Political Risk, Institutions and Foreign Direct Investment

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Abstract

The paper explores the linkages between political risk, institutions and foreign direct investment inflows. Using different econometric techniques for a data sample of 83 developing countries and the period 1984 to 2003, we identify those indicators that matter most for the activities of multinational corporations. Overall, 12 different indicators for political risk and institutions are employed in the empirical analysis. The results show that government stability, the absence of internal conflict and ethnic tensions, basic democratic rights and ensuring law and order are highly significant determinants of foreign investment inflows.

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1. Introduction

The economic development of emerging markets and developing countries depends to a large extent on the possibility to make profitable investments and accumulate capital. Having access to foreign capital and investments allows a country to exploit opportunities that otherwise could not be used. Recent experiences with opening capital accounts in emerging and developing economies, however, have proved to be a mixed blessing, as it is becoming increasingly clear that not all types of capital imports are equally desirable. Short-term credits and portfolio investments run the risk of sudden reversal if the economic environment or just the perception of investors change, giving rise to financial and economic crises. It is therefore frequently advised that those countries should primarily try to attract foreign direct investment and be very careful about accepting other sources of finance (Prasad et al., 2003). Direct investments are much more resilient to crises, therefore the question is what countries can do to attract more of such capital flows.

While the economic determinants of FDI flows to developing countries have been analysed to a considerable degree, it is rather astonishing that the importance of changes in political institutions and of other relevant policies in host countries have received relatively little attention. In the 1990s, most existing studies on the influence of policy-related variables on FDI flows consisted of international cross-country studies. Within this framework, it has been found, for example, that there is a negative link between institutional uncertainty and private investment (Brunetti and Weder, 1998), a positive relationship between FDI and intellectual property protection (Lee and Mansfield, 1996), and a negative impact of corruption on FDI flows (Wei, 2000).[1] Despite attempts to distinguish other influences, the results of these cross-country studies may well reflect other non-measured influences, which vary across countries but not over time. For this reason, the results of such studies may not apply to relevant changes in policy-related variables over time.

In principle, the bias in the estimates of such effects could be in either direction, and it is therefore important to supplement the cross-section studies with time-series estimates. The

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[1] Reviews of the literature can be found in Gastagana et al. (1998) and Busse (2004). Wheeler and Mody (1992), on the other hand, found a broad principle component measure of administrative efficiency and political risk to be statistically insignificant. The connection between institutions and investments more generally is explored in Keefer (2004), Stasavage (2002), and Faria and Mauro (2004).

first attempt was made by Jun and Singh (1996), who regressed an aggregated indicator for political risk, based on a number of sub-components, and several control variables on the value of foreign direct investment inflows. For their data sample of 31 developing countries, the political risk index is statistically significant and the coefficient implies that countries with higher political risk attract less FDI.[2] Likewise, Gastanaga et al. (1998) examined the link between various political variables and foreign investment inflows. They found that lower corruption and nationalisation risk levels, and better contract enforcement are associated with higher FDI inflows. Yet they state that their findings do not always hold up, which may be due to the relatively small country sample of 22 developing countries.

More recently, several studies have analysed the relationship between fundamental democratic rights and FDI: Using different econometric techniques and periods, Harms and Ursprung (2002), Jensen (2003), and Busse (2004) found that multinational corporations are more likely to be attracted by countries in which democracy is respected. Li and Resnick (2003), on the other hand, argue that competing causal linkages are at work. They found that democratic rights lead, above all, to improved property rights protection, which in turn boosts foreign investment. Apart from this indirect impact on FDI, increases in democracy may reduce FDI. These studies use pooled time-series analysis, but not all of them account for possible endogeneity of the independent variables. Moreover, they often concentrate their analysis on very specific indicators, such as democratic rights, leaving out a broader range of other elements of policy-related variables.

The main purpose of this paper is thus to examine a much wider range of indicators for political risk and to identify the relative importance of these indicators for FDI inflows after controlling for some other relevant determinants of observed changes in FDI flows. More specifically, the effects of government stability, socio-economic conditions, investment profile, internal and external conflict, corruption, military in politics, religious tensions, law and order, ethnic tensions, democratic accountability, and the quality of bureaucracy are examined.

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[2] Apart from political risk, Jun and Singh (and most of the empirical studies mentioned in this section) have also examined the impact of other variables, such as work days lost or business operating conditions, on FDI. For the purpose of this paper, only the results with respect to political indicators are reported.

A number of these political risk components are also linked to the quality of political institutions. Above all, the quality of the bureaucracy is closely associated with the institutional strength of a particular country. Likewise, ensuring law and order and reducing corruption levels are important determinants (and effects) of high-quality institutions. They constitute relevant sub-components of an overall assessment of "good governance" (Kaufmann et al., 1999). We therefore empirically investigate the links between various components of political risk, institutional quality and foreign investment flows. Accordingly, the paper focuses on (1) whether changes in the above-mentioned policy-related variables increase or decrease FDI inflows significantly, and (2) which are the policy-related variables that have the biggest impact on FDI flows?

Covering a time span of 20 years in our analysis, we find that only few indicators for political risk and institutions are closely associated with FDI. These are government stability, law and order, and quality of the bureaucracy. Employing a panel setting with two different econometric specifications, we establish instead a statistically significant link with a much larger number of indicators. In addition to the three mentioned indicators, we find that investment profile, internal and external conflict, ethnic tensions and democratic accountability are important determinants of FDI flows. Across different econometric models, the relative magnitude of the coefficients for these political indicators are largest for government stability and law and order, indicating that changes in these components of political risk and institutions are highly relevant for investment decisions of multinationals.

