as transportation and telecommunications to foreign investors, so there should be both direct and indirect effects from this variable. Another important institution of interest to foreign investors is the banking system, whose performance we capture by means of the lending-deposit spread. If this spread is positive, then opportunities for effective financial intermediation exist. However, in some transition economies, governments suppressed the lending rate, either to aid troubled firms or to reduce their own expenditures on servicing government debt, but a low or even negative lending-deposit spread

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[21] The EBRD index and the PRIV measure were compiled from various issues of *Transition Report.*

obviates the possibility of effective financial intermediation. Thus a positive spread should be seen as the mark of a functioning banking system by foreign investors, and it should prove attractive to them even if they are not dependent on the host country's capital markets at the outset. The budget balance as a proportion of GDP is also an important marker for foreign investors, as large deficits are a likely harbinger of future tax increases or financial instability. Investors are also likely to consider the country's international competitiveness, both for the standpoint of its ability to serve as source of production for the investor and in terms of its ability to maintain a stable real exchange rate. Because the transition economies all ran current account deficits in the 1990s due to capital inflows, it is likely that the appropriate marker was the year-to-year change in the country's current account. Finally, we examine the change in unemployment from year to year. Higher unemployment levels may attract foreign investors by signaling an absence of strong pressures for wage growth, or they may discourage foreign investors by signaling economic problems and low purchasing power in the host country.

The parameters of Equation 6 were estimated using data for the seven Central European countries, which are listed in Table 2 over the indicated time period. The parameter estimates are reported in Table 3. The regression results yield a satisfactory adjusted R-squared of 0.83 and generally significant coefficients. The coefficient for INITLINF, the initial cumulative inflation rate is negative, meaning that foreign investors likely viewed countries with high inflation rates as being more risky because of the potential inability of governments to stabilize their economies successfully and due to likely popular resistance to governments' inability to bring inflation down to moderate levels. On the other hand, investors preferred countries that had undergone large declines in production early on in the transition, presumably for the reasons we discussed above. Higher levels of privatization in 1993 tended to deter FDI, suggesting that early insider-oriented privatization did serve as a barrier to FDI. Greater liberalization of the host country's infrastructure, as measured by the EBRD index, and a positive lending-borrowing spread both had a positive impact on foreign investment. The two measures of policy sustainability, the government deficit and the change in the current

account balance, also had significant and positive effects on investors.[22]   Increases in unemployment had a negative effect on FDI, suggesting that foreign investors prefer prosperous countries over those where real wages are out of line with productivity or where there are incipient social and economic problems.[23]   The extensive economic changes that took place in the transition countries over the sample period raise questions about the stability of the regression coefficients over time, and thus we used Chow and recursive tests to verify the stability of the coefficients of Equation 6.[24]

C. The Effects of Transition and Political Instability on FDI in the Balkans.

With the parameters for Equations 1 and 6 at hand, we can estimate the effects of political instability on FDI inflows to Balkan countries. We first use the parameters of Equation 1 to estimate the FDI inflows into the Balkans that would be expected if they were normal European countries, undergoing no transition and experiencing no exceptional political instability. These estimated values of FDI are reported in the first row of each country's entry in Table 4. The expected FDI inflows for the Balkan countries increase over time, reflecting the improvement, albeit small in some cases, in the economic conditions of the region. The second row for each country reports the expected FDI based on Equation 6, that is the country's expected FDI inflow if it were a transition economy such as the ones used to estimate the parameters for Equation 6.[26] The difference between the FDI projected by Equation 1 and Equation 6 is thus a measure of the loss or gain experienced by these countries because of the quality of their transition policies.

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[22] Because much of the FDI took the form of acquisitions, we do not believe there is much simultaneity between the current account and FDI inflows.

[23] Because of their inclusion in other studies of FDI to transition economies, we also tried several other variables in our specification, including measures of corruption, reform of other sectors, proximity to the EU, etc. None of these proved significant or useful in improving the explanatory power of our specification.

[24] We thank a referee for raising this question. The test results are available from the authors upon request.

[25] In Figure 7 some parameters (initial log inflation, budget balance, the change in the current account, and the spread) are multiplied by 10 for scaling purposes.

