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Institution Building and the Integration of Eastern Europe in International Production

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ABSTRACT

Using a dataset detailing FDI flows from market economies to transition economies we examine two aspects FDI inflow determinants given insufficient prior attention: labour costs and institutional development. We find low unit labour costs and aggregate institutional development enhance FDI receipts. Examining disaggregated development indicators identifies specific institutions that positively influence FDI: private sector development, banking sector reform, price, foreign exchange and trade liberalisation, and legal development. Conversely we find non-bank financial sector development and competition policy do not enhance FDI. Our analysis highlights that Russian FDI receipts have suffered from a gap between extensiveness and effectiveness of legal reform.

JEL Classification: F2, P3, F23
Keywords: Institutional Development, Transition, Foreign Direct Investment

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1. INTRODUCTION

The particular institutional structure of a country profoundly influences the operation and performance of its economy (North, 1990; Scott, 1995; Di Maggio and Powell, 1991). For example, the structure of trade unions influences the operation of labour markets (Hirsch and Addison, 1986; for the structure of capital markets influences investment and growth, see Lucas, 1993; and for the legal arrangements underpinning an economy influences its growth and developments see La Porta *et al.* 1999. Thus, institutions are crucial for the operation of a market economy and facilitate business operations (Clague, 1997; Harriss *et al.*, 1997). However the interactions between national economic institutions and enterprise level organisational strategies are seriously under-researched. This is especially true in emerging markets, even though institutional arrangements are of particular significance because underlying the market mechanisms are typically weak and underdeveloped. Thus Hoskisson, Eden, Lau and Wright have argued that, in emerging markets, institutional theory should be "preeminent in helping explain impacts on enterprise strategies" (2000: 252). In this paper, we explore empirically the interactions between organisation strategy and institutional arrangements in the context of foreign direct investment (FDI) to Central and Eastern Europe.

The countries of Central and Eastern Europe are emerging markets in terms of their level of development and economic infrastructure (EBRD, 1999) but have formed a very distinct business environment, which derives from the transition from socialist planning to the market economy. These features may be retained for many years in the future (Meyer, 2001). As a result, western business strategies and organisational concepts can only be transferred to a limited extent and the approach to market entry observed in transition economies will differ from those in developed ones.

Our approach is to incorporate the impact of institutional arrangements into the OLI framework (Dunning, 1993). Institutions can be viewed as providing important locational advantages and influencing the interactions between ownership and locational variables. Our methodology allows us to pinpoint the impact of specific elements of the institutional framework on foreign direct investment. We also contribute to the literature by including institutions that relate source and host countries, thereby reducing transaction costs.

Resources in the home country can be seen as a source of competitive advantages that facilitates business, even when the institutions of the host country are underdeveloped.

Our work is primarily empirical, and seeks to relate, in the context of a well-specified model, FDI receipts in the transition economies with institutional development. The existing empirical literature has captured the impact of institutional development on FDI by either using aggregate indices (Brenton *et al.*, 1999; Resmini, 2000) or perceived economic risk (Edwards, 1991; Wheely and Mody, 1992).[1] We employ a wide variety of alternative measures. We find that institutional development at an aggregate level does enhance FDI receipts in transition economies. Examining subsets of institutional development, we can identify specific institutions that positively influence FDI receipts: private sector development, reform of the banking sector, price, foreign exchange and trade liberalisation, and legal development. By contrast we find that the development of the financial sector outside the banking sector and competition policy do not enhance FDI in our sample.

This paper is structured as follows: in section 2 we outline literature and develop hypotheses which we test in our empirical analysis. Section 3 considers the interaction of ownership and locational advantages and develops hypotheses as to the effect of labour costs, distance and market size. Our empirical approach and results are outlined in section 4, in which we firstly examine the influence of aggregate institutional development, before disaggregating to consider a subset of institutional factors. Section 5 concludes.

2. INSTITUTIONS AS LOCATIONAL ADVANTAGES

FDI is usually analysed on the basis of Dunning's OLI paradigm, which sees FDI as an outcome of ownership advantages (O) of the firm combining with locational advantages (L) at a foreign location and internalisation incentives (I) favouring a hierarchical organisation over a market transaction. Our study focuses on two aspects of the OLI paradigm: the interaction between O-advantages and L-advantages at the national level, and on institutions as a subset of L-advantages of a host location. The institutional

[1] Other scholars analyze specific institutional aspects in isolation, for instance the production of intellectual property rights (Oxley, 1999; Smarsnaska, 1999). The problem with this approach is that various aspects of the institutional framework tend to be correlated.

framework is a crucial L-advantage, in addition to factor endowments. To understand business strategies in emerging markets, it is therefore necessary to analyse investment decisions in different institutional contexts (Hoskisson *et al.*, 2000).

Many scholars employ North's (1990) concept of institutions as "the rules of the game in a society". More precisely, North (1990: 3) defined institutions as "the humanly devised constraints that structure human interaction" which include formal rules (laws, regulations) and informal constraints (conventions, norms). Similarly, Scott (1995: 33) defined institutions as "cognitive, normative, and regulative structures and activities that provide stability and meaning to social behaviour". Institutional theorists have demonstrated the strong influence that institutional environments exert on organisations (Meyer & Rowan, 1977; DiMaggio & Powell, 1991) and their strategic choices in particular (Child, 1972, 1997; Oliver, 1997; Peng, 2000). For firms contemplating foreign investment, the restrictions and incentives created by national and multilateral institutions "shift the playing field favouring some deals and opportunities while disadvantaging others. They force the investing firms to think strategically about how to avoid the limits imposed by domestic laws as well as how to reap the benefits that the law and particular circumstances are capable of providing" (Spar, 2001).