The paper is structured as follows: The data set and the variables used in the regressions are explained in the following section. In Section 3, the estimation strategy and the specification of the model are explained. In order to mitigate problems arising from either pure cross-section or pure time-series analyses, we intend to use both methods to estimate the impact of policy-related variables. With respect to the panel analysis, we will employ two different econometric techniques, that is, a country fixed-effects model and the Arellano-Bond generalised method of moments (GMM) estimator. The panel data analysis with country fixed-effects approach allows us to distinguish more systematically between the effects of policy changes and other less variable elements of the investment climate on FDI over time as well as across countries. The Arellano-Bond GMM dynamic panel estimator addresses the problem of autocorrelation of the residuals, as the lagged dependent variable is included as an additional regressor, and deals with the fact that some of the control variables are endogenous.

By employing various econometric techniques, we also test the robustness of our results. Section 4 concludes.

2. Data and Variables

The analysis comprises the period 1984 to 2003 for a sample of 83 developing countries, for which the linkage between political institutions and FDI is of particular concern (see Appendix C for the country sample). Included are all low- and middle-income countries with a Gross National Income per capita in 2002 of US $9,075 or less, for which data on all variables incorporated in the regressions are obtainable.[3]

Information on political risk and institutions are taken from the International Country Risk Guide (ICRG), provided by the Political Risk Services (PRS) Group. Since 1984, PRS Group (2005a) has provided information on 12 risk indicators that address not only political risk, but also various components of political institutions. They are defined as follows:[4]

- Government stability, called *GOVST* in the empirical analysis, measures the government's ability to carry out its policies and to stay in office
- *SOCIO* quantifies socio-economic pressures at work in society that might restrain government action or elevate social dissatisfaction and thus destabilise the political regime
- *INVEST* assesses the investment profile, that is, factors related to the risk of investment that are not covered by other (financial and economic) risk components, such as contract viability (expropriation), profits repatriation or payment delays
- *ICONFL* stands for internal conflict, measuring political violence within the country and its actual or potential impact on governance by focusing on, for instance, civil war, terrorism, political violence or civil disorder
- *ECONFL* weighs external conflict, namely the risk to the incumbent government from foreign action, ranging from non-violent external pressure, such as diplomatic pressures, withholding aid or trade sanctions, to violent external pressures, ranging from cross-border conflicts to all-out war

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[3] The income threshold is based on a definition by the World Bank (2005) for low- and middle-income developing countries and relates to current US $.

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- *CORR* assesses the level of corruption

- *MILIT* represents the influence of the military in politics, which could signal that the government is unable to function effectively and that the country might have an unfavourable environment for business

- *RELIG* measures religious tensions, stemming from the domination of society and/or governance by a single religious group seeking, for instance, to replace civil by religious law or to exclude other religions from the political and social process

- *LAW* quantifies law and order, that is, the strength and impartiality of the legal system

- *ETHNIC* assesses the degree of tensions among ethnic groups attributable to racial, nationality or language divisions

- *DEMOC* relates to the democratic accountability of the government, that is, the responsiveness of the government to its citizens, but also to fundamental civil liberties and political rights

- *BUR* stands for the institutional strength and quality of the bureaucracy, which might act as a shock absorber tending to reduce policy revisions if governments change

Each indicator is assessed on a scale from 0 to 12, with higher values indicating *less* political risk and *better* institutions.[5] In general, these indicators are widely recognised (and used) as high-quality measures of political risk and institutions.[6] Obviously, all 12 indicators are related to each other by varying degrees, as they all assess political risk and institutions but from a different point of view. For instance, democratic accountability of the government and the influence of the military in politics are closely related, as the military is (usually) not elected by the citizens and – on average – less accountable to the citizens. The partial correlation between *DEMOC* and *MILIT* is 0.63, as can be seen from Table 1. Similarly, law and order is closely related to both government stability and internal conflicts with partial correlations of 0.60 and 0.74, respectively. Moreover, most of the indicators for political risk are fairly strongly related to income (GNI) per capita, indicating that richer countries possess less political risk and have better institutions.

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[4] See PRS Group (2005a) for details on sub-components and aggregation procedures.

[5] In the original PRS Group data set, the last 7 indicators are scaled from 0-6 or 0-4. To ensure an easier interpretation of the results, these indicators have been re-scaled to 0-12.

[6] In recent years, they have been used, for instance, by Harms and Ursprung (2002), Bolaky and Freund (2004), Rodrik et al. (2004), and Noguer and Siscart (2005).

Table 1: Correlation Matrix

Variable	log GNI	GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
log GNI	1.00												
GOVST	0.44	1.00											
SOCIO	0.57	0.63	1.00										
INVEST	0.56	0.57	0.80	1.00									
ICONFL	0.45	0.52	0.55	0.57	1.00								
ECONFL	0.38	0.18	0.33	0.50	0.55	1.00							
CORR	0.36	0.44	0.35	0.48	0.46	0.27	1.00						
MILIT	0.53	0.33	0.43	0.60	0.63	0.43	0.54	1.00					
RELIG	0.19	-0.02	0.15	0.29	0.37	0.39	0.25	0.34	1.00				
LAW	0.46	0.60	0.50	0.54	0.74	0.28	0.57	0.56	0.15	1.00			
ETHNIC	0.47	0.33	0.39	0.38	0.58	0.31	0.37	0.33	0.34	0.44	1.00		
DEMOC	0.50	0.16	0.26	0.45	0.43	0.48	0.58	0.63	0.29	0.40	0.30	1.00	
BUR	0.58	0.53	0.64	0.62	0.45	0.35	0.50	0.58	0.09	0.50	0.21	0.51	1.00

Note: All correlations reported relate to averages for the entire period 1984 to 2003.