[26] In generating the estimates using the parameters of Eq. 6, we faced the problem that in the Central European and Baltic economies, initial declines in output reflected restructuring, a positive sign. In the Baltic countries, initial declines may have been the result of war, conflict, embargoes, etc., which would not have the same positive connotations for foreign investors. Thus for Bosnia, Croatia, FYROM we used the average Central European and Baltic GDP decline, which tends to produce an upward bias to expected FDI computed by Eq. 6. We also used the average of Central European and Baltic interest rate spreads to 1995 for Croatia and FYROM to account for banking system instability.

Recall that, in the case of the Central European and Baltic countries, appropriate transition measures enabled these countries to enjoy FDI inflows well in excess of what would be expected on the basis of Equation 1 alone, that is, for a West European non-transition economy.   This is clearly not the case in the Balkans. For most of the countries in our sample, the FDI inflows projected by means of Equation 6 are, in the majority of the years, less than those projected by Equation 1, with only Romania and Slovenia as significant exceptions to this generalization. This means that, for the Balkan countries, reform measures were much less effective than were those adopted by Central European and Baltic transition economies, and this lack of reform progress had a negative impact on foreign investors. Of course, it may well be that the inability to implement effective reform packages was in large part due to the political instability in the region. Indeed, a comparison of the two sets of estimates suggests that poor transition reform performance reduces expected inflows to about one-half of what would be expected for a West European economy, a result quite different from that of the Central European and Baltic countries, where reform performance boosted FDI inflows over those projected by Equation 1 by as much as three- to four-fold.

Row three for each country reports the actual FDI inflows. These also tend to vary considerably from year to year, in percentage terms much more so than do actual FDI inflows for the transition countries covered by Table 2. The source of this variability is partly the same as in other transition countries, that is, the privatization of large state-owned assets such as banks, telecommunications companies, etc.[27] Because there are fewer greenfield investments and acquisitions of medium and small-sized firms by foreign investors, these one-off large privatizations tend to dominate the data in way that we do not observe in Central European countries. In the Balkan countries there are additional sources of volatility, of which political instability is an important one. Note, for example, the sharp drop in Albanian FDI inflows in 1997-1999 as a reaction to the crisis caused by the collapse of the financial pyramid schemes in 1997 and 1998 and the Kosovo crisis of 1999. A similar reduction in 1999 inflows can be seen for FYROM and Romania, also perhaps reflecting the Kosovo crisis. At the same time, positive developments, such as the Dayton Peace Accords, had a strongly positive influence on the inflows to Croatia starting in 1996 as did reduced

instability and better economic stabilization, as well as the one-off privatization of major banks, telecommunications firms and the sale of mining concessions, in Albania at the end of the decade and in Bulgaria starting in 1997 perhaps reflecting positive expectations caused by Bulgaria's successful switch to a currency board regime after the 1997 crisis. Another important source of variability is the major changes in privatization policy, which occurred in the Balkans during the mid-1990s, not at the beginning of the decade as in the Central European countries. Thus, the decision to push ahead with large privatization transactions in Albania in 2000 and the change in policy in favor of foreign investors in 1998 in Croatia and in 1997 in Romania are also amply evident in the data.

The loss of FDI due to regional political instability is given by the difference between FDI a projected by Equation 6 and the actual FDI that a country received. Despite the rather poor reform performance of the Balkan countries, some of them received FDI inflows that exceeded expectations. In the case of Albania, actual inflows are much greater than predicted either by Equation 1 or Equation 6, the result of investments by the many ethnic Albanians living abroad.[28] Albania thus reflects much the same behavior as the Central European and Baltic transition economies in that its FDI inflows exceed those expected for a West European market economy, though perhaps for somewhat different reasons. In the case of Bosnia, actual investments lagged predicted for 1995 through 1997, after which they increased and then come to exceed the predicted value. Bulgaria and Romania also exhibit FDI inflows well below predicted through 1996, after which there is an increase in inflows to well above the predicted level although Romania continues to lag behind what would be expected based on its reform performance. Croatia also has below predicted levels through 1995, and then experienced a large increase in inflows to levels well above predicted, most probably due to Dayton Peace Accords. FYROM shows no clear pattern, reflecting the various sources of instability faced by that country. Slovenia, the ex-Yugoslav Republics and the least affected by regional conflict, has inflows well below predicted, which reflects the result of its privatization policies.