Institutions are also the outcome of social and political processes, in which international businesses play a part (Spar, 2001). The policy areas of particular concern to multinational enterprises are trade policy, foreign investment rules, regulation, and anti-trust and competition policies. Trade and FDI policies (and capital controls, where still used) are generally designed to explicitly influence international business, and are generally subject to international negotiations between governments and businesses. Other institutions, such as regulatory and competition policy are developed by the domestic political agenda. International businesses have to adapt to a variety regimes that, even if pursuing similar objectives, may apply radically different rules. This requires adaptation to different formalities when interacting with authorities, and, what is more challenging, different patterns of competition as a consequence of regulation. Sometimes, changes in competition policy can provide dramatic opportunity for competitive advantage for foreign investors as it may change the relative competitiveness of firms operating within a given market (Spar, 2001).

2.1 Business Strategies and Institutions in Transition

Efficient markets depend on supporting institutions that can provide the formal and informal rules of the game of a market economy. Institutions lead to a fall in both transaction and information costs by reducing uncertainty and establishing a therefore stable structure to facilitate interactions (North, 1990). The absence of institutions represent a serious problem for business, especially in transition economies with their heritage of a socialist system. With the dissolution of the planning system, it was administrators who became independent economic agents. They acted on markets that existed only in rudimentary form; they lacked both the (tacit) knowledge on how to use the market mechanism and the market knowledge about potential products, partners, competitors and market demand. Thus, agents have had to engage in considerable search processes to establish transactions and to set prices, which generates high transaction costs (TCs) of establishing new business relationships and inhibits potential transactions (Swaan, 1997*b*; Meyer, 2001). As market-based institutions have become established in the transition economies (EBRD, 1999), these high TCs have been reduced, but not eliminated. Indications of this are the persistent high level of barter (Commander and Mumssen, 1999; Seabright, 2000) and informal networking (Ledeneva, 1999; Puffer *et al.*, 2000) in some countries of the former Soviet Union. Direct investors also, have to adapt their strategies to the local institutions (Oxley, 1999; Peng, 2000). Western businesses entering the transition economies therefore face high TCs in various markets as well as within organisations. As we have seen, these costs are higher than in mature market economies with a developed institutional framework because the transition temporarily creates an incomplete institutional framework.

Foreign entrants can thus face particularly high costs in establishing an operation in transition countries. They lack information about their partners, and face unclear regulatory frameworks, an inexperienced bureaucracy, an underdeveloped court system, and corruption (Thornton and Mikheeva, 1996). All of this increases their search, negotiation and enforcement costs. Moreover they become entangled in the privatisation process. Until recently, this was the main mechanism for acquisition, but required complex negotiations with governmental authorities, management and work councils (Antal-Mokos, 1998; Carlin *et al.*, 1995). After the acquisition, post-socialist firms need considerable investment in enterprise restructuring and major changes in corporate strategy, organisational structure and culture (Meyer and Møller, 1998; Uhlenbruck and

De Castro, 2000), which makes them “qualitatively different” from industry-specific deregulation in the west (Newman, 2001). In many cases the acquisition needs such deep restructuring that it almost resembles a greenfield, and thus is frequently referred to as brownfield (Meyer and Estrin, 1999). On the other hand, greenfield investment may be too slow to achieve the desired strategic objectives, notably if firms pursue first-mover. They too face considerable establishment costs, as local bureaucracies are slow, for example in approving acquisition of real estate.

Thus we can hypothesise that the creation of institutions for a market economy which is associated with progress in transition is crucial to attract FDI, by reducing the transactions costs of setting up a local operation.

Proposition 1: “Progress in economic transition increases FDI inflows”

Empirical research on the impact of host country institutions on foreign direct investment has demonstrated that the general institutional, social and legal framework influences FDI. Most research uses very aggregate indices and finds that lower risk and more market friendly institutions do increase FDI inflow. Nigh (1985), Schneider and Frey (1985), Edwards (1991) and Wheeler and Mody (1992) show the relevance of political variables, but their quantitative impact on FDI was minor compared to economic variables. Jun and Singh (1996) find that both ‘political risk’ and ‘operations risk’ (based on indices provided by Business Environment Risk Intelligence) significantly discourage FDI. A number of studies moreover used indicators of specific institutions, which — if used in isolation — act as a proxy for the whole institutional framework. For example, Jun and Singh (1996) and Barrel and Pain (1997) find that ‘work days lost due to industrial strikes’ has a negative impact on FDI.

Studying bilateral FDI from western to eastern Europe, Brenton *et al.* (1999) include an economic freedom index, that was found to be positively related to FDI flows. Yet this index was highly correlated with *per capita* GDP, such that its interpretation is ambiguous. Resmini (2000) uses the same ‘operation risk index’ as Jun and Singh (1996) and finds that risk discourages FDI in some industries notably in scale intensive and high technology sectors.

The variation of institutional frameworks in eastern Europe is usually characterised by the countries' progress in transition. We use an aggregate of the EBRD transition indicators to reflect general progress in transition. The index has been constructed as an average of eight key transition indicators reported by the EBRD in their Transition Report, reflecting progress in: small and large-scale enterprise privatisation; governance and enterprise restructuring; price liberalisation; trade and foreign exchange liberalisation; competition policy; banking reform and interest rate liberalisation, and reform of securities markets and non-bank financial institutions. Each of these individual EBRD indices are reported on a 1 to 4+ scale with higher numbers indicating greater reform progress. Such an index has also been used by Garibaldi *et al.* (1999) who find few significant effects on volume of FDI inflow to CEE though they include other institutional variables simultaneously, and by Meyer (2000*a*) who finds that progress in transition favours FDI over other forms of business.