In general, we would expect that all 12 indicators are positively related to FDI flows, as less political risk and better institutions may attract foreign investment due to a lower risk premium, for instance, by enforcing property rights and contracts. Also, the quality of institutions may be closely related to reducing information asymmetries, as high-quality institutions channel information about market conditions, goods and participants, which in turn could foster (domestic and foreign) investment in the country (WTO, 2004). Yet we do not know the exact impact of these indicators on FDI flows.

As the dependent variable in the following regressions, FDI net inflows per capita in current US dollars (*FDI*) will be employed. Using per capita figures allows us to take the relative country size into account. Regarding the independent variables of foreign investment, a standard procedure would be to use a common theoretical model for the determinants of FDI flows, integrate political risk indicators and then estimate the effects. Unfortunately, we do not have such a model. Most researchers who undertake empirical work on the determinants of FDI flows use a rather ad-hoc specification, that is, they try various indicators that may explain differences in FDI flows across countries and use those that are most suitable for the purpose of their research.[7]

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[7] Chakrabarti (2001) and Asiedu (2002) provide surveys of the literature.

Evidently, some of the results from past studies are contradictory. For instance, the impact of labour costs on FDI flows is anything but clear: The results by Schneider and Frey (1985) and Jun and Singh (1996) showed a negative impact of labour costs on FDI flows, while Wheeler and Mody (1992), Loree and Guisinger (1995) and Lipsey (1999) indicated that there might be a positive or no significant influence.

Despite these contradictory results, we do observe that a considerable number of variables show relatively persistent results with respect to their influence on foreign investment. Above all, market size, measured as Gross Domestic Product (GDP) or Gross National Income (GNI) per capita, is probably the most important factor in explaining foreign investment (Chakrabarti, 2001).[8] The size of a particular market may indicate the attractiveness of a specific location for the investment, in the case that the multinational corporation aims to produce for the local market (horizontal or market-seeking FDI). Though there are a few studies that indicate that the link between income levels and FDI may not be that close, an overwhelming majority of empirical studies confirm the importance of that linkage. Likewise, high (GDP or GNI) growth rates may signal high investment returns and, hence, may attract further (foreign) investment. Yet we have to keep in mind that high growth rates (and thus income levels) may be boosted by FDI, indicating the problem of endogeneity in the empirical analysis (Carkovic and Levine, 2002).

Another determinant that is likely to have an impact on FDI is openness to trade, usually measured by the ratio of imports and exports to GDP. This ratio is often interpreted as a quantification of trade restrictions.[9] In general, the impact of openness to trade is linked to the type of foreign investment (Asiedu, 2002). Horizontal FDI may be attracted by higher trade barriers, as they also protect the output of the foreign investor in the local market against imports of competitors (tariff-jumping hypothesis). Conversely, multinationals engaged in export-oriented investment, called vertical FDI, may favour investing in a relatively open economy, since trade barriers increase transaction costs. Also, trade restrictions may be linked to other forms of policy imperfections, particularly in developing countries, such as exchange-rate controls, leading to a reduction of foreign investment inflows. Overall, openness to trade

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[8] Note that we are using FDI per capita figures as the dependent variable. Thus, we have to use GNI (or GDP) per capita too.

[9] See Gastanaga et al. (1998) for a discussion of different indicators to measure the degree of openness.

may thus be positively or negatively associated with FDI, depending on the country sample. The empirical evidence, on the other hand, suggests that a positive link can be expected (Chakrabarti, 2001).

The attraction of a particular market is further enhanced if a country has a consistent macroeconomic policy in place. Apart from boosting growth rates, a good macroeconomic policy, that embraces (or leads to) small budget and trade deficits and low inflation and interest rates, is likely to reduce the risk premium for foreign (and domestic) investment, decrease transaction costs, and may thus boost FDI. As a (rough) measure for various forms of macroeconomic imbalances, we added the inflation rate to the regressions, as it can be expected to be closely linked to a range of forms of policy distortions, such as fiscal or monetary imbalances.[10]

With this background, we use the following four control variables in the regressions:[11]

(1) Gross National Income per capita in (current international) PPP US dollars (*GNI*) to control for the market size
(2) the real growth rate of GNI per capita in per cent (*GROWTH*) for market growth and potential
(3) the ratio of imports and exports to GDP (*TRADE*) to control for openness to trade and
(4) the GDP deflator (*INFLATION*) as a proxy for (macroeconomic) policy distortions

The first three variables are expected to be positively associated with FDI inflows, whereas for *INFLATION* we would assume a negative linkage.

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[10] That macroeconomic volatility has a negative influence of multinationals' profits and thus on investment decisions is shown by Aizenman (2003). Easterly (2004), however, argues that institutions are behind macroeconomic volatility as well and that country growth is thus mainly due to the influence of institutions.

3. Empirical Specification and Results

Following the introduction of the variables, we now turn to the empirical linkages between political risk, institutions and FDI flows. We start with the cross-sectional technique, using averages for the entire period 1984-2003. Similar to most studies in the empirical literature on FDI flows, the logarithm for investment flows and the independent variables is used.[12] The exception is *GROWTH*, since there are a number of negative real per capita values for GNI growth rates, which would have reduced the country sample. Moreover, to avoid the problem of multicollinearity, the 12 indicators will be singly added to the benchmark regression, which is written as follows:

$$\log FDI_i = \text{ß}_0 + \text{ß}_1 \log GNI_i + \text{ß}_2 GROWTH_i + \text{ß}_3 \log TRADE_i + \text{ß}_4 \log INFLATION_i$$
$$+ \text{ß}_5 REGIONAL + \text{ß}_6 POLITICAL_i + e_i \qquad (1)$$

where ß_j are the estimated parameters, *REGIONAL* stands for a set of six regional dummies (to control for regional characteristics),[13] $POLITICAL_i$ stands for one of the 12 indicators for political risk and institutions, and e_i is an error term.