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[27] See Hunya (2002) and Šohinger and Harrison (2004).
[28] Also noteworthy is the jump in Albania's expected FDI on the basis of Eq. 6 starting in 2000 as the result of the stabilization of the economy.

Two conclusions can be drawn from these patterns. The first is that countries affected by regional conflict or serious political turbulence do suffer significant shortfalls in FDI inflows, so that their inflows of FDI are a half or less of what would be predicted either for West European economies or for economies in transition, suggesting that the costs of instability in terms of foregone FDI inflows are quite high. On the other hand, once these conflicts are brought to an end, investment inflows increase quite rapidly, so that, in these countries, as in the transition economies of Central Europe, actual FDI inflows tend to significantly exceed what would be expected if they were typical West European economies.

IV. Conclusions and Policy Implications

Our research has demonstrated that both economic transition and political instability, whether of domestic origin or stemming from international conflicts and tensions, significantly reduced FDI inflows into the transition economies of Central Europe and the Balkans. Nevertheless, the good reform performance of the Central European and Baltic countries enabled them to receive inflows that were several-fold those experienced by comparable West European countries. Moreover, our results indicate that a large part of the shortfall in FDI into the Balkan transition economies, whether measured relative to the Central European economies or to a hypothetical European market economy, is, in fact, attributable to the effects of regional political instabilities on the willingness of foreign investors to invest in these countries. Although our estimates of expected FDI have to rely on a static view of foreign investor behavior, which may somewhat understate our estimates of the negative effects of transition and instability on FDI, the general goodness of fit achieved in Equations 1 and 6 suggests that the orders of magnitude of our estimates of the FDI shortfall are relatively robust.

While it is beyond the scope of this paper to quantify the economic costs of foregone FDI inflows for the Balkan countries, the literature on the effects of FDI on transition economies suggests that these costs must be quite high because of the important benefits that FDI brings. The most obvious one is that FDI can serve as a supplement to domestic saving and investment, and all transition economies sorely need additional investment to raise their productivity and living standards. It is true that much of the FDI that has come into transition economies has been used to purchase existing firms rather than to finance new greenfield

investments. Nevertheless, even FDI through mergers and acquisitions has a positive effect on domestic capital formation (Šohinger and Harrison, 2004) because investors do contribute additional capitalization to their acquisitions. Moreover, as Hunya (1996) shows in the case of Hungary, foreign firms have higher profits and reinvest a much higher share of it than do domestically-owned firms, thus increasing capital formation in the future. Finally, there is little crowding out of domestic investors (Misun and Tomšík, 2002). Given the low savings rates in many of the Balkan countries, larger FDI inflows would thus have made an important contribution to economic growth. Another benefit of FDI is that it brings in new technology and managerial skills. Thus, foreign-owned firms are likely to be more productive (Hunya, 1996, Sgard, 2001) and to use more advanced technologies (Voicu, 2004). Moreover, there are likely to be important spillovers of these technologies and managerial skills form foreign-owned firms to the domestic economy. [29]

As a result, it is likely that the costs of lost FDI to the Balkan economies are much greater than the shortfalls in FDI that we have shown in our study. Consequently, the restoration of peace to the region and the elimination of tensions, both internal and among the countries of the region, should bring important economic benefits. Certainly, the demonstrated positive response to reduced tensions and instability shown by the FDI flows to the Balkan countries are a positive sign.

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[29] Fan (2002) provides a useful survey of the literature on technology spillovers in transition economies. Aitken and Harrison (1999), Blomstrom and Persson (1983) provide useful case studies.

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Table 1: Parameter Estimates for Equation 1 (Dependent variable: Log FDI)

	Const.	LGDPPP	LLGDPPC	LTRADE	LSECOND	LLAND	LCITY
Coeff.	-24.03	1.48	0.77	1.13	2.29	0.15	-0.49
(t-stat)	$(-7.29)^{***}$	$(15.58)^{***}$	$(3.80)^{***}$	$(4.83)^{***}$	$(4.59)^{***}$	(1.58)	$(-3.23)^{***}$