2.2 Focus on Institutions: Which Ones Matter?

While there is strong support for the proposition that institutions matter when it comes to attracting inward investors, there is little agreement as to which institutions are crucial, and which secondary institutions are merely correlated with them. To provide policy advice, we need to provide evidence on the relative importance of different institutions. The following propositions aim at shedding more light on which institutions in particular affect FDI inflows. We extend the previous literature by looking at the constituent elements of the institutional framework and suggesting specific propositions. Our empirical work focuses on their explanatory power, relative to both the aggregate index and to each other.

2.2.1 Privatisation

Possibly the most important institutional change in transition is the change of ownership (Estrin, 1994; World Bank, 1996). State-owned firms are privatised on a large scale, while a small incipient entrepreneurial sector gradually gains market shares. Both forms of privatisation create opportunities for foreign investors in multiple ways:

- private firms are more adept partners for Western businesses, lowering transaction costs;
- private ownership encourages entrepreneurship and thus reinforces the competitive character of local markets, and

- privatisation itself creates opportunities for acquisitions and joint ventures.

Therefore, we expect that all forms of privatisation and private sector development have a positive impact on inward investment:

Proposition 2a: "*Progress in privatisation increases FDI inflows"*

Privatisation has numerous elements in transition economies and to reflect this, we include a variety of proxies of privatisation in our analysis. In prior research, Lansbury *et al.* (1996) find that private sector share has a positive effect on inward FDI in Visegrad countries, though this result is not confirmed by Holland and Pain (1998) using a larger set of host countries. In our work, we use the following variables to proxy for progress in privatisation:

- EBRD index of large-scale privatisation
- EBRD index small-scale privatisation
- Private sector share in GDP.

all of which are derived from the EBRD Transition Report (1999).

Many transition countries chose to privatise by the free distribution of shares to managers, workers or the population as a whole so-called "mass privatisation" (Estrin, 1994). For those that did not, the sale of enterprises can lead to significant FDI capital inflows as the purchasing price has to be transferred unless all funds are raised locally. Countries that chose to sell more enterprises to foreign investors should therefore be receiving more FDI. Holland and Pain (1998) find that the method of privatisation, measured on a four-point scale accelerates FDI inflows. We include their index in our analysis:[2]

2 The Holland and Pain (1999) index has a scale from 1 (primary privatization method, vouchers) to 4 (privatization method, sale to outsiders). A score of 2 goes to countries whose primary method is voucher but secondary method is sale to outsiders, and 3 if sale to outsiders is a primary method while vouchers are secondary. Hungary and Estonia score 4, Bulgaria 3 Czeck republic, Latvia, Romania, Russia and Slovenia score 2 and Lithuania, Poland, Slovakia and Ukraine 1.

- Index of the extent to which privatisation is geared towards foreign investors.

2.2.2 Financial Infrastructure

Progress in establishing financial infrastructure and capital markets is important for foreign investors because it facilitates access to local capital markets. The better-developed markets encourage business to set up operations, as they can access complementary local finance more easily, and face lower TCs for local financial services such as the payment system. Moreover their customers too are more likely to have access to bank credit, which should accelerate the demand for, e.g., industrial machinery and up-market consumer goods that often are bought on credit.

However, the effect of capital market development on FDI is not necessarily unidirectional. Foreign investors may substitute locally raised capital for capital raised on international capital markets, which would lead to a reduction of recorded FDI inflow (loans from parent are included in the OECD statistics as FDI capital). Nonetheless, the received consensus is that the former effect dominates over the latter so we propose:

Proposition 2b: "The development of the financial markets infrastructure increases FDI inflows"

We use the following proxies for the financial market infrastructure, which are derived from the EBRD Transition Report (1999):

- EBRD index of non-banking financial institutions reform
- EBRD index of banking sector reform.

2.2.3 Establishing Markets

The essence of transforming a centrally planned economy to a market economy is the establishment of markets as basic institution for exchange of goods and services. Progress in establishing market institutions increases business opportunities while reducing institutional uncertainty. The most crucial step of creating markets is liberalisation of prices in both domestic and international markets.

Beyond this, regulatory institutions are required, such as competition policy. While liberalisation has been rapid throughout the region, the process of designing and implementing competition policy has been far more complex (Hare *et al.*, 1999). Governments in the less reformed countries continue to protect markets of their local firms, even at sub-national level. Dutz and Vagliasindi (2000) find sharp differences in both rules and implementation across the region's countries and time, though only successful implementation has a strong positive relationship with economy-wide intensity of competition, whereas the mere existence of rules do not.

Studies in developing countries suggest that openness of the economy and liberal trade regimes are positively associated with investment and growth (Jun and Singh, 1996; Balasubramanian *et al.*, 1997; Edwards, 1997). However, as openness is usually proxied by trade intensity the causality may well be reversed, as FDI contributes to a country's imports and exports. Our indicators are based on experts' assessment and thus less likely to suffer from such bias. On competition policy, however, we have to note that some MNEs are quietly taking advantage of weak competition policy and command considerable market power in small emerging markets. Thus, a counter-effect is possible.

We thus suggest two propositions on the establishment of markets:

Proposition 2c: *"Liberalisation of domestic and international markets increases FDI inflows".*

Proposition 2d: *"Development of regulation and competition policy increases FDI inflows".*

We use the following indices of liberalisation:

- EBRD index of price liberalisation
- EBRD index of foreign exchange and trade liberalisation

and for regulation and competition policy:

- EBRD index of competition policy

All three items are derived from the EBRD Transition Report (1999).

