Embedded Economies: Social Relations as Determinants of Foreign Direct Investment in Central and Eastern Europe*

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Abstract

Foreign direct investment (FDI) is considered a powerful catalyst in market transition. However, FDI flows vary greatly across Central and East European transition countries. I compare and contrast current approaches, which consider country characteristics as determinants of FDI, with a relational approach that emphasizes institutional, political, economic, and cultural connections between investor and host countries. Regression analyses of FDI flows in country dyads provide little evidence for the effects of country characteristics. Political, migration, trade, and cultural relations between investors and hosts have strong positive effects on FDI flows, and they add considerably to the proportion of the explained cross-national variance. These findings highlight the utility of a relational understanding of macroeconomic processes, as well as the importance of examining how substantively different social relations shape economic exchange.

Annual world foreign direct investment (FDI)\(^1\) dramatically increased from around $60 billion in 1985 to an estimated $315 billion in 1995. By 1998, annual global flows exceeded $600 billion, marking a 15-fold increase since 1970 (UNCTAD 1999). Interested in the large-scale consequences of economic globalization, researchers have primarily studied the influence of FDI on national development and growth of host economies (Bornschier & Chase-Dunn 1985; Bornschier, Chase-Dunn & Rubinson 1978; Bradshaw 1987; Firebaugh 1992;

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London 1987; London & Williams 1988). However, few sociological studies examine the factors that influence FDI.

Understanding the determinants of FDI is particularly significant for the transition countries of Central and Eastern Europe. Prominent international organizations have advocated FDI as an engine in the transition from state socialism and as a powerful force for integration of this region into the global economy (IMF 1997; UNCTAD 1998). Many experts suggest that “without massive inflows of foreign capital, successful transition [from planned to market economies] in Central and Eastern Europe is unlikely” (Schmidt 1995:268). As a catalyst in the movement away from state socialism, FDI is reported to affect key macroeconomic indicators, such as employment and the balance of payments. Moreover, foreign investors bring financial, managerial, and technological resources that induce corporate restructuring in formerly state-owned enterprises (Meyer 1998).

Despite its importance for economic change, FDI shows substantial cross-national variation. Flows of foreign investment into Central and Eastern Europe are consistently smaller than those into the developing countries (Figure 1). Moreover, capital flows into individual Central and East European transition countries vary greatly. In the period from 1995–1997, foreign investment levels in Hungary and Latvia reached over 6% of GDP in comparison to 2% in Slovenia and Lithuania. Foreign direct investments into Poland and Slovakia fell below the regional average of 3.3%, while the Czech Republic and Estonia attracted above-average FDI levels (UNCTAD 1998). How can this variation be explained?

Previous research suggests that economic and political characteristics of host countries determine the size of investments and investment locations (see Crenshaw 1991; Dunning 1994; London & Ross 1995; Schneider & Frey 1985; Welfens 1993). Two assumptions underpin most analyses emphasizing host characteristics. First, such analyses treat hosts as passive receivers of investment. Second, this research assumes profit maximization by investors who choose locations that promise highest returns and minimal risk. But Central and East European countries, which are evaluated as most developed and least risky for investment, do not attract the highest investment levels (EBRD 1997; IMF 1997). Moreover, disaggregating national FDI flows by different investor countries reveals significant within-country variation. This suggests that analysis based on country characteristics might not adequately explain FDI flows into Central and Eastern Europe.

Instead of treating hosts as passive recipients of foreign investment and investors as bound by the profit-maximizing imperative, I propose that FDI must be conceptualized and empirically analyzed as a relational phenomenon. By definition, investment flows from an origin (investor) to a destination (host). Thus, FDI results from a relationship between two parties to an economic
exchange. Consequently, the causes of FDI must likewise be traced to the relations between the involved transactors, rather than only to the attributes of each individual party. The relational approach has been widely used in economic sociology (see Burt 1992; Granovetter 1974; Romo & Schwartz 1995; Uzzi 1996) but has so far seen little application in the study of macroeconomic exchange.

The relational account of FDI is indifferent to the imperative of profit maximization that underlies the country characteristics focus of previous research. The existing studies assume atomistic markets in which capital flows to most profitable opportunities. By contrast, the relational approach emphasizes the embeddedness of economic action, which may or may not lead to profit maximization. Although social relations may enable profit
maximization by reducing transaction costs, ties between investors and hosts may also limit economic options. In addition, hosts may interfere with the investor’s profit-maximizing efforts by resisting certain FDI attempts in favor of alternatives with which they are connected.

This article tests the utility of a relational approach for explaining the FDI flows into 11 countries of Central and Eastern Europe. Specifically, I use regression analysis of FDI between investor-host country dyads (1995–97) to contrast the explanatory power of country characteristics with the effects of social relations between investor and host countries. This analysis aims to bring recent conceptual developments in economic sociology to the study of macroeconomic exchange. While research on economic embeddedness often emphasizes the structure of social relations, my study highlights the effects of different substantive varieties of social relations on economic exchange.

**FDI in Central and Eastern Europe**

Analysis of FDI in Central and Eastern Europe provides an excellent natural experiment for studying the forces behind international capital flows. Before the fall of the Berlin Wall in 1989, Central and Eastern Europe attracted virtually no foreign investment due to the closed political regimes in these former socialist countries. The stock of investment in the Central and East European region represented 0.1% of total world investment stock. After 1989, foreign capital began to flow into the region, but the initial inflows were minimal. With FDI expanding globally, 1995 marked the year of the first substantial surge of foreign investment into Central and Eastern Europe; flows grew by 80% over the prior year, amounting to 4.3% of total world FDI.

FDI flows into individual Central and East European countries show variation across and within countries. For the 1995–1997 period, total FDI ranges from $93 to $855 per capita for Romania and Hungary respectively, with $348 as the regional average. Disaggregating FDI flows for different investor countries reveals additional variation. Germany and the United States are the biggest investors in the region. Both countries invest heavily in Hungary, but while U.S. investment is large in Croatia, Poland, and Lithuania, Germany invests more in the Czech Republic, Slovakia, and Latvia. Among smaller investors, Estonia receives more than half of Sweden’s investment in the region, and Slovenia receives a similar proportion of Austria’s investment. Australia invests in Poland, Croatia, and the Czech Republic; Asian and Latin American investments in the region are negligible.
Previous Research on FDI Determinants: Focus on Country Characteristics

Most prior research on FDI is predicated on the utilitarian assumption that investors select investment sites that maximize their profitability. In order to account for the patterns of macroeconomic exchange, this approach suggests that host country characteristics provide information about potential returns on investment. Profit-maximizing investors, uninfluenced by other economic actors, then choose those countries whose characteristics promise the highest returns. While adopting this broad assumption, particular empirical studies have operationally distinguished between economic and political country characteristics as determinants of investment profitability and FDI flows.

Most accounts of FDI examine the effects of economic opportunities generated by the demand and costs associated with the supply at the investment site. Market potential is commonly measured by the size and growth of GDP and sometimes by size and growth of population, overurbanization, or government consumption (Crenshaw 1991; Dunning 1994, respectively). Key cost factors include the availability of labor as reflected in the unemployment rate, labor costs and inflation, and development of infrastructure of the host country, as well as the skill and education levels of the workforce (Agarwal 1980; Dunning 1994; Schneider & Frey 1985). Overall, this research suggests that FDI will flow to countries with economic indicators that increase revenues and human and physical capital indicators that decrease costs.