$\bar{R}^2 =$	0.83				F-stat =	228.40	
					Prob. (F-stat.) =	0.0000	

*** = significant at 1% level
** = significant at 5% level
* = significant at 10% level

Table 2: Predicted and Actual FDI Inflows in Transition Economies *(billion US $)*		1993	1994	1995	1996	1997	1998	1999	2000	2001
	FDI									
Czech Rep.	Predicted by Eq. 1	1.57	1.76	2.58	2.51	2.04	2.01	2.60	4.29	4.80
	Actual	0.65	0.87	2.56	1.43	1.30	3.72	6.32	4.99	4.92
	Actual/Predicted (**R**)	0.42	0.49	0.99	0.57	0.64	1.85	2.43	1.16	1.02
Estonia	Predicted by Eq. 1	0.06	0.07	0.09	0.10	0.16	0.18	0.18	0.21	0.25
	Actual	0.16	0.21	0.20	0.15	0.27	0.58	0.31	0.39	0.54
	Actual/Predicted (**R**)	2.78	3.00	2.16	1.49	1.63	3.21	1.70	1.87	2.18
Hungary	Predicted by Eq. 1	0.43	0.53	0.76	0.88	1.02	1.31	1.70	2.45	2.71
	Actual	2.34	1.15	4.45	2.28	2.17	2.04	1.94	1.64	2.41
	Actual/Predicted (**R**)	5.44	2.17	5.87	2.59	2.13	1.55	1.14	0.67	0.89
Latvia	Predicted by Eq. 1	0.03	0.02	0.03	0.03	0.04	0.05	0.05	0.07	0.08
	Actual	0.04	0.21	0.18	0.38	0.52	0.36	0.35	0.41	0.20
	Actual/Predicted (**R**)	1.38	9.35	7.12	12.22	13.07	7.34	6.90	6.04	2.66
Lithuania	Predicted by Eq. 1	0.15	0.08	0.11	0.13	0.16	0.19	0.16	0.24	0.31
	Actual	0.03	0.03	0.07	0.15	0.35	0.93	0.49	0.38	0.45
	Actual/Predicted (**R**)	0.21	0.39	0.68	1.17	2.15	4.97	2.98	1.58	1.43
Poland	Predicted by Eq. 1	2.28	2.89	3.96	4.79	6.27	8.27	9.15	13.45	12.01
	Actual	1.72	1.88	3.66	4.5	4.91	6.36	7.27	9.34	8.83
	Actual/Predicted (**R**)	0.75	0.65	0.92	0.94	0.78	0.77	0.79	0.69	0.74
Slovak Rep.	Predicted by Eq. 1	0.43	0.51	0.68	0.84	0.74	0.91	1.02	1.41	1.63
	Actual	0.17	0.25	0.20	0.25	0.22	0.68	0.39	2.08	1.48
	Actual/Predicted (**R**)	0.39	0.48	0.29	0.30	0.30	0.75	0.38	1.47	0.91

Table 3: Parameter Estimates for Equation 6 (Dependent variable: Log R)

	INIT*L*INF	INIT*DL*GDP	INIT*L*PRIV	*L*INFRA	SPREAD
Coeff.	-0.08**	-2.99***	-0.69***	0.98***	0.09***
(t-stat)	(-2.00)	(-6.89)	(-3.60)	(3.80)	(4.05)
	BUDGBAL	*D***CURACC**	*D***UNEMP**	*D***LPRIV**	
Coeff.	0.05*	0.05***	-0.08***	1.13	
(t-stat)	(1.68)	(2.90)	(-3.12)	(1.63)	
$\overline{R}^2$ =	0.83		F-stat =	34.38	
			Prob. (F-stat.) =	0.0000	

*** = significant at 1% level
** = significant at 5% level
* = significant at 10% level

Table 4: Predicted and Actual FDI Inflows in Balkan Transition Economies (billion US $)