As can be seen from the results for the benchmark regression, reported in column 1 of Table 2, all control variables have the expected sign and are significant at the 1 per cent level.[14] The exception is the coefficient for *INFLATION*, which is positive but not significant. The overall fit of the benchmark regression is reasonable, considering the heterogeneous set of developing countries included in the analysis. In the next 12 columns, the indicators for political risk and institutions have been added in addition to the control variables. The results show that government stability, law and order, democracy and the quality of bureaucracy have a positive impact on FDI inflows, as the coefficients are positive and statistically significant at the 5 or 10 per cent level. In other words, countries with a lower political risk and better institutions related to these three indicators received – ceteris paribus – more FDI per capita in the period 1984 to 2003.

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[11] See Appendix A for data sources and Appendix B for descriptive statistics.

[12] An appropriate Box-Cox test showed that a double-log specification would be preferred.

[13] The set-up of the regional dummies is based on the World Bank (2005) classification of regions. See Appendix A for details.

[14] The cross-sectional data sample drops from 83 to 81 countries, since (average) FDI values for two African economies, Gabon and Sierra Leone, were negative for the period 1984 to 2003.

The finding regarding democracy is in line with the results reported by Harms and Ursprung (2002), Jensen (2003), and Busse (2004), who all found a statistically significant link between fundamental democratic rights, such as civil liberties and political rights, and foreign investment inflows. Moreover, our results with respect to the quality (and institutional strength) of the bureaucracy and law and order supports those reported by Gastanaga et al. (1998), who established a statistically significant (negative) link between FDI flows and bureaucratic delays (that is, lower bureaucratic quality is associated with lower FDI inflows) and a positive link between contract enforcement and foreign investment.

Yet only 4 out of 12 indicators for political risk and institutions have a significant impact on FDI flows. Moreover, three of them (*GOVST*, *LAW* and *DEMOC*) are barely significant at the 10 per cent level. One reason for this outcome might be the fact that we computed averages for the period 1984 to 2003. In case of significant deviations of FDI or other variables from the mean, this approach neglects changes within that period. For example, Brazil had an inflation rate of some 2,500 per cent in 1990, but single-digit figures since 1997. Taking the average for the 20-year period yields 552 per cent, which is still a very high number. On the other hand, FDI flows to Brazil have increased significantly in the 1990s, which, in turn, boosted average FDI inflows and leads to the (wrong) impression that higher inflation is associated with increased FDI inflows over a period of 20 years. Likewise, this problem could apply to various indicators of political risk and institutions, questioning the reliability of the cross-country results.

Table 2: Cross-Country Analysis, Average 1984-2003

| Political risk variable (POLITICAL) | Dependent variable: log FDI | | | | | | | | | | | | |
| | Government stability | Socio-economic conditions | Investment profile | Internal conflict | External conflict | Corruption | Military in politics | Religious tensions | Law and order | Ethnic tensions | Democratic accounta-bility | Quality Bureaucracy |
Variable: Independent Variables	(1)	GOVST (2)	SOCIO (3)	INVEST (4)	ICONFL (5)	ECONFL (6)	CORR (7)	MILIT (8)	RELIG (9)	LAW (10)	ETHNIC (11)	DEMOC (12)	BUR (13)
log GNI	0.93*** (4.95)	0.79*** (4.08)	0.73*** (3.16)	0.81*** (3.00)	0.89*** (4.94)	0.87*** (4.39)	0.86*** (4.29)	0.98*** (4.67)	0.92*** (4.75)	0.86*** (4.86)	0.92*** (4.89)	0.83*** (4.27)	0.63*** (2.67)
GROWTH	0.19*** (2.70)	0.15** (2.20)	0.16** (2.21)	0.17** (2.40)	0.18** (2.47)	0.22*** (2.87)	0.18*** (2.61)	0.20*** (2.70)	0.19*** (2.60)	0.16** (2.25)	0.19*** (2.60)	0.19*** (2.81)	0.18*** (2.63)
log TRADE	1.41*** (4.16)	1.31*** (4.16)	1.33*** (3.97)	1.32*** (4.10)	1.34*** (3.86)	1.42*** (4.33)	1.36*** (3.85)	1.47*** (3.56)	1.38*** (4.30)	1.36*** (3.91)	1.42*** (4.21)	1.34*** (3.88)	1.36*** (4.14)
log INFLATION	0.04 (0.45)	0.05 (0.59)	0.08 (0.82)	0.06 (0.65)	0.06 (0.68)	0.07 (0.79)	0.04 (0.41)	0.04 (0.41)	0.04 (0.40)	0.06 (0.62)	0.05 (0.55)	0.04 (0.43)	0.05 (0.54)
Regional dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
POLITICAL		0.35* (1.66)	0.24 (1.41)	0.16 (0.73)	0.10 (1.18)	0.16 (1.42)	0.09 (0.99)	-0.03 (-0.39)	0.03 (0.45)	0.10* (1.71)	0.03 (0.58)	0.11* (1.67)	0.13** (2.22)
R^2	0.68	0.70	0.70	0.69	0.69	0.70	0.69	0.69	0.69	0.69	0.69	0.70	0.70
No. of obs.	81	81	81	81	81	81	81	81	81	81	81	81	81

Notes: t-values, reported in parentheses, are based on White's (1980) correction for heteroskedasticity; multicollinearity has been tested by the creation of variance inflation factors (VIF); all regressions pass at conventional levels; to save space, the coefficients for the regional dummies and the constant terms are not shown; *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