The political stability of host countries also influences FDI. Political instability provides a hostile environment for foreign corporations, discouraging investment (Bennett & Green 1972). Thus, executives report that political instability is the most important variable influencing their foreign investment decisions, aside from market potential (Aharoni 1966; Basi 1963). While early research focused on developing countries, Welfens (1993) suggests that in transition economies like Central and Eastern Europe, a set of credible political institutions and stabilizing monetary and fiscal policies are also needed to attract FDI. Consequently, frequency of changes in a country’s legal policies and bureaucratic or administrative barriers decisively shape investment choices (OECD 1994). However, discussions of political instability were often speculative and did not quantify the effects of political, fiscal, and legal conditions on FDI flows in Central and Eastern Europe. More recent evidence also discredited the importance of political stability as a determinant of FDI. Studying FDI in the motor vehicle industry from 1948–1965, Bollen and Jones (1982) found that the effect of political instability was much weaker than suspected. Although previous research yielded mixed findings, political instability may be a strong deterrent of FDI flows in Central and Eastern Europe. The collapse of state socialism created volatility in public policy and
in some cases, civil disorder and war. If investors seek to minimize risks, this implies that political instability in post-socialist states would reduce their FDI inflow.

Foreign investment policies may also facilitate or deter investment inflows (Hein 1992; Stoever 1986; Wint 1992). Central and East European transition countries with permissive national policies provide incentives to foreign investment through tax breaks, exemptions from certain import duties, establishment of free economic zones, and prevention of double taxation. In countries with strict policies, FDI is discouraged through the requirement of investment permits or registration and screening or sectoral restrictions and barriers (Alter & Wehrle 1993). Overall, the profit-maximization imperative would predict that high investment incentives and low administrative barriers specified in FDI policies would increase profitability for investors and thus have a positive effect on FDI flows.

In contrast to the assumption that profit maximization guides most FDI accounts, London and Ross (1995) adopt a theory of global capitalism that contends that developed countries seek more docile and less costly Third World labor. The authors argue that labor control and labor cost are key determinants of FDI, net of level of development. Although grounded in a conflict rather than rational-choice perspective, this research nevertheless similarly predicts that national development and political stability, as attributes of a host country, would encourage FDI.

In sum, prior research on the determinants of FDI flows focuses, without exception, on the effects of country characteristics. This research treats foreign investment markets as atomistic, assuming that economic actors are independent from one another. But actors “are so constrained by ongoing social relations, that to construe them as independent is a grievous misunderstanding” (Granovetter 1985:482). Nation-states are embedded — connected to each other through political relations, migration and trade flows, or associational alliances. These supra-organizational factors shape the choice of FDI locations and the size of investments. It is thus necessary to treat the relations between investor and host countries as influences on FDI.

Examining Substantive Varieties of Social Relations

The idea that economic processes are constrained and enabled by — or “embedded” in — social relations may be the defining characteristic of economic sociology (Granovetter 1985). Researchers have studied, for example, how people use networks in labor markets, consumer transactions, or business-to-business exchanges (Granovetter 1974; DiMaggio & Louch 1998; Uzzi 1996, 1997, respectively). Scholars have also been interested in networks as a source of social capital for individuals (Portes & Sensenbrenner 1993) and in network
position, or degree of structural autonomy, as a source of productive value of firms (Burt 1992). Examining the embeddedness of economic processes has stimulated a rich body of research whose findings provide a powerful antidote to atomistic explanations of economic exchange (for a review, see Swedberg 1997). Nevertheless, research on embeddedness raises additional empirical and theoretical questions.

Despite strong evidence for the effects of social connections on the economic life of individuals and organizations, the influence of embeddedness on macroeconomic activity at the level of nation-states has not been examined (Ingham 1996). Research in the world-systems tradition investigates the effect of structural positions of countries on their economic growth in order to explain the development of individual countries (for a review, see Chase-Dunn & Grimes 1995). However, few studies investigate how nation-level institutional, political, and cultural relations shape patterns of economic exchange between countries.

Theoretically, research on network relations has been inattentive to culture, institutions, and politics (Barber 1995; Emirbayer & Goodwin 1994; Fligstein 1996; Zelizer 1988). Along these lines, DiMaggio & Zukin (1990:15) suggested that embeddedness should “broadly refer to the contingent nature of economic action with respect to cognition, culture, social structure and political institutions.” Broadening the notion of embeddedness to simply include more variables that influence economic action, however, may lose sight of the crucial idea that the relational character of social life influences economic outcomes.

Nevertheless, we can effectively combine the emphasis on social relations and attention to culture, institutions, and politics in the analysis of economic activity. To do so, I propose to study the effects of different substantive varieties of social relations on economic exchange. Such an investigation of embeddedness necessarily takes into account culture, politics, and institutions, but it integrates them into a relational framework.

In addition, the focus on the substantive content of ties advances the structural approach (for a critique, see Powell & Smith-Doerr 1994). While previous studies suggest that social ties among economic actors are consequential for economic outcomes, all of them need not be. It is an empirical question: which kinds of relations matter for economic exchange? We should develop testable propositions about the effects of substantively different social relations on economic activity.

Social Relations as Determinants of FDI in Central and Eastern Europe

Which substantive categories of social relations are important for explaining FDI in Central and Eastern Europe? Scholars propose that economic exchange is situated in political, economic, institutional, and cultural relations (Barber
1995; Emirbayer & Goodwin 1994, Fligstein 1996; Spillman 1999; Zelizer 1988). Economic actors exchange concrete resources such as money, information, goods, or services, and these exchanges allocate power. Some exchange relationships also congeal into formal institutional arrangements like long-term contracts or policies. Actors are also influenced by cultural understandings of and beliefs about the other party or type of exchange. These attitudes render certain economic goals and strategies more plausible than others, hence aiding or constraining efficiency of outcomes.

Specifically, for the present analysis at the nation-state level, this implies that economic exchange between countries is rooted in state relations, international exchanges, and national identity. First, nation-states as political actors forge formal institutional and political alliances with other states. Second, countries build contacts with each other through exchanges of people and goods. Third, nationality as a form of identity has particular cultural understandings and meanings associated with it; those meanings shape contacts between actors from different nations. These supra-organizational phenomena suggest that formal institutional arrangements, political alliances, business and personal networks, and cultural ties between investor and host countries will influence FDI flows between them. In the following sections, I describe each of these social relations and derive testable propositions about their specific effects on FDI flows.

**Institutional Arrangements between Investors and Hosts**

State institutions are often seen as a fundamental context of economic action (Allen & Campbell 1994; Block 1994; Campbell & Lindberg 1990; Perrow 1990; Polanyi 1944, 1992). From a relational perspective, state institutions themselves are interdependent and embedded in a global environment (Meyer et al. 1997). In an analysis of FDI, it is critical to incorporate the relational character of institutions because specific institutional arrangements between investors and hosts might have an impact on investments between them. In this vein, my study goes beyond understanding how single institutions regulate economic processes to focusing on how the interdependence of states and international political institutions shape cross-border investment flows.