	FDI	1993	1994	1995	1996	1997	1998	1999	2000	2001
Albania	Predicted by Eq. 1	0.0020	0.0010	0.0010	0.0020	0.0030	0.0060	0.0090	0.0130	0.0160
	Predicted by Eq 6	0.0015	0.0007	0.0021	0.0013	0.0001	0.0005	0.0072	0.0259	0.0285
	Actual FDI	0.0680	0.0530	0.0700	0.0900	0.0480	0.0450	0.0410	0.1430	0.1810
Bosnia	Predicted by Eq. 1			0.0050	0.0220	0.0400	0.0400	0.0470	0.0530	0.0610
	Predicted by Eq. 6			0.0028	0.0026	0.0262	0.0865	0.0125	0.0278	0.0218
	Actual FDI			0.0000	-0.0020	0.0010	0.0550	0.1490	0.1310	0.1640
Bulgaria	Predicted by Eq. 1	0.1100	0.1400	0.1980	0.1890	0.2340	0.2200	0.2520	0.4220	0.5300
	Predicted by Eq 6	0.0803	0.2129	0.2633	0.1017	0.3220	0.1954	0.1842	0.3992	0.3927
	Actual FDI	0.0400	0.1050	0.0900	0.1090	0.5050	0.5370	0.8190	1.0020	0.6890
Croatia	Predicted by Eq. 1	0.1110	0.0980	0.1300	0.1580	0.2050	0.2020	0.2200	0.2810	0.3370
	Predicted by Eq 6	0.1097	0.0858	0.0689	0.4253	0.1242	0.2695	0.1758	0.1911	0.2248
	Actual FDI	0.1200	0.1170	0.1210	0.5160	0.5510	1.0140	1.6350	1.1270	1.4420
FYROM	Predicted by Eq. 1		0.0120	0.0110	0.0110	0.0270	0.0330	0.0380	0.0550	0.0510
	Predicted by Eq 6		0.0077	0.0058	0.0132	0.0137	0.0253	0.0472	0.0408	0.0236
	Actual FDI		0.0240	0.0100	0.0120	0.0160	0.1180	0.0320	0.1780	0.5300
Romania	Predicted by Eq. 1	0.2480	0.2750	0.4180	0.5150	0.4570	0.3240	0.4020	0.5620	0.6740
	Predicted by Eq 6	1.8360	0.4961	0.7079	1.0281	1.2544	1.0256	1.9262	1.7876	1.7641
	Actual FDI	0.0940	0.3410	0.4190	0.2630	1.2150	2.0310	1.0410	1.0250	1.1370
Slovenia	Predicted by Eq. 1	0.2680	0.3030	0.3450	0.3970	0.4640	0.4950	0.5610	0.7650	0.8470
	Predicted by Eq 6	0.3133	0.8420	0.6203	0.6732	0.5759	0.5192	0.5131	0.6162	0.7301
	Actual FDI	0.1130	0.1280	0.1770	0.1940	0.3750	0.2480	0.1810	0.1760	0.4420

Figure 1. FDI Inflows in Selected Transition Economies
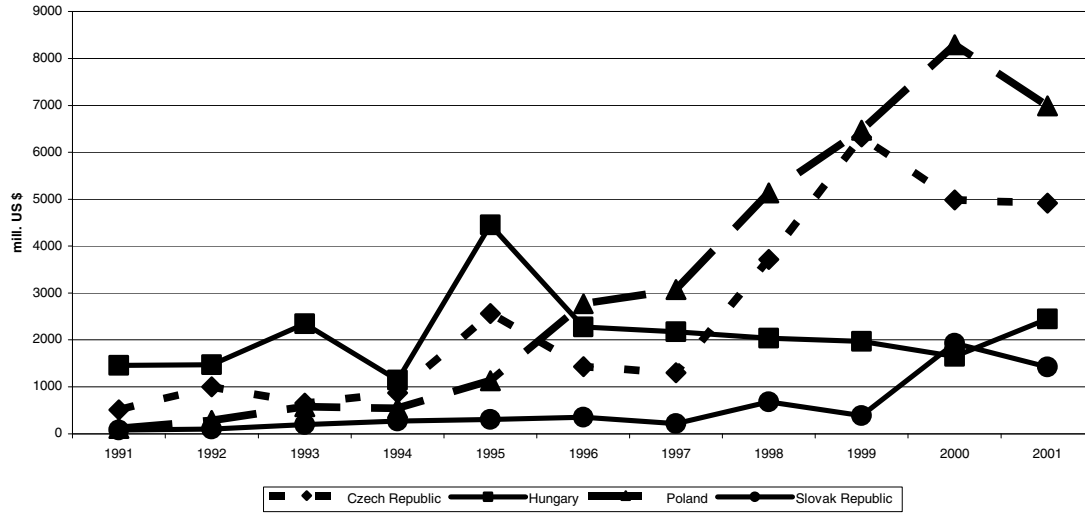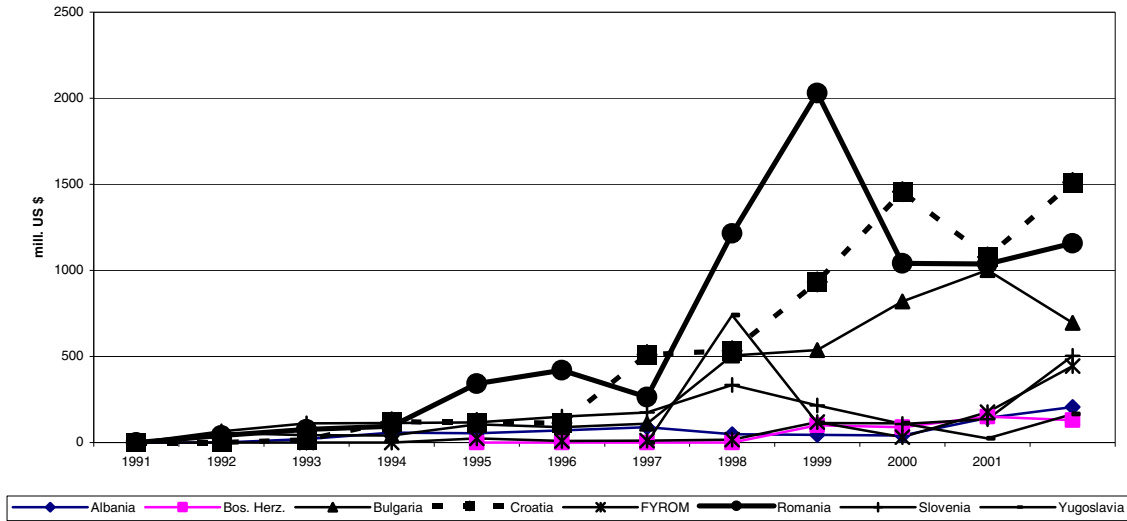