2.2.4 Legal Infrastructure and Corruption

An efficient legal infrastructure reduces institutional uncertainties for foreign investors, facilitates establishment and enforcement of contracts and in various other ways reduces the TCs of doing business in an economy. Prior research has focused in particular on the impact of intellectual property rights protection on FDI, given the political sensitivity of this particular issue. Oxley (1999) and Smarzynska (1999) found that weak property rights inhibit FDI inflows.[3] However, in the transition economies, not only *intellectual* property rights are of concern, so we require a broader index of the legal framework.

As noted above, transition scholars have highlighted that by the late 1990s many elements of a market-based legal framework had been established, but the implementation of laws was often weak (Murrell, 1996; World Bank, 1996; EBRD, 1999). This is attributed, among other reasons, to the fact that it takes time to establish the informal institutions that need to underpin the law: trained lawyers, independent judges, and general knowledge about laws and legal proceedings. Therefore, we need to distinguish the extensiveness and effectiveness of legal reform. We expect legal effectiveness to have a more powerful effect than legal extensiveness, because this is what impacts directly on business operations.

Proposition 2e: *"Progress in legal extensiveness and in legal effectiveness encourage FDI, with the impact of legal effectiveness being stronger".*

We utilise two indicators from the EBRD Transition Report (1999):

- EBRD index of legal effectiveness
- EBRD index of legal extensiveness

[3] Data on intellectual property rights protection are not available in satisfactory quality for the countries of our study. Ostergard (2000) reviews available data but includes obtained data for only five of our host countries (his data are on: http://www.binghamton.edu/polsci/research/jibsdata.html). Smarzynska (1999) uses a three-point scale based on her own assessment.

In prior research, Garibaldi *et al.* (1999) included an aggregate of these two indices in their analysis, and reported the variable to be positive but not significant.

3. THE INTERACTION BETWEEN OWNERSHIP AND LOCATIONAL ADVANTAGES

The OLI paradigm proposes that FDI occurs if O-advantages held by a firm in one country can be profitably combined with L-advantages of another country (and internalisation incentives favour internal co-ordination over market co-ordination). FDI between nations hence ought to be a function of both L-advantages in the host country, and the specific complementarities between resources held in the two countries.

3.1 Labour Cost

The cost of labour is an important locational advantage of any potential host economy, particularly for firms seeking to locate manufacturing to apply worldwide markets. Given the labour cost differences, FDI was expected to utilise factor cost differences and to build export oriented production in CEE. The region still has low labour costs compared with western Europe although higher than some locations in southeast Asia. Relocation of production to regions with lower labour costs has been reported as an important motive of FDI in CEE (Estrin, Hughes and Todd, 1997). The opportunity arises from the simultaneous industrial restructuring in western and eastern Europe, which creates high wage differences within Europe. In this environment, manufacturing businesses experience simultaneously a cost push in the west and a cost pull in the east (Ozawa, 1992; Meyer, 2000*b*).

Although many projects are motivated by market-seeking motives (OECD, 1995; Meyer, 1998; Pye, 1998), there is a considerable number of investments in local production aimed at global markets. Since these projects typically require more capital transfer than pure sales operations they weigh heavily in the FDI capital flows. Hence we expect that low labour costs are crucial for attracting FDI. However, the variable has to be specified carefully to distinguish between a number of different factors. Multinational firms will not wish to invest abroad, even if wage costs are modest, if the productivity levels attained in their foreign plants is very low. Any lowering in the standards of labour efficiency relative to western operations must therefore be more than matched by savings in wage costs. Thus we focus in our empirical work on the differential in unit labour costs between

source and host economies. Moreover, in order to take out any exchange rate effects, the labour cost differential is calculated in DM.

Proposition 3a: *"Large differences in relative wage levels increase the potential for production relocation and thus increase FDI"*

We utilise data obtained from EBRD on average monthly earnings and productivity in manufacturing (in DM) for our host countries[4]. Data for our source countries was derived from the International Labour Office Yearbook of Labour Statistics (ILO, 1999). The relative unit labour cost (RULC) was then computed as the difference between the source to host country value.

Prior research has used rather simplistic proxies for labour costs as FDI determinants, without taking account of the difference between source and host country, and the results are inconclusive. Barrel and Pain (1997, 1999) find an FDI-reducing effect while Wei (2000) finds an FDI-increasing effect. For transition economies, Lansbury *et al.* (1996) find a negative effect of unit labour costs on FDI in Visegrad countries, which however is insignificant in all but one of the equations, while Holland and Pain (1998) find a significant negative impact of wage levels in the host countries, whether they controlled for productivity levels or not.

3.2 Distance

The cultural and linguistic distance between home and host country affects costs of internal organisation and economic risk via the availability of information on the local environment and personal interaction between local and foreign individuals. In particular the international business literature has used the concept of distance, sometimes going beyond geography to include cultural factors: 'psychic distance'. Psychic distance includes geographical as well as cultural, political and linguistic commonalties between the home and the host economy. Traditional business ties also reduce unfamiliarity and thus increase present FDI. The internationalisation process model (Johansen and Vahlne, 1977) proposes that firms enter markets in a sequence starting in countries in close 'psychic distance'. This has been found to negatively influence the performance or survival rate of local ventures (Barkema *et al*., 1996; Li and Guisinger, 1993; Meschi,

[4] We are indebted to Simon Commander for his assistance in helping us to obtain this data.

1997). The relative importance of psychic distance appears to have declined since the 1970s, as economic conditions are becoming more important (Sölvell, 1987; Nordström, 1991). However, the model is still highly relevant to explain international business activity by small and medium size firms, who are relatively important in this region. Hence, we expect that distance increases the costs of business and thus discourages FDI.[5]

Prior research has generally found that distance — geographical as well as psychic — reduces FDI. For instance, Martin and Velasquez (1997) find a significantly negative effect of distance on FDI in the OECD countries and a positive significant effect if the host and source countries share a common border. This is an important variable in the context of central and eastern Europe, a region where borders have changed enormously over the past century reflecting the closely intertwined history and culture of the region. For this reason, we also include a dummy variable taking the value unity if a pair of countries share a common border. Wei (2000) also finds a negative effect of distance and a positive effect of linguistic tie, i.e. whether or not the two countries share a common language.

