

# Political risk, institutions and foreign direct investment

Matthias Busse<sup>a,\*</sup>, Carsten Hefeker<sup>b,c,d</sup>

<sup>a</sup> *Hamburg Institute of International Economics (HWWA), Neuer Jungfernstieg 21, 20347 Hamburg, Germany*

<sup>b</sup> *University of Siegen, Department of Economics, Hölderlinstraße 3, 57068 Siegen, Germany*

<sup>c</sup> *Hamburg Institute of International Economics (HWWA), Germany*

<sup>d</sup> *CESifo, Munich, Germany*

Received 8 April 2005; received in revised form 24 October 2005; accepted 17 February 2006

Available online 15 May 2006

## Abstract

The paper explores the linkages among political risk, institutions, and foreign direct investment inflows. For a data sample of 83 developing countries covering 1984 to 2003, we identify indicators that matter most for the activities of multinational corporations. The results show that government stability, internal and external conflict, corruption and ethnic tensions, law and order, democratic accountability of government, and quality of bureaucracy are highly significant determinants of foreign investment inflows.

© 2006 Elsevier B.V. All rights reserved.

*JEL classification:* C31; C 33; F21; F23

*Keywords:* Political risk; Institutions; Foreign direct investment; Multinational corporations

## 1. Introduction

Economic development depends to a large extent on profitable investment. Having access to foreign capital allows opportunities that otherwise would not be available. Recent experience with open 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 are subject to sudden reversal if the economic environment or just the perception of investors changes, giving rise to possible financial and economic crises. It is therefore frequently advised that those countries should primarily try to attract foreign direct investment (FDI) and be careful about accepting other

\* Corresponding author. Tel.: +49 40 42834 435; fax: +49 40 42834 451.

E-mail address: [busse@hwwa.de](mailto:busse@hwwa.de) (M. Busse).

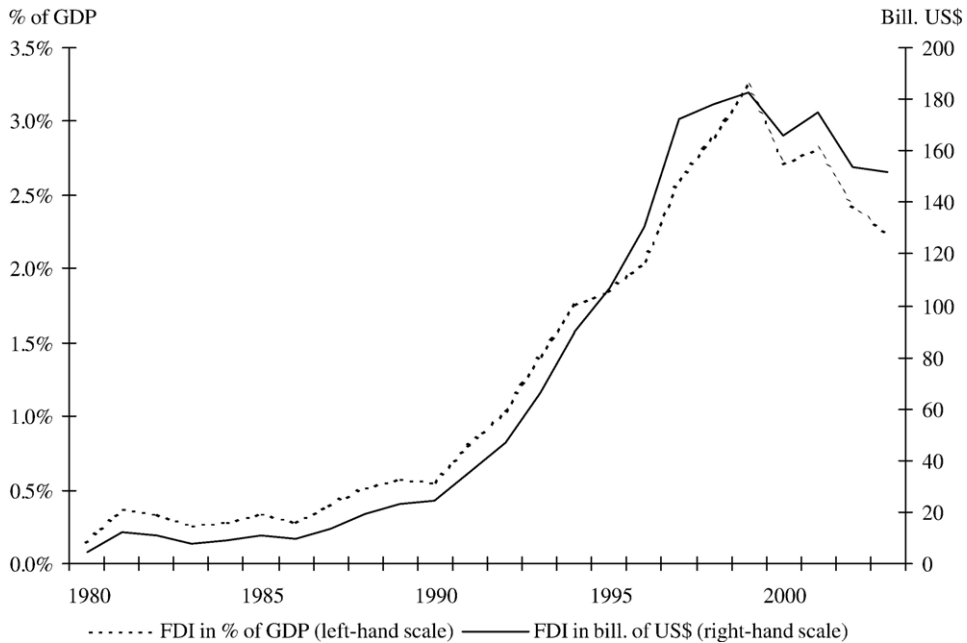


Fig. 1. Foreign direct investment inflows in developing countries, 1980–2003. Source: UNCTAD (2005).

sources of finance (Prasad et al., 2003). Direct investment is much more resilient to crises. Therefore the question is what can countries do to attract more of such capital flows?

FDI in developing countries has increased significantly over the last 25 years. Total FDI rose from some US \$4 billion in 1980, to US \$182 billion in 1999, before falling back to US \$152 billion in 2003 (Fig. 1). As a share of Gross Domestic Product (GDP), we have observed an enormous increase in the significance of FDI. In developing countries, defined as low- and middle-income countries with a Gross National Income (GNI) per capita of US \$9075 or less,<sup>1</sup> this share increased from a very low figure of some 0.1% in 1980, to more than 3% in 1999, and then declined to 2.2% in 2003.

Various determinants have been identified that influence location of investment of multinational corporations. Theoretical and empirical studies have looked at the characteristics and behaviour of multinationals and have identified management skills, economies of scale, and innovative product technologies as important determinants of FDI.<sup>2</sup> Market structure, the dynamics of oligopoly, political and economic stability, market size and growth, infrastructure, exchange rate risks, labour costs, and more have been singled out as additional influences that can explain FDI.