Institutional arrangements between states could have different effects on foreign direct investment. If institutions are central to the governance of contractual relations, states may institutionalize foreign ties to minimize international transaction costs (Williamson 1981, 1985, 1994). These institutional connections affect economic relations between countries by routinizing transactions and thus reducing uncertainties and costs associated with dealing with a foreign country. The transaction cost perspective thus predicts a positive relationship between institutional arrangements and FDI flows between countries.
Alternatively, theories about multinational firms suggest that minimizing transaction costs may reduce FDI. From this perspective, FDI results from a firm's need to internalize foreign markets in the face of market failure (Dunning 1981; Rugman 1981). In the absence of market failure, firms will simply service foreign markets through exports or licensing agreements with domestic firms and forego the costs and risks of FDI. Following this reasoning, the institutional ties between states negatively affect FDI flows.

Two kinds of institutional relations regulate FDI flows between investor countries and Central and East European host countries: bilateral investment treaties (BITs) and European Union (EU) agreements. BITs specifically regulate FDI and the activities of transnational corporations. They are designed for the promotion and protection of foreign investments between countries that sign a treaty. For instance, a prototype treaty between the U.S. government and other foreign governments specifies that U.S. investments abroad will be treated as domestic investments, that foreign investments will “not be expropriated or nationalized,” and that all transfers relating to foreign investments (such as profits, compensation, or dividends) will be “made freely and without delay into and out of [a host country’s] territory” (UNCTAD 1996b). Texts of German and Swiss bilateral investment treaty prototypes specify very similar provisions between investor and host country, and the United Nations Conference on Trade and Development provides these treaties as examples for other countries to emulate (UNCTAD 1996b).

Furthermore, the post–Cold War period has witnessed a succession of increasingly formalized international regimes that establish rules regulating international economic activity (Block 1994). The dominant European example is, of course, the European Union. Before 1997, none of the Central and East European countries had started negotiations for the EU accession, however, a majority of these transition economies had signed EU agreements. EU agreements provide a bilateral institutional framework between EU member states and a partner country, covering trade-related issues, political dialogue, and legal harmonization. Other areas of cooperation have included industry, environment, transport, and customs. Specifically, these agreements require the abolition of most tariffs and the adaptation of the regulatory framework to EU rules (Meyer 1998).

Different theoretical perspectives expect different effects of BITs and EU agreements on FDI. If institutionalized agreements between investor and host countries directly reduce transaction costs in investment exchanges, then profit-maximizing investors will choose those host countries that are bound by the institutional agreements, and the effects of BITs and EU agreements on FDI will be positive. Alternatively, if institutionalized agreements between countries allow for alternative and less costly ways of accessing host markets, the effects of such agreements on FDI may be negative.
POLITICAL ALLIANCES BETWEEN INVESTORS AND HOSTS

While BITs and EU agreements are institutional provisions designed to directly regulate foreign investment activity, nation-states are also connected to each other through political alliances, which influence economic activity. Sachs (1998:4) reports how "in 1989, post-communist Poland desperately needed a fund to stabilize the exchange rate . . . [and while] the IMF mission to Poland dismissed the idea of a stabilization fund . . . the Poles were able to lobby the United States directly." In response, the U.S. helped establish the zloty stabilization fund and prevent hyperinflation. This case illustrates that those Central and East European countries that forge ties to rich and powerful states secure benefits from their political alliances. These alliances allow for political visits and exchanges of information between countries to occur. They also enable the transfer of knowledge about economic opportunities during the privatization process in which postsocialist countries sell large, formerly state-owned monopolies (Stark & Bruszt 1998).

Disbursements of official aid signal the nature of political alliances between two countries; more aid will be disbursed to countries with which the donors have closer political connections. Certainly, some countries have large foreign aid budgets but less political influence in the global arena, such as Sweden or Denmark, while other countries, such as the United States, have a proportionally small foreign aid budget but more political influence. However, for this analysis, political influence is not considered in absolute terms but relationally. Aid flows thus show political patronage of donors toward certain recipient countries but not others; these political connections shape international economic exchange. In this vein, current aid flows from a donor to a recipient country should have a positive effect on future FDI for that country pair.

PERSONAL AND BUSINESS NETWORKS BETWEEN INVESTORS AND HOSTS

Economic transactions flow through interpersonal relationships and other social networks (Granovetter 1985; for a review, see Swedberg 1997). Two types of networks might influence the choice of foreign investment sites: organizational networks between foreign firms and companies in a host country, and personal networks among affiliates of a specific host country and foreign investor firms.

A potential investor firm can have its own networks in a foreign country because it has previously existing trading relations with that country. Consider Glaxo, a large UK-based pharmaceuticals manufacturer that decided to invest in the Czech Republic. Having a representative office in Czechoslovakia in the 15 years before the investment was made was pivotal for the final outcome. Because of pre-existing business ties, Glaxo already had some knowledge of the country and the market, which influenced their investment decision (Estrin,
Consistent with this example, surveys of investors in Slovenia show that the choice of investment locations is strongly influenced by pre-existing business cooperation between investor and host firms (TIPO 1998). Overall, established business ties between investors and hosts will have a positive effect on future FDI between them.

A decision to invest abroad can also be influenced by personal networks. De Mortanges and Caris's (1994) study of individual cases of Dutch investment in Central and Eastern Europe identified promoters within a firm as very influential in foreign investment decisions. These people personally made a case for investment because they had personal or other affiliate ties to a specific host country. Affiliation to a host country is often based on ethnic ties between sizable and relatively affluent expatriate communities and their home countries (Dobosiewicz 1992).

Personal ties between expatriates and business members of host countries influence investment flows because affiliates to host locations facilitate information flows and/or lobby for certain locations as opposed to others. For most Western companies, the idea of investing in Central and Eastern Europe in the mid-1990s was relatively new and the mechanisms for gathering and assessing information underdeveloped (Estrin, Hughes & Todd 1997). Firms thus amassed information about investment opportunities through their business or personal ties. This might be especially the case for investment sites in countries where economic and political stability is relatively low, such as in Croatia. Because violent political conflicts and civil war had subsided there only by 1995, it is surprising that we see substantial U.S. and Australian investments in Croatia. One explanation points to sizable Croatian immigrant communities in the U.S. and Australia. Immigrant Croats maintain particularly strong links to their home country, which is substantiated through a high level of remittances sent back to Croatia (IMF 1999). It is thus likely that Australian and U.S. investments in Croatia were initiated through personal networks based on ethnic ties between immigrants from the host country and investor firms. Information from a personal interview with a consultant to the Croatian Investment Promotion Agency supports this interpretation (personal comm., Zagreb, Croatia, July 20 1999). In sum, aggregate personal ties between two countries facilitate trust and information flows and should thus encourage FDI flows between them.

**Cultural Ties between Investors and Hosts**

Economic behavior is culturally embedded because shared collective understandings of economic strategies, goals, and actors influence economic outcomes. Cultural embeddedness is especially important for understanding transnational processes and making cross-national comparisons (DiMaggio & Zukin 1990:19). In the case of FDI, the influence of cultural factors on
economic activity seems particularly likely because the exchange not only involves a transfer of foreign capital but also a transfer of a lasting interest in an acquired company. This lasting interest implies a significant degree of influence by the investor on the management of the host company (Dunning & Rojec 1993). Knowing that management practices are not universal but culturally specific (Boltanski 1990), we can infer that a host’s and an investor’s conceptions of management and work organization might vary greatly. On these grounds, hosts might be more open to investments that they consider closer to their cultural values and practices and resist those that are perceived as distant.