As a remedy, we add a cross-sectional time-series analysis, using an unbalanced panel for the 83 countries in the sample. The basic set-up of the panel, however, does not comprise of 20 annual observations for all variables. Partly due to one or a few large investment projects, FDI flows can vary significantly from year to year, which may lead to misleading results in a panel setting. This applies in particular to relatively small developing countries, which make up a considerable share of our country sample.[15] Also, using a log-FDI model can be problematic, since FDI flow data on an annual basis can be negative. By using the logarithm, the number of observations would drop by one tenth. More worryingly, excluding only those observations for a country and time period for which FDI inflows are zero or negative is likely to bias the country sample. To deal with both problems, five 4-year averages for the period from 1984 to 2003, that is, 1984-1987, 1988-1991, and so on, are used instead of annual data, which yields a very high number of positive FDI observations.[16]

While a suitable F-test suggested not using a common intercept for all countries, the statistics from the Hausman (1978) test suggest using a fixed-effects instead of a random-effects model. The specification of the fixed-effects model is as follows:

$$\log FDI_{it} = \beta_0 + \beta_1 \log GNI_{it} + \beta_2 GROWTH_{it} + \beta_3 \log TRADE_{it} + \beta_4 \log INFLATION_{it}$$
$$+ \beta_5 POLITICAL_{it} + e_{it} \tag{2}$$

where β_0 is the country-specific fixed effect and, again, $POLITICAL_{it}$ stands for the 12 indictors for political risk and institutions (for country i and period t), which will be singly added to the benchmark regression.

The results of the benchmark equation are reported in column 1 of Table 3. Now, all four control variables have the expected sign and are statistically significant at the 1 per cent level. Again, the overall fit of the (panel) model is reasonable, taking the diversity of the 83 developing countries into account. We then added the 12 indicators for political risk and institutions one by one to see whether they explain any variation in *FDI* in addition to the control variables. The results show that, apart from corruption, military in politics and religious tensions, all indicators are positively associated with FDI flows. The exception is *SOCIO*, which has a negative sign, meaning that an improvement in the socio-economic

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[15] In 2003, 31 out of 83 countries in our sample had a total population of less than 10 million people.

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conditions is negatively associated with FDI inflows. Though surprising at first glance, a closer look at the underlying sub-components shows that *SOCIO* comprises of the unemployment rate, consumer confidence and the poverty rate. These indicators are not necessarily associated with an increase in foreign investment inflows, as the impacts of FDI on labour markets or income distribution depend on specific country circumstances, which would be relatively difficult to assess.

Apart from *SOCIO*, *CORR*, *MILIT* and *RELIG*, all other estimated coefficients are significant at least at the 10 per cent level and have the expected positive sign. *GOVST*, *INVEST*, *ICONFL*, *LAW*, *ETHN*, and *DEMOC* are even significant at the 1 per cent level, indicating a particularly close positive linkage with FDI flows. The estimated coefficient for investment profile, for example, means that an increase in *INVEST* by one point is associated with an increase in net FDI inflows by US $1.55 per capita. Though this might appear as a small number at first glance, the total impact can be quite significant for individual countries. For instance, based on figures for the period 2000 to 2003, annual average net FDI inflows to India would increase by almost 50 per cent.

Among the political indicators that are statistically significant, the estimated coefficients for government stability, investment profile, law and order and democratic accountability of the government are somewhat larger than those for the other indicators. The relative importance of the investment profile is hardly surprising, given that *INVEST* contains key sub-components, such as contract viability, expropriation of assets or the ability of multinationals to repatriate profits. Obviously, these sub-components are extremely important for multinationals' decisions on where to invest.

The results for government stability and democratic accountability of the government show that foreign investors are also highly sensitive to changes in political stability and the framework in which governments operate. Fundamental democratic rights, like civil liberties and political rights, do matter to multinationals operating in developing countries, even when we control for other factors that affect FDI flows. This result is in line with the findings by Harms and Ursprung (2002), Jensen (2003) and Busse (2004), who all showed that basic

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[16] Likewise, 4-year averages for all other variables are used in the regressions.

democratic rights are positively associated with FDI inflows, even if the specifications of their models differ.

Consequently, we do not support the findings by Li and Resnick (2003), who obtained the opposite outcome. At the same time, they argue that improvements in democratic rights lead to an improved protection of property rights, which in turn increases FDI. Apart from this indirect impact, democracy may have a negative influence on foreign investment. This different outcome could be explained by the particular data set used by Li and Resnick. They include 53 developing countries and focus on the period 1982 to 1995. The results might change significantly, however, if we expand the time period (and the number of countries included in the sample), as there has been an enormous increase in FDI flows to developing countries (and improvements in democracy) since the mid-1990s.[17]

Similarly, multinational corporations seem to care about internal and external conflicts that affect the host country of their investment, as it increases economic and political instability. The threat of incidence of civil wars, political violence, trade sanctions or an all-out war increases the risk premium of investment projects, thus reducing overall investment.[18] Interestingly, changes in corruption do not significantly affect FDI inflows, though the coefficient has the expected positive sign. This result is at odds with those results reported by Wei (2000), who found a statistically significant link between corruption and foreign investment in a cross-country analysis.

Likewise, the influence of the military in politics does not affect FDI. In contrast to tensions among religious groups, the degree of conflicts among ethnic fractions (*ETHNIC*) is significantly associated with FDI. The outcome is basically in line with studies that examine the linkage of ethnic tensions and economic growth, indicating that a high degree of conflicts attributable to racial nationality or language divisions might – on average – negatively affect economic development. For example, Easterly and Levine (1997) found that ethnic diversity helps to explain cross-country differences in public policies and several economic indicators.

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[17] See Busse (2004) for a detailed analysis on changes in the investment behaviour of multinationals in developing countries.