Figure 2. FDI Inflows for Balkan Transition Economies

Sources for Figs. 1-6: United Nations Economic Commission for Europe, *Economic Survey of Europe, 2003*. United Nations: Geneva, 2003 and United Nations Development Program, *Human Development Report, 2003*. New York and Oxford: Oxford University Press, 2003.

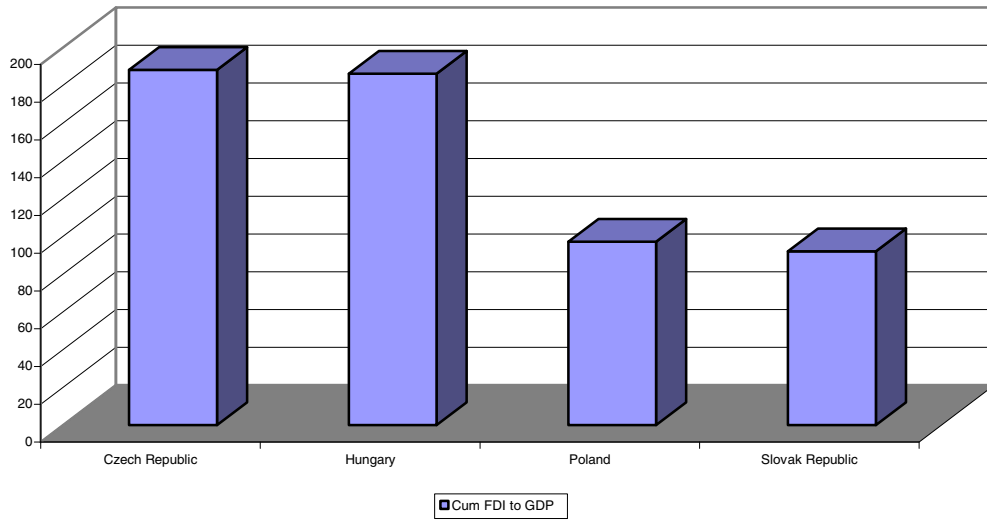**Figure 3. Transition Economies' Total 1991-2001 FDI to $1000 GDP (in US$)**