An attempt by an American household appliance manufacturer to buy a majority share in a Slovenian company illustrates this point. Perceiving “the American way of doing business” as merciless downsizing and an uncaring attitude toward workers, middle management of the targeted host firm mobilized workers and launched a news campaign against the American investment; labeling it “a hostile take-over” (Slovenian national daily Delo, June 10, 1997). As a result, the American firm withdrew the offer because they did not want to be perceived as having negative intentions. Half of this Slovenian company was later acquired by a German multinational whose style of management, due to a history of connections between the two countries, was much more familiar to Slovenes.

This case illustrates that investment flows are imbued with cultural significance; their place of origin is relevant to a host’s willingness to accept them. On the other side of the investment transaction, management theory suggests that investors prefer locations that are culturally and linguistically similar to the investor (Mead 1994). Though this research acknowledges the role of culture, it defines it in terms of coherent psychologically based national character and, moreover, uses it mostly to account for the residual in economic equations and not as an integral part of analysis (Schwartz & Haggard 1997).

In contrast, I propose that culture significantly affects economic exchanges. However, we should understand culture not as a coherent national value but as a historically institutionalized cultural repertoire (Lamont & Thévenot 2000). Investors’ and hosts’ cultures need not be similar for a successful transaction to occur as long as each party has knowledge of the other, as a member of a particular national group, that allows for “cultural matching” (DiMaggio 1993:127). Cultural matching occurs when exchange parties envision each other as likely partners in a transaction.

Since institutionalized national cultural repertoires shape people’s understandings and behavior (Lamont 1992), conceptions of nationality are a likely influence on international economic transactions, leading to differentiation between investors on the basis of their country of origin. Such differentiation comes across in a remark by one of my Central European informants, a retired judge, who reported, “Our office of external affairs would quickly issue all the necessary investment documents to German or Swiss
investors, no problem, but you know, that wouldn’t be the case for Italians” (personal comm., Moscenicka Draga, Croatia, Oct. 30, 2001). In international encounters where distinctions on the basis of national origin are significant, cultural matching between investor and host occurs when knowledge of the other’s nationality is conducive to investment transactions. Since historically, frequent experiences and interactions with other nationals are a good source of knowledge, two countries with a history of interaction will share a cultural tie. We would expect hosts that share cultural ties with potential investors to be able to attract more FDI than those who do not.

Data and Analysis of FDI Flows into Central and Eastern Europe

To investigate the effects of substantively different social relations outlined in the previous section, I model FDI flows between investor and host countries. Other studies on the effects of relational variables have used dyads as units of analysis (Lincoln, Gerlach & Takahashi 1992; Galaskiewicz & Wasserman 1989). Following this approach, host-investor dyads are units of my analysis. Hosts are the 11 countries of Central and Eastern Europe. Investors are the world’s 20 largest foreign investors (UNCTAD 1998) and any other country that invested at least $5 million between 1995 and 1997 in at least one Central or East European country. The cut-off of $5 million is used because this maximizes the number of country dyads while taking into account the availability of data. The investors included in the analysis contribute to 94.2% of the total world FDI stock in 1997 (UNCTAD 1998). Their investment in individual Central and East European host countries varies significantly, with a mean presence of investors in about six countries, and standard deviation of 3.4. Altogether, 27 investor countries and 11 host countries, comprising 293 dyads, were used for analysis. Appendix A details the structure of data and data sources.

FDI Flows from Investor to Host Country

This research examines FDI as a macroeconomic process and aims to specify the supra-organizational factors that determine the levels of FDI by a particular investor country in a particular host country. Aggregate FDI flows are the standard foreign direct investment statistics reported by international organizations such as the International Monetary Fund (IMF), the United Nations Conference on Trade and Development (UNCTAD), or the Organization for Economic Cooperation and Development (OECD). All independent variables examined in this study are measured at the aggregate level or are characteristics of nation-states. In my proposition that variance in FDI flows within host countries needs to be taken into account to understand cross-national variation, I am disaggregating my outcome variable to examine
FDI flows from a specific investor to a specific host country. Examining FDI at the national level allows us to specify the extent to which supra-organizational factors influence firm behavior. Moreover, it allows us to incorporate data on all possible host locations in the 11 countries of Central and Eastern Europe rather than only a selection of successful organizational FDI attempts.

Specifically, the dependent variable in this analysis is the aggregate of 1995–1997 FDI inflows in U.S. dollars in an investor-host country dyad, scaled by host country population. The outcome is measured for the 1995–1997 period because 1995 marks the year of first substantial investment into the region, with FDI flows exceeding 1% of total GDP, and 1997 is the most recent year for which all dyadic data are available. The variation in FDI into Central and Eastern Europe before 1995 is insignificant.

As a measure of yearly aggregate FDI flows, the outcome can have positive or negative (signaling disinvestment) values. In my sample, there are no negative values, but the distribution is clustered near zero. The dependent variable is logged to reduce skewness and heterogeneity of regression error variance.

Information on predictor variables is from a period before 1995 in order to avoid endogeneity and establish causal priority. Since the current political structure of countries in Central and Eastern Europe dates from 1992, predictors are measured for the period 1992–94.

Variables used in the regression analysis are listed in Table 1. In addition to country characteristics and relational predictors, a variable that controls for an investor country’s propensity to invest abroad is included (i.e., total FDI outflows by investor country for 1995–97). To control for size of host country, every continuous independent variable is scaled to host country population. For 32 of all possible country dyads, data were missing, but tests showed that dyads with missing values are not systematically different from the rest of the dyads; thus their exclusion seems unlikely to bias the inferences based on the regression results.

**Host Country Characteristics**

**GDP per Capita**

Previous studies include a variety of economic and human capital indicators (GDP, GDP per capita, GDP growth, inflation rate, infrastructure development, unemployment rate, level of skill of workforce, and labor costs). Combining all indicators in a model of FDI creates collinearity, since many of these economic factors commonly tap the overall economic performance and level of development of a country. (Collinearity diagnostics in exploratory analysis exceeded conventional thresholds.) Following previous research, I use GDP per capita as a general indicator of economic performance of a country to be
<table>
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<th>Variable</th>
<th>Description</th>
<th>Mean</th>
<th>S.D.</th>
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<tr>
<td><strong>Dependent variable</strong></td>
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<tr>
<td>Foreign direct investment (FDI)</td>
<td>Cumulative inflows of FDI from investor to host (US$ per capita) 1995–97</td>
<td>12.67</td>
<td>30.87</td>
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<td><strong>Host country characteristics</strong></td>
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<td>Development</td>
<td>GDP per capita (US$ thousands)</td>
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<td>1.71</td>
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<td>GDP growth (percent)</td>
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<td>5.4</td>
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<td>Inflation rate (percent)</td>
<td>223.9</td>
<td>249.6</td>
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<td>Ratio of digital to all phone lines (1996)</td>
<td>262.7</td>
<td>58.6</td>
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<td></td>
<td>Ratio of highways to all roads (1996)</td>
<td>71.6</td>
<td>21.4</td>
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<td></td>
<td>Unemployment rate (percent)</td>
<td>9.2</td>
<td>4.1</td>
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<td>Combined 1st, 2nd and 3rd level gross school enrolment ratio (percent), 1994</td>
<td>69.8</td>
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<td></td>
<td>Average monthly wages (US$)</td>
<td>223.6</td>
<td>164.7</td>
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<td>Political stability</td>
<td>5-point scale indicating stability of government and market-oriented policies (1 = lowest, 5 = highest), 1993</td>
<td>3.14</td>
<td>1.10</td>
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<td>FDI policy</td>
<td>11-point scale measuring openness of host government’s FDI policy (1 = lowest, 11 = highest), 1993</td>
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<td><strong>Investor country characteristic</strong></td>
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<tr>
<td>Total FDI from investor</td>
<td>Cumulative FDI outflows from investor (US$ billion) 1995–97</td>
<td>40.03</td>
<td>61.97</td>
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<tr>
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<td>Dummy variable indicating whether countries signed BIT by December 1994</td>
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<td>.48</td>
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<tr>
<td>EU Agreement</td>
<td>3-point scale indicating whether bound by “Europe Agreement” by December 1994 (0 = no agreement, 1 = agreement 1993, 2 = agreement 1991)</td>
<td>.43</td>
<td>.77</td>
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<td>Government aid from investor country to host country government (US$ per capita)</td>
<td>.68</td>
<td>1.83</td>
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<td>Migration</td>
<td>Dummy variable indicating registered emigrants from host to investor country</td>
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<td>.50</td>
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<td>Export</td>
<td>Exports from investor to host (US$ thousands per capita)</td>
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<td>.08</td>
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<tr>
<td><strong>Cultural ties</strong></td>
<td>Dummy variable indicating a presence of investor-country national minority in host country and vice versa</td>
<td>.11</td>
<td>.31</td>
</tr>
</tbody>
</table>