This leads to the propositions:

Proposition 3b *"Increased distance reduces FDI".*
Proposition 3c *"Sharing a common border increases FDI".*

3.3 Macroeconomy

Further control variables are necessary to control for the size of the respective home and host economies. The former variable reflects the economic power of the source country to generate multinational firms and outward FDI, the later the attraction of the host country as a market and as a location for complementary resources. Surveys (Meyer, 1998) indicate that multinational search for new markets has been a major motive for FDI

[5] International business researchers frequently use the index developed by Kogut and Singh (1988) on the basis of Hofstede's work on culture. We believe that this index is not appropriate for the current host countries because the relevant aspects of culture that distinguish East European and capitalist economies are insufficiently reflected in the scales developed by Hofstede. Moreover, cultures are not constant, what is very visible in the transition economies (Feichtinger and Fink, 1998). Dated data on culture are thus of limited value here. We therefore abstain from employing Hofstede type measures, even though there are 'estimates' (of unknown quality) available for some transition economies. Hofstede's original work did not cover any central-plan economy (the only 'socialist' country in the study is Yugoslavia). Recently, scholars started constructing similar indices based on the work by Trompenaars (Trompenaars and Hampden-Turner, 1997). These are available for six CEE countries, which does not suffice for this study.

into transition economies. We include GDP for both countries in current prices and measured in million DM, derived from the International Financial Statistics Yearbook (IMF, 1999). Such variables have been frequently significant in prior research, and are commonly included in studies on CEE (Martin and Velasquez, 1997; Resmini, 2000; Brenton *et al.*, 1999). This leads to the propositions:

Proposition 3d *"Increased source country income increases the ability to engage in FDI".*

Proposition 3e *"Increased host country market size increases FDI".*

4. EMPIRICAL ANALYSIS

Cross-sectional empirical analysis of FDI has frequently been applied to analyse aggregate FDI capital flows. It has been applied to transition economies by, among others, Lansbury *et al.* (1996) and Holland and Pain (1998). Several studies employed country-to-country level data, mostly in order to estimate gravity model type equations (Brainard, 1997; Eaton and Tamura, 1996). This approach has been applied to east-west European FDI flows by Boros and Erkillä (1995), Martin and Velasquez (1997), Brenton, Di Mauro and Lücke (1998) and Resmini (2000), who, however, use mainly country level data with limited consideration of specific bilateral aspects of the relationship between host and home countries.

Our analysis is based upon a large dataset covering the period 1994 to 1998, containing information on FDI flows and the source and host country characteristics referred to above. Each observation point in our dataset constitutes a relation between source country *i* (EU-14, as Belgium and Luxembourg are merged, Korea, Japan, Switzerland and the USA) and host country *j* (Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovak Republic, Slovenia and Ukraine). Hence each observation details the flow of FDI from *i* to *j* — for example, from Austria to the Czech Republic — in million DM. FDI data is derived from various issues of the International Direct Investment Statistics Yearbook published by the OECD. [6]

[6] This data confirms to the standard definition of FDI as 'an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy…. in an enterprise resident in an economy other than that of the foreign direct investor'(United Nations, 1999). Hence the FDI data used has three components: equity capital; reinvested earnings, and intra-company loans or debt transactions. Consequently it excludes portfolio investments and other capital account movements.

The independent variables pertaining to the source and recipient countries are listed in table A1 in the appendix. We distinguish between variables which relate only to either the host or home country (*i* or *j* variables), and those which reflect a differential between the home and host country (*ij* variables). Each variable is constructed as the arithmetic average value over the five year period of our sample. Averaging in this way enables us to overcome the problems of estimating annual cross-sectional regressions on FDI data that tends to be 'lumpy' in nature: investment projects typically have a life-span of more than one period, and hence the initial inflow that occurs when a project is undertaken is effectively a stock rather than flow variable. Hence estimations which use country characteristics to explain FDI inflow on the basis of one data period may be biased through including the initial large set-up flow while failing to control for the longer term implications of the investment. [7]

In order to assess the implications of general transition performance for FDI inflows, we firstly estimate a base model with control variables and determining factors including an aggregate transition index. Because Russia is something of a special case among transition economies, with high proportion of its GDP and a majority of its trade deriving from raw materials and energy, we felt it was desirable to include a specific control variable — the Russia dummy variable. Hence we estimate an equation of the following form: [8]

$$FDI_{ij} = \left(GDP_i, GDP_j, \text{Distance}_{ij}, \text{RULC}_{ij}, Common\ Border_{ij}, Transition\ \ Index_j, Russia_j\right) \quad \textbf{(1)}$$

We present the results of these estimations in the following sub-section. Having established a baseline model, sub-section 4.2 then replaces the aggregate transition index with individual institutional elements of transition, in order to examine their impact upon FDI flows in a more detailed manner.

[7] This is particularly problematic in small countries (e.g. the Baltic States) and/or countries which do not receive a great deal of FDI, as one large project may account for a large proportion of total FDI receipts in any one period.
[8] In order to estimate market size effects directly we have chosen not to deflate our dependent variable by host GDP.