[18] As these events create higher uncertainty, they reduce foreign capital flows. Moreover, such conflicts have a strong negative impact on a country's growth rate (Alesina et al., 2003), thus making investment less attractive.

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This applies in particular to sub-Saharan Africa, where ethnic fragmentation is much larger in comparison to other regions.

It might be argued that multinational corporations will respond only partially to changes in political (and economic) variables in the short term. Investment decisions may take time due to physical and procedural constraints (Jun and Singh, 1996). Hence, we have lagged all independent variables for one period, that is, four years, to allow for an adjustment in FDI flows. Yet the results with respect to sign, significance and the (absolute and relative) size of the estimated coefficients are almost identical. Due to reasons of space, the results are not reported.[19] The exception is the impact of socio-economic conditions, as *SOCIO* has a positive sign in these results, but the coefficient is not significant.

So far, we have assumed that both the control variables and the political risk indicators are exogenous. In the case of openness to trade this is obviously an unrealistic assumption, as FDI inflows are highly likely to affect the overall trading volume, if they import raw materials and/or semi-manufactured goods and export processed commodities. Likewise, depending on the exact country circumstances, FDI may increase the host country capital stock, bring in new technologies and boost GNI growth rates (and hence GNI per capita). Consequently, we have to add an instrumental variable approach, such as the generalised method of moments (GMM).

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[19] The complete results for these further regressions as well as all other regressions can be obtained from the first author upon request.

Table 3: Panel Analysis, Country Fixed-Effects, 1984-2003 (4-Year Intervals)

Political risk variable (POLITICAL) Variable: Independent Variables	Dependent variable: log FDI												
		Government stability	Socio-economic conditions	Investment profile	Internal conflict	External conflict	Corruption	Military in politics	Religious tensions	Law and order	Ethnic tensions	Democratic accounta-bility	Quality Bureaucracy
		GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
log GNI	2.70*** (11.34)	1.96*** (7.03)	2.63*** (11.04)	2.01*** (7.39	2.45*** (9.75)	2.38*** (8.93)	2.70*** (11.18)	2.69*** (11.14)	2.65*** (10.82)	2.40*** (9.72)	2.49*** (10.07)	2.42*** (10.46)	2.61*** (10.82)
GROWTH	0.07*** (3.46)	0.05*** (2.87)	0.07*** (3.72)	0.05** (2.39)	0.06*** (3.18)	0.06*** (3.12)	0.07*** (3.42)	0.07*** (3.40)	0.07*** (3.41)	0.06*** (2.98)	0.06*** (3.23)	0.05*** (2.93)	0.07*** (3.45)
log TRADE	0.97*** (3.65)	1.09*** (4.23)	1.03*** (3.88)	1.19*** (4.56)	0.89*** (3.32)	0.90*** (3.38)	0.97*** (3.59)	0.99*** (3.72)	0.99*** (3.69)	0.89*** (3.38)	1.00*** (3.78)	0.97*** (3.84)	0.91*** (3.40)
log INFLATION	-0.17*** (-4.03)	-0.14*** (-3.18)	-0.19*** (-4.34)	-0.12*** (-2.66)	-0.16*** (-3.79)	-0.18*** (-4.23)	-0.18*** (-4.07)	-0.18*** (-4.06)	-0.17*** (-4.02)	-0.16*** (-3.72)	-0.18*** (-4.23)	-0.15*** (-3.53)	-0.16*** (-3.71)
POLITICAL		0.14*** (4.52)	-0.10** (-2.09)	0.19*** (4.59)	0.08*** (2.57)	0.08** (2.46)	0.02 (0.57)	-0.01 (-0.32)	0.02 (0.41)	0.12*** (3.42)	0.09*** (2.54)	0.17*** (5.65)	0.06* (1.76)
R^2 (within)	0.50	0.53	0.50	0.53	0.51	0.51	0.50	0.49	0.50	0.51	0.51	0.55	0.50
R^2 (between)	0.59	0.61	0.59	0.63	0.60	0.60	0.60	0.60	0.60	0.60	0.61	0.61	0.59
Durbin-Watson	1.37	1.40	1.39	1.41	1.36	1.40	1.36	1.37	1.37	1.37	1.36	1.42	1.36
No. of groups	83	83	83	83	83	83	83	83	83	83	83	83	83
No. of obs.	371	370	370	370	370	370	370	370	370	370	370	370	370

Notes: t-values reported in parentheses; *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

Table 4: Arellano-Bond Dynamic Panel-Data Estimation, 1984-2003 (4-Year Intervals)