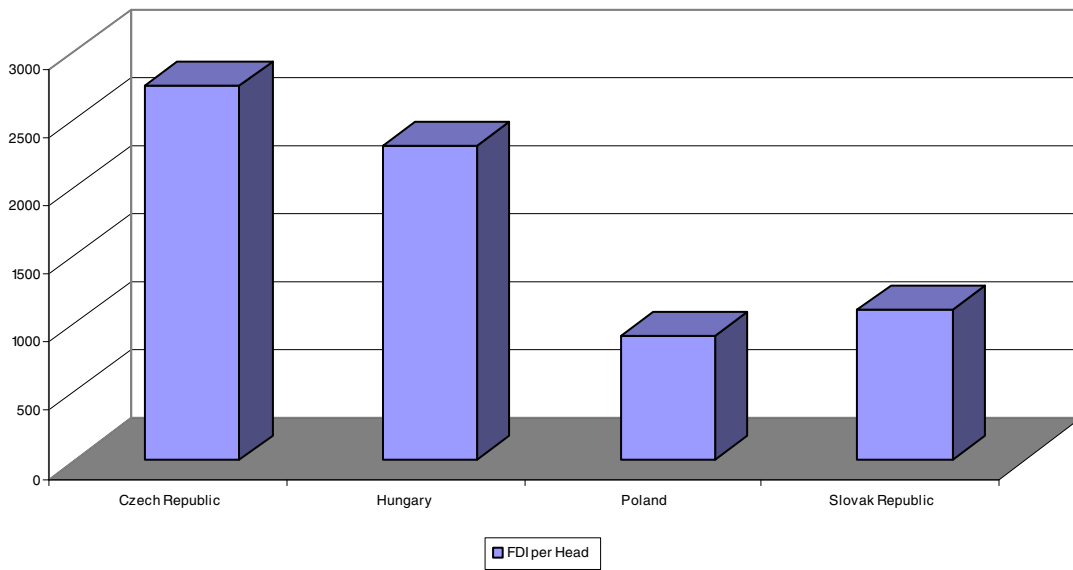**Figure 4. Total 1991-2001 FDI per Head (US$) in Central Europe**

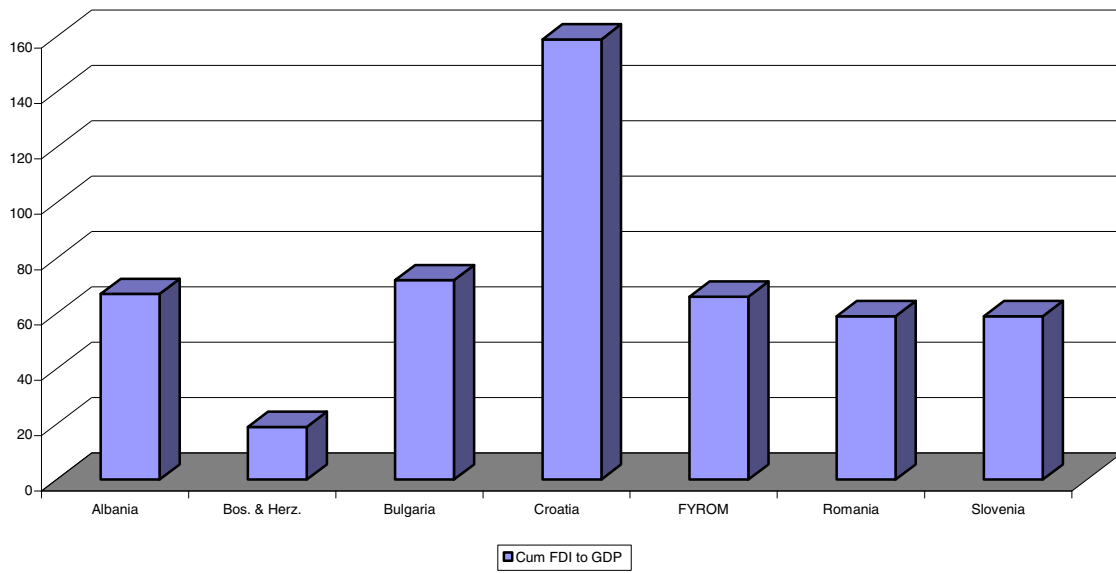**Figure 5. Total 1991-2001 FDI to $1000 GDP In Selected Balkan Countries**

Cum FDI to GDP

Figure 6. Total FDI per Person (US$) In Selected Balkan Countries

FDI per person (US$)