4.1 FDI Flows and Progress in Transition

We regress the level of FDI flow from each source country *i* to each recipient country *j* against our various source and recipient country characteristic variables, and our aggregate transition index and present the results in table 1 below, as model 1.[9]

Overall, the regression is highly significant; hence we reject the null hypothesis of joint insignificance of the coefficients at the 1 per cent level. Moreover, all the independent variables are statistically significant with the predicted sign. Thus we confirm the full set of hypothesis outlined in section 3 above. Commencing with the control variables, our model establishes that FDI is lower between countries located geographically more distant from one another, and higher in ones that share a common border (Proposition 3b,c). We also find that firms from large economies invest abroad significantly more than those from smaller ones. The economies of scope and scale that derives from a larger domestic market thus appear to offer advantages that can be replicated abroad (Proposition 3d). It is also striking that FDI is attracted to larger markets, with the coefficient on the host GDP being large, positive and significant at the 99 per cent level (Proposition 3e).

Though our equation confirms the empirical relevance of market motives for FDI into transition economies, it also provides the first unambiguous evidence in the transition context for the relevance of relative labour costs. As predicted in Proposition 3a, FDI is significantly higher between countries where the relative unit labour cost advantages of relocation are greater. The contrast between this clear finding and those of the previous studies probably arises because the data cover a period and controls for exchange rates and productivity are included. In the early turbulent years of longer transition, the relative cost advantages of producing in central and eastern Europe may have been outweighed in the minds of many western businessmen by the problem of low productivity, exchange rates and unstable political environments. Our equation suggests that once these latter factors are controlled for properly, the impact of relative unit labour costs on FDI emerges clearly by 1998.

We included the Russia dummy because of the suspicion that, as the only major natural resource supplier in the region, the factors driving FDI to that country might differ from

[9] In each case White robust standard errors are reported in parentheses.

these in Central and Eastern Europe. Model 1 confirms this to be the case, but not exactly in the way that we might have expected. The coefficient is highly significant and negative, indicating that Russia receives *less* FDI than would be expected given all the other factors controlled for in the regression. Russian under-performance in FDI, given its market size, is thus deeper than can be explained by its relatively poor performance in the process of transition.

The most important result in model 1 however concerns the impact of institutions on business strategies. We have established that, even after traditional factors determining FDI such as market size and labour costs are taken into account, the creation of institutions for a market economy acts to increase FDI flows (Proposition 1). This supports the view that progress in transition, as measured by the EBRD index, acts to improve the business climate for foreign investment, by reducing transaction costs and risks of international business operations. In the following section we go on to explore the particular institutional factors conducive to the enhancement of FDI in transition economies.

4.2 FDI Flows and Institutional Progress

We explore the empirical impact of four institutional developments which have been at the forefront of consideration during the transition progress: privatisation; financial sector reform; liberalisation and the establishment of market institutions; legal development. The resulting estimations are presented in tables 2 to 5, and we discuss the findings relating to each institutional factor in turn in the following sub-sections. The coefficients of the basic model are extremely robust to these specification changes. In none of the equations reported do these results contradict those of the previous section — coefficients that were previously significant remain so and do not change sign. Indeed the collinearity between the variables of the basic model and the institutional parameters must be very small, because the coefficients on the former hardly change value. Hence we focus our discussion upon the added institutional variables.

4.2.1 Privatisation

Table 2 presents the results of our examination of the impact of privatisation and enterprise reform upon FDI receipts, presented as models 2 to 5. Models 2 and 3 illustrate that both small and large-scale privatisation have a positive impact upon FDI

receipts and support proposition 2a. Model 4 establishes that FDI receipts are significantly positively associated with the share of GDP produced by the private sector. This result is stronger than when the privatisation indices are used perhaps because the variable includes the activities of some *de novo* enterprises which have been seen to be extremely significant during transition. Consequently we interpret our results as illustrating that both privatisation and private sector development more generally serve to encourage FDI.

The method of privatisation included under model 5, however, does not have significant implications for FDI. Hence, we are unable to confirm the positive finding of Holland and Pain (1998). This suggests that countries that do not sell enterprises directly to foreign investors receive an equal amount of FDI in other forms, i.e. via greenfield investment or via acquisition of already private firms. This confirms case study findings about investors' intentions and motives (Estrin, Hughes and Todd, 1997).

4.2.2 Financial Sector Development

Table 3 presents the results of estimations with our chosen financial sector reform variables. We find clear evidence that banking sector reform is associated with greater FDI inflows under model 6 (Proposition 2b). Hence our results suggest that foreign investors are concerned with the effectiveness of the banking sector to serve as a robust payment system and source of non-equity finance. Moreover the result may reflect the thought that the possibility of banking crises reduces FDI owing to the negative implications which such an event may have for customers and suppliers of a venture. By contrast non-bank reform seems to be of little importance for foreign investors under model 7. This suggests that the development of other financial institutions such as securities markets, investment funds and private pension funds are of secondary or no importance to foreign investors. One interpretation is that foreign investors interact more directly with local banks than with other local financial institutions.

4.2.3 Market Institutions

Under models 8 and 9 in table 4 we find partial evidence that the liberalisation of domestic and international markets has a positive and significant effect on FDI inflow. Interestingly we cannot confirm that progress in domestic price liberalisation has a significant implication for FDI inflows, though the coefficient has the predicted positive

sign. However model 9 finds a highly significant positive effect of foreign exchange and trade liberalisation, which provides support for one element of Proposition 2c.

We find in model 10 that the development of competition policy does not have a significant impact on FDI receipts, and we are forced to reject proposition 2d. These results are very interesting because they suggest that the building of institutions to develop flexibility and competition in domestic markets is not a significant factor in influencing foreign investment decisions, though a liberal foreign exchange regime is important. It may simply be that foreign investors prefer to invest in monopolistic markets.[10] The attraction of investing in economies with developed domestic market institutions may be offset by the desire to invest in highly protected or regulated markets in view of the market power they are able to obtain. With weak competition policy, FDI is more able to extract monopoly rents. However this may lead to lower allocative efficiency (whoever appropriates the rents: multinational firms, their local partners, or the regulators). Competition policy may thus be primarily an instrument to manage the spillovers from FDI to the host economy, rather than to encourage FDI *per se*.