Political risk variable (POLITICAL) Variable: Independent Variables		Government stability	Socio-economic conditions	Investment profile	Internal conflict	External conflict	Corruption	Military in politics	Religious tensions	Law and order	Ethnic tensions	Democratic accounta-bility	Quality Bureaucracy
		GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
log FDI (-1)	0.43***	0.39***	0.42***	0.44***	0.42***	0.43***	0.45***	0.44***	0.44***	0.39***	0.44***	0.37***	0.43***
	(3.56)	(3.50)	(3.46)	(3.69)	(3.55)	(3.63)	(3.67)	(3.59)	(3.64)	(3.39)	(3.72)	(3.12)	(3.56)
log GNI	0.67	0.44	0.65	0.44	0.53	0.63	0.57	0.54	0.51	0.35	0.39	0.64	0.47
	(1.07)	(0.75)	(0.98)	(0.69)	(0.85)	(1.00)	(0.89)	(0.84)	(0.79)	(0.56)	(0.62)	(1.06)	(0.73)
GROWTH	0.04*	0.04*	0.04*	0.04*	0.04*	0.04	0.04*	0.04*	0.04*	0.03	0.03	0.04*	0.04*
	(1.77)	(1.85)	(1.71)	(1.74)	(1.62)	(1.58)	(1.72)	(1.73)	(1.79)	(1.39)	(1.56)	(1.74)	(1.75)
log TRADE	0.60*	0.42	0.59*	0.58*	0.47	0.52	0.51	0.60*	0.52	0.45	0.54	0.57*	0.55
	(1.68)	(1.24)	(1.65)	(1.61)	(1.30)	(1.41)	(1.41)	(1.68)	(1.43)	(1.28)	(1.52)	(1.66)	(1.54)
log INFLATION	-0.07	-0.02	-0.07	-0.04	-0.06	-0.07	-0.07	-0.06	-0.06	-0.06	-0.07	-0.07	-0.06
	(-1.01)	(-0.31)	(-1.00)	(-0.56)	(-0.90)	(-1.06)	(-1.12)	(-0.91)	(-0.91)	(-0.89)	(-1.09)	(-1.11)	(-0.91)
POLITICAL		0.19***	0.01	0.11*	0.08**	0.04	0.08*	0.04	0.06	0.12***	0.13***	0.07*	0.06
		(3.94)	(0.11)	(1.83)	(1.98)	(0.91)	(1.61)	(0.91)	(1.21)	(2.85)	(2.95)	(1.86)	(1.32)
No. of groups	76	76	76	76	76	76	76	76	76	76	76	76	76
No. of obs.	198	198	198	198	198	198	198	198	198	198	198	198	198
Wald χ^2 (6)[1]	37.3***	53.1***	37.2***	39.7***	41.2***	38.0***	39.5***	37.4***	39.1***	46.7***	44.1***	43.1***	40.7***
Sargan χ^2 (5)[1]	7.77	3.59	7.91	9.35	5.35	7.11	5.66	7.32	6.62	3.86	3.71	8.53	7.50
AB test $H_0=0$[2] (z-value)	0.34	0.14	0.34	0.31	0.65	0.36	0.38	0.37	0.61	0.47	0.26	0.12	0.40

Dependent variable: log FDI

Notes: The results refer to one-step estimates; coefficients for the constants are not shown; z-values reported in parentheses; *** significant at 1% level; ** significant at 5% level; * significant at 10% level; [1] degrees of freedom in parentheses; note that there are only 5 degrees of freedom for the Wald test in the benchmark regression [2]Arellano-Bond test that average autocorrelation in residuals of order 2 is 0; autocorrelation of order 1 is always rejected (not reported).

Another econometric problem relates to the fact that time-series regression analysis may involve autocorrelation of the disturbances. Autocorrelated errors can be tested by computing the standard Durbin-Watson d statistic. For the benchmark regression, reported in column 1 of Table 3, we computed a d value of 1.37, indicating that we do have positive first-order serial correlation for our data sample. Adding each of the 12 indicators one by one to the control regression does not alleviate this problem.[20] One consequence of autocorrelation might be that some or all estimated coefficients are biased, which could severely affect the interpretation of the relative impact of the indicators for political risk and institutions on foreign investment.

The problem of autocorrelation can be significantly reduced by including the lagged dependent variable on the right hand side of the regression equations. Apart from solving an econometric problem, this procedure is theoretically plausible as foreign investment in the previous period is highly relevant for FDI in the current period. Multinationals are much more likely to be attracted by countries that already have considerable FDI inflows. Firms' own experiences in host countries and the success of other multinationals are a strong attractor for further foreign investments. This has been demonstrated, for instance, by Jensen (2003) and Gastanaga et al. (1998), as the lagged FDI variable is always highly significant in their regressions.

By including lagged FDI flows, we change the econometric specification to a dynamic panel. A commonly employed method for dynamic panels is the Arellano and Bond (1991) GMM estimator. Due to the set-up of their estimator, the fixed effects are eliminated using first differences and an instrumental variable estimation of the differenced equation is performed. As instruments for the lagged difference of the endogenous variable, all lagged levels of the variable at hand are employed. Applying the procedure to our econometric specification we have:

$$\Delta \log FDI_{it} = \text{\ss}_0 + \text{\ss}_1 \Delta \log FDI_{it-1} + \text{\ss}_2 \Delta \log GNI_{it} + \text{\ss}_3 \Delta GROWTH_{it} + \text{\ss}_4 \Delta \log TRADE_{it} +$$
$$\text{\ss}_5 \Delta \log INFLATION_{it} + \text{\ss}_6 \Delta POLITICAL_{it} + \Delta e_{it} \qquad (3)$$

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[20] All computed values are below the lower limit of the d statistic. The results do not change if we take 2- or 3-year averages rather than 4-year averages of all variables.

The consistency of the Arellano-Bond GMM estimator requires a lack of second-order serial correlation in the residuals of the differenced specification. The overall appropriateness of the instruments can be verified by a Sargan test of over-identifying restrictions.

The results for the dynamic panel estimator are reported in Table 4. The benchmark regression, displayed in column 1, shows a highly significant lagged dependent FDI variable. In fact, variations in *FDI(-1)* clearly dominate in comparison to the other control variables, as *GNI* and *INFLATION* are no longer significant and *GROWTH* and *TRADE* barely at the 10 per cent level, though all control variables have the expected signs. The regression statistics show that one of the basic assumptions for applying the Arellano-Bond estimator, that is, no second-order serial correlation, is appropriate for our data sample, as the null-hypothesis has never been rejected.[21] Moreover, the Sargan test results show that the applied instruments are valid. Yet we have to keep in mind a likely drawback of applying the Arellano-Bond estimator to our sample: Introducing lagged (independent and instrument) variables reduces the length of the time series to three and reduces further the number of countries, as the time-series for some nations, such as Albania, the Czech Republic, Mongolia, Russia, or Slovakia, are not very long or incomplete. Nevertheless, we think that the estimated coefficients do provide additional information on the robustness of the results.