**Note:** See Appendix A for data structure and sources. All variables are annual averages (1992–1994) unless indicated otherwise.
included in the analysis. (The sensitivity of estimates to the choice of economic development measure is assessed below.) According to the profit maximization thesis, investors will invest in those countries that promise highest returns based on their economic development. Thus, GDP per capita and FDI should be positively associated.

Political Stability

Measuring political stability in the transition economies is particularly difficult because there are no cross-national data on the frequency of changes in a country’s legal policies and bureaucratic/administrative barriers. I rely on a measure of political risk derived by an international consulting firm, Ernst & Young (Dunning & Rojec 1993). High scores on the Ernst & Young political risk indicator indicate stability of government and market-oriented policies. According to the profit maximization thesis, investors invest in countries with politically stable environments. Thus, the political stability score and FDI should be positively associated.

FDI Policy

Although researchers agree that multinational firms respond to policy incentives and react against restrictions imposed by host country governments (Estrin, Hughes & Todd 1997), no study has tried to quantify host country FDI policy. To systematically measure FDI policy, I conducted a content analysis of several governmental provisions with respect to incoming FDI for each of the 11 host countries in the sample. The content analysis allowed the construction of a composite variable, measuring the extent of host government solicitation of FDI. Based on the assumption that firms react to incentives for investment, higher scores on a country’s FDI policy index should be positively associated with FDI into that country.

Relations between Host and Investor Countries

Institutional Arrangements

Institutional relations between countries are captured by two measures. A dummy variable indicating country dyads that have signed BITs measures how formal agreements about foreign investment between investor and host countries influence FDI flows between them. The transaction cost perspective predicts that a positive score on BIT will increase FDI.

An ordinal-level variable indicating when a EU agreement was signed measures how region-specific institutional arrangements influence FDI. The earlier signature can induce more FDI because it signals recognition of a host
country’s progress in transition and thus credibility for foreign investment. This reasoning predicts a positive relationship between EU and FDI. Based on the theory of multinational firms, EU agreements induce investor countries to enter host markets via alternative economic arrangements to FDI. Based on this perspective, the relationship between the EU agreements and FDI will be negative.

**Political Alliances**

Flows of official government aid from one member of a country dyad to the other capture political relations and patronage between the two countries, which facilitates information flows about investment opportunities and leads aid recipients to favor investment attempts from their donor countries. Therefore, the higher the current disbursement of aid from an investor to a host country, the higher the future flow of FDI between them.

**Personal and Business Networks**

Personal ties are indicated by a dummy variable for a dyad where investors receive long-term immigration from the host country. A positive score on the migration variable should have a positive effect on FDI flows. Business networks are measured by the value of export from investor to host country in order to capture investor country’s preexisting business ties with the host. The higher level of export should induce higher FDI.

**Cultural Ties**

Knowledge of other national cultures is historically based and is difficult to quantify. I use the presence of national minorities in a particular foreign country as a proxy for cultural ties. Presence of national nonimmigrant minorities between host and investor countries contributes to historically based experiences and interactions with people from the two countries, which creates tacit knowledge about the other group’s culture and affirms cultural ties between the two nations. National minorities in European countries are often the remains of historical divisions of territory that do not correspond to current national boundaries. For instance, many Central and East European countries were either a part of the Austro-Hungarian Empire or Prussia. Thus, among other ethnicities there is a sizable nonimmigrant population of ethnic Germans in Hungary and ethnic Poles in Latvia. For countries within Europe, the presence of nonimmigrant minorities is similar to the use of colonial relations as a proxy for historical cultural ties between Western nations and their colonies. Hence, the presence of a nonimmigrant minority with host-country national origin in the investor country, or vice versa, will positively influence FDI between two countries.
MODEL SPECIFICATION: OLS AND FIXED EFFECTS REGRESSION

In the analysis below, FDI is written as a linear function of the predictors:

$$\log (Y+1) = \alpha + \beta X + \epsilon$$

where $Y$ is the dependent variable, $\alpha$ is the intercept term, $\beta$ is the coefficients matrix, $X$ is the matrix of independent variables, and $\epsilon$ is the error component.

I report results from two different specifications. Ordinary least squares (OLS) regression is used to examine the explanatory power of the atomistic and relational approaches to FDI as well as to assess how substantively different kinds of relations between investors and hosts influence macroeconomic exchange. Due to multiple inclusion of individual countries in the analysis, I also used the Huber-White method to correct for heteroskedasticity in the OLS models. The significance of the effects with robust error estimates was unchanged.

The use of dyads as units of analysis in this study may create correlations in data due to host- or investor-specific effects. Such clustering would yield coefficient standard errors smaller than those obtained for independent data and boost the regression coefficients. To address this concern, the robustness of relational variables is tested in a model that corrects for potential bias by adding fixed effects for each host and investor country. A random effects model for hosts and investors provides a more parsimonious specification. Results from the random effects model were substantively identical to the fixed effects analysis. However, for the purposes of this analysis, the fixed effects model provides the most stringent test to assess the explanatory power of the relational perspective, since it accounts for any possible host or investor country characteristic. Thus any omitted variable related to country characteristics would be accounted for in the fixed effects model.