4.2.4 Legal Infrastructure and Corruption

Table 5 presents the results of our estimations with our legal indicators. The results of models 11 and 12 indicate that the development of the legal system has a strong effect on FDI inflow, both if measured in terms of the extensiveness of the legal framework (model 11) and its effective implementation (model 12). When both variables are included simultaneously in model 13, however, we find evidence to suggest that legal extensiveness dominates effectiveness which is contrary to our prior expectations. Hence under this specification we are unable to fully accept proposition 2e.

It is notable however, that our Russia dummy variable, while negative and significant under model 11, loses value when combined with legal effectiveness in model 12. This suggests that low legal effectiveness has a part to play in the poor FDI performance of Russia. This suggestion is confirmed when we exclude the Russian dummy and hence do not control directly for Russia, under model 14. Comparison of models 13 and 14

[10] We are grateful to Mike Peng for pointing out to us that this competition result is supported by a case study of the Chinese photographic industry: a major western photographic company acquired several Chinese companies and lobbied the Chinese government to prevent any other foreign entrants in the sector for a four year period following the acquisitions.

indicate that when Russia is controlled for, legal extensiveness appears to dominate effectiveness, however both variables become positive and significant once the control is removed. This result therefore illustrates the implications of the gap that exists between legal extensiveness and effectiveness in Russia.[11] Indeed when Russia was excluded from our sample in supplementary tests, we found extensiveness to dominate effectiveness in the same manner as model 12, confirming this hypothesis and suggesting that lack of legal effectiveness may be the cause of the low FDI in Russia.

5. CONCLUSIONS AND POLICY IMPLICATIONS

In this paper we have analysed the determinants of international direct investment flows and focused on two aspects that were given insufficient attention in prior research: labour cost and the institutional framework.

We have established that the size of the host markets and the financing ability of the source country have a significant positive impact upon FDI flows. Moreover, we confirm the results of previous analyses that distance negatively impacts on FDI flows because distance increases the costs of doing business, and that sharing common borders has a positive effect. Relative unit labour costs are found to be an important determinant of FDI flows to transition economies.

General progress in transition is found significantly to increase FDI flows. Moreover, when we dis-aggregate the overall transition index to subsets of institutional development, we are able to distinguish the particular institution developments that attract FDI. Our findings suggest that the following measures are likely to enhance FDI receipts to our sample of transition economies:

- Privatisation and the creation of a functioning private sector more generally;
- Development of the banking sector;
- Liberalisation of foreign exchange and trade; but not necessarily domestic prices.
- Development of legal institutions;

[11] The values for Russia are legal extensiveness 4, legal effectiveness 2+. No other country has a similarly large gap between these two indicators.

By contrast we found that non-banking financial sector development does not appear to have a significant impact upon FDI. Furthermore, we found that development of competition policy does not appear to be significant in motivating FDI. This perhaps reflects the fact that some foreign investors are attracted by the possibility of earning monopoly rents.

Our results also suggested that Russia is in an extremely interesting position with regard to FDI. Russia suffers, according to EBRD indices, from poor legal effectiveness. The fundamental issue here is not writing legislation, but of legislative enforcement. The lack of enforcement may be the key obstacle to acceleration of FDI in Russia.

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Table 1: Aggregate Progress in Economic Transition and FDI (robust standard errors in parentheses)

	Model 1 FDI
Transition Index	52.20959* (30.95218)
Source GDP	0.02450*** (0.00594)
Host GDP	1.17836*** (0.33789)
Distance	-0.03649*** (0.01146)
Relative Unit Labour Cost	68.68627*** (26.33289)
Common Border	307.3232** (155.5996)
Russia	-379.6899** (161.0802)
Constant	-167.5698** (84.53246)
No. of Obs F-value R^2	158 5.01 0.3941

***, ** and *, significant at the 1, 5 and 10 percent level respectively;
Source: Authors' calculations

Table 2: Privatisation, Enterprise Reform and FDI (robust standard errors in parentheses)

	Model 2 FDI	Model 3 FDI	Model 4 FDI	Model 5 FDI
Source GDP	0.02466*** (0.00608)	0.0245*** (0.00599)	0.02414*** (0.00594)	0.02554*** (0.00617)
Host GDP	1.26422*** (0.32416)	1.26733*** (0.32703)	1.24623*** (0.32670)	1.45333*** (0.34367)
Distance	-0.03685*** (0.01187)	-0.03664*** (0.01167)	-0.03565*** (0.01174)	-0.03936*** (0.01241)
Relative Unit Labour Cost	71.83382** (28.06061)	66.58475*** (25.65273)	62.87117** (25.69717)	76.38704*** (28.32616)
Common Border	311.9852** (154.2312)	305.9291** (154.7899)	310.3921** (152.8225)	314.7506** (152.3826)
Russia	-438.5573*** (153.4398)	-439.0038*** (154.6528)	-429.5544*** (154.6716)	-512.6157*** (161.2696)
Constant	-91.13421** (43.7643)	-108.9364** (45.66824)	-165.1715*** (59.8886)	-65.45919* (34.59712)
Small-Scale Privatisation	21.77027* (13.10366)			
Large-Scale Privatisation		33.12967* (17.61119)		
Private Sector Share in GDP			2.67448** (1.13561)	
Privatisation Method				22.19657 (14.55581)
No. of Obs F-value R^2	158 5.13 0.3894	158 5.33 0.3960	158 5.34 0.3931	158 4.84 0.3991