The results for the 12 political indicators show that government stability, investment profile, internal conflict, corruption, law and order, ethnic tensions, and democratic accountability of the government matter for the investment decision of multinationals, as their respective coefficients are positive and statistically significant. The strongest significance level (1 per cent level) can be found for *GOVST*, *LAW* and *ETHNIC*, indicating that these variables are particularly closely associated with FDI inflows in a dynamic panel setting. These results are broadly in line with those of the fixed-effects panel analysis, as a considerable number of variables are significant (and have an identical positive sign). This applies in particular to government stability, investment profile, internal conflict, law and order, ethnic tensions, and democratic accountability. Moreover, government stability and law and order have in both panel estimations a 1 per cent significance level and a relatively high magnitude of the respective coefficient.

4. Concluding Remarks

Foreign direct investments are the most desirable form of capital inflows to emerging and developing countries because they are less susceptible to crises and sudden stops. The goal of this paper was to explore in detail the role of political risk and institutions in host countries as determinants of foreign direct investment. As we have pointed out, our main contribution is not to find new and provocative policy recommendation but to distinguish several alternative hypotheses about the relative influence of such factors as risk premiums and institutions more broadly in those countries.

Accordingly, the results of the paper can be summarised as follows: First, in the cross-country analysis, covering a period of 20 years, we find rather few indicators for political risk and institutions that are closely associated with FDI. The exceptions are government stability, law and order, and quality of the bureaucracy. Second, in a panel setting, using two different econometric specifications, we establish statistically significant links for a much larger number of indicators. In addition to those three mentioned indicators, we find that the investment profile, internal and external conflict, ethnic tensions and democratic accountability are important determinants of foreign investment flows. Across different econometric models, the relative magnitude of the coefficients for the these political indicators are largest for government stability and law and order, indicating that changes in these components of political risk and institutions are highly relevant for investment decisions of multinationals.

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[21] Likewise, first-order autocorrelation of the residuals is always rejected by another Arellano-Bond test.

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Appendix A: Definition of Variables and Data Sources

Variable	Definition	Source
FDI	Foreign direct investment per capita, net inflows in current US dollars	UNCTAD (2005)
GNI	Gross National Income per capita, PPP current international US dollars	World Bank (2005)
GROWTH	Real growth of Gross National Income per capita in per cent	World Bank (2005)
TRADE	Total imports and exports divided by Gross Domestic Product	World Bank (2005)
INFLATION	Change in GDP Deflator in per cent	World Bank (2005)
GOVST	Government stability, 0-12 scale	PRS Group (2005b)
SOCIO	Socio-economic conditions, 0-12 scale	PRS Group (2005b)
INVEST	Investment profile, 0-12 scale	PRS Group (2005b)
ICONFL	Internal conflict, 0-12 scale	PRS Group (2005b)
ECONFL	External conflict, 0-12 scale	PRS Group (2005b)
CORR	Level of corruption, 0-12 scale	PRS Group (2005b)
MILIT	Influence of military in politics, 0-12 scale	PRS Group (2005b)
RELIG	Tensions among religious groups, 0-12 scale	PRS Group (2005b)
LAW	Law and order, 0-12 scale	PRS Group (2005b)
ETHNIC	Tensions among ethnic groups, 0-12 scale	PRS Group (2005b)
DEMOC	Democratic accountability of the government, 0-12 scale	PRS Group (2005b)
BUR	Institutional strength and quality of the bureaucracy, 0-12 scale	PRS Group (2005b)
Regional dummies	Set of six regional dummy variables: (1) Sub-Saharan Africa, (2) South Asia, (3) East Asia & the Pacific, (4) Middle East & North Africa, (5) Latin America & the Caribbean, (6) Transition economies (Europe and Central Asia)	World Bank (2005) classification

Appendix B: Descriptive Statistics of the Variables, 1984-2003

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
GOVST	418	6.9	2.1	1.3	11.3
SOCIO	418	5.0	1.5	0.8	9.0
INVEST	418	6.1	1.8	1.2	11.2
ICONFL	418	7.9	2.6	0.1	12.0
ECONFL	418	9.3	2.3	0.0	12.0
CORR	418	5.5	2.0	0.0	11.7
MILIT	418	6.3	3.3	0.0	12.0
RELIG	418	8.7	2.8	0.0	12.0
LAW	418	6.1	2.4	0.4	12.0
ETHNIC	418	7.3	2.8	0.0	12.0
DEMOC	418	6.4	2.5	0.0	12.0
BUR	418	5.1	2.8	0.0	12.0
FDI	413	32.5	76.9	-45.0	550.6
GNI	412	3,627.6	3,043.7	360.0	15,963.0
GROWTH	422	1.0	3.4	-11.1	20.3
TRADE	420	62.5	31.8	13.2	243.3
INFLATION	421	94.1	584.3	-3.2	8,242.3

Appendix C: Country Sample

Albania, Algeria, Angola, Argentina, Bangladesh, Bolivia, Botswana, Brazil, Bulgaria, Burkina Faso, Cameroon, Chile, China, Colombia, Congo (Dem. Republic), Congo (Republic), Costa Rica, Cote d'Ivoire, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Gabon, Gambia, Ghana, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Jamaica, Jordan, Kenya, Korea (South), Lebanon, Madagascar, Malawi, Malaysia, Mali, Mexico, Mongolia, Morocco, Namibia, Nicaragua, Niger, Nigeria, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Romania, Russia, Saudi Arabia, Senegal, Sierra Leone, Slovakia, South Africa, Sri Lanka, Sudan, Syrian Arab Republic, Tanzania, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Uruguay, Venezuela, Vietnam, Zambia, Zimbabwe