CROSS-NATIONAL VARIANCE IN FDI: RESIDUALS ANALYSIS

Host country characteristics may provide a good explanation of cross-national variation, and relational variables may just account for variation in the origin of investment within host countries. To study the explanatory power of host country and relational variables as rival accounts of cross-national variation, I calculate the proportion of cross-national variance explained by each model. For host countries, $h$ ($h = 1, \ldots, 11$), and investor countries, $i$ ($i = 1, \ldots, 27$), the proportions of cross-national variance explained under a model is given by

$$R^2 = (1 - \text{RSS} / \text{TSS}),$$

where

$$\text{TSS} = \sum_h \left( \sum_i Y_{hi} - \frac{\sum_h \sum_i Y_{hi}}{11} \right)^2,$$

$$\text{RSS} = \sum_h \sum_i (Y_{hi} - \hat{Y}_{hi})^2,$$

$$Y_{hi} = \sum_i Y_{hi},$$

$$\hat{Y}_{hi} = \sum_i \hat{Y}_{hi},$$

$$R^h_i = \sum_i Y_{hi} - \hat{Y}_{hi}.$$
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Ext. Bounds*</th>
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<td>(2.25)</td>
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<td>.003*</td>
<td>.003*</td>
<td></td>
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<td>(6.48)</td>
<td>(6.65)</td>
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<tr>
<td>Bilateral investment</td>
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<td>.162*</td>
<td>.054</td>
<td>.058</td>
<td>(1.09, .223)</td>
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<td>(2.29)</td>
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<td>(0.67)</td>
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<td>EU agreement</td>
<td>.136*</td>
<td>.130*</td>
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<td>.021</td>
<td>(1.124, .195)</td>
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<td>(1.06)</td>
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<td>.059*</td>
<td>.054*</td>
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<td>.217*</td>
<td>.191*</td>
<td>.257*</td>
<td>(1.176, .232)</td>
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<td>.014*</td>
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<td>(2.93)</td>
<td>(3.73)</td>
<td>(2.45)</td>
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<td><strong>Cultural ties</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Investor country fixed effects</td>
<td>.244*</td>
<td>.266*</td>
<td>.348*</td>
<td>.363*</td>
<td>(0.231,.389)</td>
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</tr>
<tr>
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<td>included</td>
<td>included</td>
<td>included</td>
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<td>−.120</td>
<td>.087</td>
<td>−.153</td>
<td>.305</td>
<td>1.05*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(−.750)</td>
<td>(1.71)</td>
<td>(−1.16)</td>
<td>(1.55)</td>
<td>(6.34)</td>
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<tr>
<td>R²</td>
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<td>.535</td>
<td>.673</td>
<td>.702</td>
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<td>BIC</td>
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<td>−57.86</td>
<td>−49.37</td>
<td>−35.73</td>
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<td>.000</td>
<td>.017</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>261</td>
<td>261</td>
<td>261</td>
<td>261</td>
<td>261</td>
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<tr>
<td>Explained cross-national variation of FDI into 11 host countries (percent)</td>
<td>57</td>
<td>72</td>
<td>73</td>
<td>81</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>

Note: t-values in parentheses; p-value for F change reports p-values for a significance test of model improvement over the specification reported in previous column.

* Extreme bounds for relational predictors of all alternative model specifications of host country characteristics (including GDP per capita, GDP growth, inflation rate, ratio of digital to all phone lines, ratio of highways to all roads, unemployment rate, combined 1st, 2nd, and 3rd-level gross school enrolment ratio, average monthly wages, political risk, and FDI policy).

* p < .05 (two-tailed tests)
and $Y_{hi}$ is the observed value of the dependent variable for host $h$ and investor $i$, and $\hat{Y}_{hi}$ is the predicted value of the dependent variable calculated from the regression. Regression results and residuals analysis are reported in Table 2.

Results

In Table 2, model 1 shows the fit of the atomistic model in predicting FDI flows and evaluates the impact of individual host country characteristics. The explanatory power of the model is relatively weak and dependent upon the investor country's overall level of foreign investment. Political risk is the only significantly influential host characteristic in this simple model, but its effect disappears once relational predictors are added to the model. This indicates that political volatility in postsocialist Central and East European countries does not uniformly deter foreign investment.

The insignificant effect of FDI policy is surprising, but there may be large differences between official policy and its practical application (Calavita 1992). Information from a personal interview with a high-ranking official of the Central and East European Privatization Network supports this interpretation (personal comm., Ljubljana, Slovenia, Jan. 10, 1999). Negotiations of investments in Central and Eastern Europe are done case by case at the organizational level, whereas serious investors can bypass some of the legal regulations set at the host country level. This implies, in fact, that relational measures may be better for tapping FDI determinants.

Model 2 tests how institutional, political, network, and cultural ties between countries influence dyadic FDI flows. The results strongly confirm the hypothesis that embeddedness has positive effects on FDI. $R^2$ of .515 indicates a significantly higher explanatory power of this relational model compared to the country characteristics specification. In particular, if host and investor country have signed a BIT and EU agreement, the effect of standardization and routinization of transactions raises FDI flows in country dyads by about 17% and 14% respectively. Moreover, with each additional dollar per capita of foreign aid moving from investor to host, the future FDI between the two countries increases for 6%.

The presence of migration communities of host country origin in an investor country has a positive effect on FDI. Expatriates establish personal network ties, which are heavily used to promote and facilitate investment opportunities in home countries. The significant positive relation between the level of investor-host export and FDI signals that pre-existing business ties acquired through trade relations are an important determinant of investment locations. As predicted, cultural ties forged historically by the presence of a
national minority of host country origin in the investor country, and vice versa, raise FDI flows in a country dyad for more than 25%.

Relational and host country characteristics are combined in model 3. The effects of institutional arrangements and the political, network, and cultural ties exhibited by country dyads remain significant and just as strong as in model 2. This yields additional support to the relational perspective put forward in this study. In fact, $R^2$ increases insignificantly ($p > .01$) from model 2 to model 3, indicating that country characteristics barely add to the explanatory power of the combined model. Likewise, the Bayesian Information Criterion (BIC), which assesses the goodness-of-fit, is lower for model 2 than 3, indicating that model 3 provides a better fit.

Model 4 tests the robustness of relational variables by fitting fixed effects for investor countries; thus it includes all the controls associated with investors such as their propensity to invest, trade, accept immigration flows, and disburse aid. With this specification, formal institutional arrangements in country dyads, such as BIT and EU agreements, lose their significance to determine FDI flows between countries. These results imply that standardization of the institutional environment between countries does not have a direct effect on actual FDI flows, once we control for all investor country characteristics. However, political alliances, trade, migration, and cultural ties remain robust predictors of FDI flows between investor and host countries.

The specification in model 5 adds additional constraints to test the robustness of social relations for explaining macroeconomic exchange. By including fixed effects for both investor and host countries, this model provides the most stringent test for the relational approach, since it accounts for all the variance in the outcome related to host and investor country characteristics. Consequently, it also eliminates any omitted variable bias related to country characteristics. As in model 4, this specification again exposes the weakness of the institutional arrangements effects and the robustness of political, network and cultural embeddedness between economic actors to explain FDI flows between them.

Some may object that this study's focus on the particular universe of Central and East European host countries undermines the importance of risk and return indicators, since potential investors may perceive the whole region to share similar levels of economic and political stability. However, as standard deviations presented in Table 1 show, the 11 postsocialist countries comprising the hosts in the dyadic relationships vary substantially in their characteristics. In addition, such an objection cannot explain why institutional arrangements, which lower uncertainty and thus risk, do not have a significant impact on FDI flows.