***, ** and *, significant at the 1, 5 and 10 percent level respectively;
Source: Authors' calculations

Table 3: Financial Sector Reform and FDI (robust standard errors in parentheses)

	Model 6 FDI	Model 7 FDI
Source GDP	0.02446*** (0.00592)	0.02488*** (0.00601)
Host GDP	1.24358*** (0.32176)	1.18145*** (0.39292)
Distance	-0.03620*** (0.01142)	-0.03773*** (0.01168)
Relative Unit Labour Cost	69.12496** (27.05236)	73.34912*** (26.7246)
Common Border	310.2681** (154.472)	309.9339* (157.2098)
Russia	-390.3199** (153.1932)	-401.955** (178.7779)
Constant	-150.8465** (63.80066)	-70.97872 (70.00579)
Bank Reform	50.8449** (25.34613)	
Non-Bank Reform		26.45974 (35.06161)
No. of Obs F-value R^2	158 4.89 0.3959	158 4.83 0.3884

***, ** and *, significant at the 1, 5 and 10 percent level respectively;
Source: Authors' calculations

Table 4: Market Institutions and FDI (robust standard errors in parentheses)

	Model 8 FDI	Model 9 FDI	Model 10 FDI
Source GDP	0.02446*** (0.00589)	0.02472*** (0.00608)	0.02473*** (0.00604)
Host GDP	1.19443*** (0.32789)	1.27922*** (0.32061)	1.19281*** (0.33742)
Distance	-0.03638*** (0.01142)	-0.03698*** (0.01188)	-0.03714*** (0.01177)
Relative Unit Labour Cost	69.31162** (27.07391)	73.01143*** (27.96252)	71.03865*** (26.85747)
Common Border	312.6831** (154.7203)	310.8525** (153.322)	311.0257** (154.0134)
Russia	-400.205** (155.2054)	-418.352*** (150.7623)	-399.2605** (159.0928)
Constant	-648.4195* (386.791)	-163.4198*** (51.28257)	-79.9206* (42.24412)
Price Liberalisation	215.8771 (133.6432)		
Forex and Trade Liberalisation		39.07755*** (13.51787)	
Competition Policy			30.63767 (20.89418)
No. of Obs F-value R^2	158 4.81 0.3939	158 5.30 0.3928	158 4.86 0.3910

***, ** and *, significant at the 1, 5 and 10 percent level respectively;
Source: Authors' calculations

5: Legal Reform and FDI (robust standard errors in parentheses)

	Model 11 FDI	Model 12 FDI	Model 13 FDI	Model 14 FDI
Source GDP	0.02419*** (0.00588)	0.02519*** (0.00611)	0.02420*** (0.00598)	0.02384*** (0.00615)
Host GDP	1.12676*** (0.31632)	1.12242*** (0.32226)	1.12441*** (0.32388)	0.41718*** (0.12836)
Distance	-0.03537*** (0.01165)	-0.03836*** (0.01203)	-0.03541*** (0.01196)	-0.03634*** (0.01239)
Relative Unit Labour Cost	65.20709** (26.67228)	73.46961*** (27.54375)	65.28735** (27.13819)	49.20247* (26.55095)
Common Border	313.9118** (150.4116)	310.9904** (151.644)	313.7977** (151.1236)	317.642* (163.1926)
Russia	-383.2193** (150.1858)	-348.0326** (152.5397)	-381.3394** (155.429)	
Constant	-205.1469*** (48.20546)	-126.9089*** (41.60562)	-205.4065*** (49.71605)	-244.9286*** (62.16172)
Legal Extensiveness	59.03379*** (14.67597)		58.14673*** (15.66924)	39.85106** (18.30668)
Legal Effectiveness		37.44549*** (13.80597)	1.02691 (16.13716)	43.42452** (21.43143)
No. of Obs	158	158	158	158
F-value	5.77	5.01	5.18	4.97
R^2	0.4102	0.3995	0.4102	0.3717

***, ** and *, significant at the 1, 5 and 10 percent level respectively;
Source: Authors' calculations

Table A1: Data and Sources

Variable	Variable Definition	Data Source
	i or j variables	
Source GDP	Source Country GDP in current prices (DM mn)	IMF International Financial Statistics Yearbook (1999)
Host GDP	Host GDP in current prices (DM mn)	IMF International Financial Statistics Yearbook (1999)
Transition Index	Transition Index	Calculated from EBRD Transition Report (various)
Russia	Russia dummy	
Small- Scale Privatisation	Small scale privatisation index	EBRD Transition Report (1999)
Large-Scale Privatisation	Large scale privatisation index	EBRD Transition Report (1999)
Privatisation Method	Host privatisation method (1 to 4 dummy)	Holland and Pain (1998) and EBRD Transition report (1999)
Private Sector Share in GDP (%)	Host private sector share of GDP	EBRD Transition report (1999)
Bank Reform	Index of banking sector reform	EBRD Transition Report (1999)
Non-Bank Reform	Index of Non-Banking Financial Institutions Reform	EBRD Transition Report (1999)
Price Liberalisation	Index of Price Liberalisation	EBRD Transition Report (1999)
Forex and Trade Liberalisation	Index of forex and trade liberalisation	EBRD Transition Report (1999)
Competition Policy	Index of competition policy	EBRD Transition Report (1999)
Legal Extensiveness	Index of Legal Extensiveness	EBRD Transition Report (1999)
Legal Effectiveness	Index of Legal Effectiveness	EBRD Transition Report (1999)
	ij variables	
Common Border	Common borders dummy	
Distance	Distance between capital cities of host and donor (Kilometres)	How Far Is It? Website
Relative unit labour cost	Relative wage between source and host countries (average monthly earnings in manufacturing) (annual average, D-Mark), divided by average labour productivity.	