Establishing that political, trade, migration, and cultural relations powerfully explain the FDI flows in country dyads, we want to also determine the added value of the relational perspective for explaining the cross-national
variation in FDI flows among the 11 Central and East European countries examined in this study. Using the residuals from each model specification, we estimate the proportion of the cross-national variation explained by each model. The calculations show that relational characteristics and investor country controls explain 81% of the variance in cross-national FDI inflow. Adding all possible characteristics associated with host countries — considered crucial by previous research — contributes only one additional percent to the explanation of the variance in FDI across the 11 Central and East European countries. These results substantiate that the relational perspective is not only important in specifying dyadic FDI flows, but that it also has considerable implications for distribution of outcomes across Central and East European postsocialist countries.

**Diagnostics and Specification Sensitivity**

A variety of diagnostics and specification checks were used to study the robustness of the results. Studentized residuals and Cook’s distances revealed no influential cases, significant outliers, or severe departures from model assumptions. Analysis of subsamples that alternatively drop individual host countries also showed robustness of relational effects.

To assess sensitivity of the effects (Leamer 1983) to the choice of the GDP predictor, I estimated relational coefficients for all permutations of the following host country variables, measured as annual averages for the 1992–94 period: GDP, GDP per capita, GDP growth, inflation rate, ratio of digital to all phone lines, ratio of highways to all roads, unemployment rate, combined first-, second-, and third-level gross school enrollment ratio, and average monthly wages. The narrow range of coefficients obtained from this large set of alternative models indicates robustness of the relational effects to assumptions about host characteristics (see Table 2, col. 6).

**Discussion and Conclusions**

This article examines sources of foreign direct investment in Central and Eastern Europe, using data on a sample of investor–host country dyads. Studying the determinants of FDI has important implications for economic development and growth. The analysis allows us to identify which factors lead some countries to establish strong connections to transnational corporations, while others remain less tightly integrated into the world economy. The analysis strongly indicates the embeddedness of macroeconomic processes and supports a relational approach for explaining FDI. Foreign investors and hosts are not independent but rather situated in different kinds of relational settings, which differentially shape macroeconomic exchange between them. Strong effects of
political alliances, migration, trade, and cultural ties between investors and hosts on FDI flows prompt serious reconsideration of previous studies emphasizing the market potential and political environment of individual host countries as key FDI determinants.

I adopt a theoretical framework of embeddedness of economic action that pays attention to politics, institutions, and culture. I argue for a fundamental conceptual revision in how these factors are integrated into analyses of economic exchange. Instead of considering them as regulatory external forces that constrain economic activity, it is important to treat them as inherently constitutive of social relations, enabling as well as constraining economic exchange. Adopting such a relational framework prompts a researcher to empirically focus on the content of social relations, not merely their structures, and to test how substantially different social relations can affect economic processes.

While political alliances, cultural ties, and the presence of networks between countries shape FDI flows, the results also suggest that institutional arrangements between countries do not significantly influence foreign investment flows into Central and Eastern Europe. These findings imply that institutionally reduced transaction costs are not consequential for FDI. Both BITs and EU agreements are official rules, or formal contracts. They regulate what is often a very context-specific practice of foreign direct investment, where formal provisions between the members of a country dyad are overridden by informal considerations, such as cultural knowledge, political connections between hosts and investors, or the presence of personal and business networks that facilitate information flows and promote certain investment opportunities over others.

These findings can further imply that agents of investment prefer FDI transactions promoted by previously existing personal and business ties to transactions guaranteed by formal institutional channels. This interpretation is consistent with findings in economic sociology about risk reduction in a broad range of economic exchanges (see DiMaggio & Louch 1998; Ingram & Roberts 2000; Uzzi 1997). There is an emergent generalization that in conditions of high uncertainty, people reduce risk not just by relying on institutional guarantees, but by channeling economic transactions through previously existing social relations. This strategy may reduce uncertainty and cost and increase knowledge of the other party and third-party guarantees, but embeddedness may also have negative effects on economic efficiency (Portes & Sensenbrenner 1993; Uzzi 1997).

Decoupling between formal-legal regulations and actual FDI flows may also support propositions in neo-institutional theory (Edelman 1992; Meyer & Rowan 1977; Sutton, Dobbin, Meyer & Scott 1994). Claiming that institutionalization of certain formal-legal arrangements between countries is driven by legitimization and world-society myths (Meyer et al. 1997), neo-
institutional theory would expect the effects of institutional arrangements to be symbolic rather than actual. Hence, formal-legal arrangements would not have any impact on the actual practice of macroeconomic exchange. While the null effects of BITs and EU agreements on actual FDI flows in this study are consistent with such an interpretation, further research is needed to test the decoupling thesis at the nation-state level.

Understanding FDI flows into Central and East European post-socialist countries is important because of the alleged importance of foreign capital as well as managerial and technological know-how in these countries’ economic transformation after socialism. In this context, the study’s findings are consistent with research underlining the continuity of institutions and practices through the socialist and post-socialist periods (Stark 1992; Szelenyi & Kostello 1996). Historically, highly bureaucratized and regulated socialist systems fostered opportunities to escape control through informal mechanisms (Lomnitz 1988). Thus, reliance on personal networks and political alliances were more plausible economic strategies than following formal institutional arrangements. Since the social organization of an economy is deeply rooted in collective understandings and practices, it is resilient to changing cultural circumstances (Biggart & Guillen 1999). This explains why economic practices established during state socialism still persist after socialist regimes have fallen.

Despite this study’s regional specificity, the findings also have implications for the links between economic development and economic globalization in other areas. The robustness of the embeddedness perspective may be sensitive to the institutionalized and path-dependent social organization of the national economies. Nevertheless, the specificity of emerging capitalist economies of Central and Eastern Europe is unlikely a sole reason to account for the significant effects of social relations and weak effects of standard risk and return indicators. More broadly, these results point to departures from profit maximization in the process of foreign investment, implying that social relations in which economic exchange is embedded may or may not lead to maximization of profits. While pre-existing business and personal ties forged through trade and migration flows between nations likely decrease search and transaction costs, established connections may also lock actors into a limited number of alternatives. Moreover, the local actors at investment sites may interfere with the investors’ profit-maximizing efforts. By resisting certain FDI attempts and favoring others with whom they are connected, hosts can determine who the foreign investors are and thus actively influence global economic exchange. What determines the extent of local actors’ involvement in global processes is an empirical question that should be addressed in subsequent studies. In addition, future research should assess how embeddedness and different substantive varieties of social relations matter for different kinds of global economic processes and for different world regions.
In any case, as findings of this study underscore, such examinations would benefit from relaxing the constraints of the profit-maximization imperative and balancing the unilateral accounts of economic exchange.

Notes

1. Official IMF and OECD statistics define FDI flows as a sum of initial investments (capital and in-kind) and any subsequent investments in a given year from the investor country to a host country. FDI refers to business transactions and does not include portfolio foreign investments or contributions from foreign governments.

2. In this analysis, Central and Eastern Europe is a geopolitical term that refers to 11 former state socialist countries: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The analysis omits Albania, Bosnia, Federal Republic of Macedonia, and Yugoslavia due to the unstable political situation and incomplete data in the 1995-97 period.

3. This also holds as far as individual countries are concerned, with a notable exception of Hungary, which has experienced inflows of FDI since 1990.

4. I used an outcome that scales FDI between a dyad by GDP of the host country, since this is also a common operationalization of FDI flows. The results were substantively similar between the two types of operationalizations. I present results for scaling by population because such analysis allows me to establish an independent effect of host country GDP on FDI.

5. The fixed effects model is written as follows:

\[
\log(Y+1) = \alpha + \beta_1 X + \beta_2 H_{(k-1)} + \beta_3 I_{(j-1)} + \epsilon,
\]

where \( \alpha \) is the intercept, \( \beta_1 \) is the coefficients matrix for independent variables, \( X \) is the matrix of independent variables, \( \beta_2 \) is the coefficients matrix for \((k - 1)\) host country dummies, \( H_{(k-1)} \) is the matrix of \((k - 1)\) host country dummies, \( k \) is the number of host countries, \( \beta_3 \) is the coefficients matrix for \((j - 1)\) investor country dummies, \( I_{(j-1)} \) is the matrix of \((j - 1)\) investor country dummies, \( j \) is the number of investor countries, and \( \epsilon \) is the error component.

References


APPENDIX A: Data Structure and Sources

SAMPLE: INVESTOR-HOST DYADS

Hosts: Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

Note: This is the first study of FDI into Central and East European countries using dyadic data. Great effort was made to include a varied population of post-socialist countries in Central and Eastern Europe, but dyadic data were not available for Albania, Bosnia and Herzegovina, the Federal Republic of Macedonia, and Yugoslavia. Therefore, any inferences based on my analysis do not apply to these countries. Were data available, however, inclusion of these host countries would most likely strengthen the results. The excluded countries are potentially very risky investment locations; previous research shows that in cases of greater uncertainty, economic actors rely on social relations even more than otherwise (DiMaggio & Louch 1998). Nevertheless, the 11 host countries included in this analysis represent a wide range of economic and political risks. (See Table 1 for the descriptive statistics for host country characteristics.)

Investors: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Italy, Japan, Korea, Latvia, Malaysia, the Netherlands, Norway, Poland, Singapore, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

Note: According to the $5 million criterion, Ireland and Russia would also qualify but were omitted because of data unavailability. Total outflows from these two countries indicate that they invest abroad relatively little and are not present as investors in the majority of the host countries studied. If anything, inclusion of Russia, which invests mostly in the Baltic States, would strengthen the impact of relational variables since Russia has cultural ties with the Baltic and has shared business ties with these countries since the time they all were part of the USSR.

Since four host countries, the Czech Republic, Estonia, Latvia, and Poland, also passed my criteria for investor countries, the set of dyads is not a complete $11 \times 27 = 297$, but 293. In general, I justify the selection of investor countries by including a population of investors that contributed to 94.2% of 1997 world stock of outward FDI (UNCTAD 1998). This means that the sample of host-investor dyads used in this study excludes those investor countries that contribute to about 5% of world investment but did not invest in any of the 11 Central and East European countries. My inferences thus do not refer to those very few countries, which are potential investors but did not invest in Eastern Europe. Knowing, however, that these countries are located in Africa, Latin America, the Middle East, and South Asia, regions that do not have political, cultural or migra-

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tion ties with Eastern Europe, I am certain that the inclusion of these countries would only strengthen my results and provide additional support for the relational perspective. Added dyads would score zero on the relational characteristics but, according to the country characteristics approach, their likelihood to invest in host countries with lower economic and political risk should be higher than for higher-risk countries. The outcome for these added dyads, however, would be zero in any case. For this reason, adding the dyads with investor countries responsible for the remaining 5% of world FDI would also not explain any additional cross-national variation in FDI in the 11 Central and East European countries.

**DEPENDENT VARIABLE**

*Foreign Direct Investment Flows* (Source: WIIW 1998; OECD 1998a)

**HOST COUNTRY CHARACTERISTICS**

*Development*
- GDP (exchange values)
- GDP per capita
- GDP growth
- Inflation rate
- Unemployment rate
- Wages
  (Source: IMF 1998)
- Ratio of digital to all phone lines
- Ratio of highways to all roads
- Combined first, second, and third-level gross school enrollment ratio
  (Source: World Bank 1999)

*Political Risk Indicator* (Source: Dunning & Rojec 1993)

*FDI Policy* (Source: Dunning & Rojec 1993; and National Accounts)

*Note*: The following criteria were used in the construction of the FDI policy index:
- approval/registration of foreign investor required (0 = yes, 1 = no)
- sectors restricted to investment (0 = three or more, 1 = one or two, 2 = none)
- incentives by host government: tax holiday (3 = 3 or more years, 2 = 1 to 2 years, 1 = tax cut, 0 = no tax incentives), exemption from custom tariffs (1 = yes, 0 = no)
- limits on repatriation of profits (0 = yes, 1 = no)
- role of FDI in privatization policy (4 = open early sale to foreigners, 3 = belated open sale to foreigners, 2 = first offer to domestic investors, 1 = required negotiations with privatization agency, 0 = no foreign privatization)
APPENDIX A: Data Structure and Sources (Cont'd)

**INVESTOR COUNTRY CHARACTERISTIC**

*Total FDI outflows from investor* (Source: OECD 1998)

**INSTITUTIONAL ARRANGEMENTS**

*Bilateral Investment Treaties* (Source: UNCTAD 1996b)

*European Union Agreements* (Source: European Union
http://europa.eu.int/comm/enlargement/pas/europe_agr.htm)

**POLITICAL ALLIANCES**

*Foreign Aid* (Source: OECD 1997)

**NETWORKS**

*Migration* (Source: OECD 1998b and National Accounts)

*Note:* There is no one source that collects data on sizes of migration groups in various countries. Contacting immigrant organizations for the 11 host countries revealed that they have only crude estimates on the sizes of immigrant populations of their national origin around the world and that their data are not complete. Moreover, such data would hardly be comparable across countries. Every country issues national reports on emigration, which list the number of individuals per year who register at a local municipality that they are acquiring a new citizenship. However, not everybody who registers also specifies the country to which they are emigrating. This means that official reports are likely conservative in terms of numbers; they also include only legal emigrants. Using a continuous variable of emigrants from host to investor countries in the 1992-94 period would also obscure the fact that the effect of immigrants might take several years to develop. The best measure would therefore be a variable that captures a history of migration trends between two countries in a dyad. Since half of the nations included in this analysis did not exist as sovereign political units before 1992, there are no continuous historical data available for the majority of my sample. However, migration studies have documented that people tend to migrate to those destinations with pre-existing ethnic communities of their national origin (Massey et al. 1998; Portes 1995; Zolberg 1989). This implies that yearly migration from host to investor country would signal the existence of ethnic communities of host country origin in investor countries. Thus, a decision was made to dichotomize the available data according to whether any emigrants were reported to leave a host country for the investor country during each of the three years (1992-94). Comparison of country pairs scoring 1 on the migration var-

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iable and available data on the presence of immigrant communities provided by national immigration organizations revealed a very close fit. Thus I am confident that my migration measure is a good indicator of the presence of migrants of host country origin in an investor country who can act as intermediaries to facilitate information flows about their home countries, act as lobbyists or promoters within potential foreign investor firms, or, as themselves owners of such firms, make decisions to invest back into their home countries.

*Export* (Source: National Accounts)

**Cultural Ties**

*National Minorities* (Source: National Accounts; Ethnologue http://www.sil.org/ethnologue)

*Note:* The presence of a nonimmigrant minority is a proxy for the existence of historical cultural ties between countries. It parallels the indicator of colonial status for non-European countries. It is the best available quantifiable measure that reflects a historical and cultural dimension of the relations between two countries; this warrants its inclusion in the analysis, despite its possible shortcomings.