Rather than analysing a broad range of heterogeneous determinants of FDI, this paper focuses on various aspects of political risk, and tries to identify those political risk components that matter most for multinationals. Political risk is related to the risk that a sovereign host government will unexpectedly change “the rules of the game” under which businesses operate (Butler and Joaquin, 1998). Changes in government policy and/or political institutions could affect investment

<sup>1</sup> 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 \$ in the year 2002.

<sup>2</sup> See Chakrabarti (2001) and Asiedu (2002) for surveys of the literature.

behaviour of multinational corporations, as the risk premium incorporated in any investment project and, therefore also the location decision is influenced by political risk.

While the economic determinants of FDI flows to developing countries have been analysed to a considerable degree, it is somewhat astonishing that the importance of changes in political institutions and of other relevant policies in host countries has received rather limited attention. In the 1990s, most research 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 there is a negative impact of corruption on FDI flows (Wei, 2000).<sup>3</sup> Despite attempts to distinguish other influences, the results of these cross-country studies may well reflect other non-measured influences that 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, since the bias in the estimates of such effects could be in either direction, it is important to supplement the cross-section studies with time-series estimates. The first such attempt was 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.<sup>4</sup> 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 apply, which may be due to the relatively small country sample of 22 developing countries.

Henisz (2000) showed that multinationals face an increasing threat of expropriation if political hazard in the host country increases. However, the degree of risks depends on the strategic behaviour of the multinational, which may partner with host-country firms that have a comparative advantage in interactions with the host-country government.<sup>5</sup> Harms (2002) estimated the impact of financial risk on equity investment flows, that is, the sum of FDI and portfolio investment, to developing countries. Using a panel data set of 55 developing countries and the period 1987 to 1995, he found that lower financial risk is associated with an increase in FDI and portfolio investment. Egger and Winner (2005), on the other hand, found for a sample of 73 countries over the period 1995 to 1999 a positive linkage between corruption and FDI. In the presence of excessive regulation and other administrative controls, they propose that corruption may act as a “helping hand” to encourage FDI inflows.

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 where there is democracy. Li and Resnick (2003), on the other hand, argue that

<sup>3</sup> 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 Henisz (2002), Stasavage (2002), Keefer (2004), Faria and Mauro (2004). Reviews of the literature can be found in Gastanaga et al. (1998) and Busse (2004).

<sup>4</sup> 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.

<sup>5</sup> See also related work by Delios and Henisz (2003) on internationalisation strategies by multinationals or by Gelos and Wie (2002) on the effects of transparency on investment behaviour.

competing causal linkages are at work. They found that democratic rights lead to improved property rights protection, which in turn increases 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 focus on very specific indicators such as democratic rights, omitting a broader range of policy-related variables.

The purpose of this paper is 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 other relevant determinants of observed changes in FDI flows. We examine the influences 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.

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. These influences constitute relevant sub-components of an overall assessment of “good governance” (Kaufmann et al., 1999). We therefore empirically investigate the (direct) links between various components of political risk foreign investment flows and the (indirect) links between institutional quality and FDI.

The paper is structured as follows: The data set and the variables used in the regressions are presented 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 use both methods to estimate the impact of policy-related variables. With respect to the panel analysis, we employ two different econometric techniques, 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 endogeneity of some of the control variables. Section 4 concludes.

## 2. Data and variables

The analysis comprises the period 1984 to 2003 for a sample of 83 developing countries. The linkage between political institutions and FDI is our particular concern. Included are all developing countries for which data on all variables in the regressions are obtainable.<sup>6</sup> Information on political risk and institutions is 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:<sup>7</sup>

- Government stability, called GOVST in the empirical analysis, measures the government’s ability to carry out its policies and to stay in office

<sup>6</sup> The country sample can be found in Appendix C.

<sup>7</sup> See PRS Group (2005a) for details on sub-components and aggregation procedures.

- 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
- 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, therefore, 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.<sup>8</sup> In general, these indicators are widely recognised (and used) as high-quality measures of political risk and institutions.<sup>9</sup> Obviously, all 12 indicators are related to each other by varying degrees, as 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 have less political risk and better institutions.

In general, we expect all 12 indicators to be positively related to FDI flows, as less political risk and better institutions are expected to attract foreign investment due to a lower risk premium, for instance, by enforcing property rights and contracts. Also, the quality of institutions may be

<sup>8</sup> 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.

<sup>9</sup> In recent years, these indicators have been used, for instance, by Harms and Ursprung (2002), Bolaky and Freund (2004), Rodrik et al. (2004), and Noguera and Siscart (2005).

Table 1  
Correlation matrix

Variable	ln GNI	GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
ln 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.

closely related to reducing information asymmetries, as high-quality institutions channel information about market conditions, goods and participants, which in turn can encourage (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 used. Per capita values allow us to take the relative country size into account. The FDI data are from the UNCTAD FDI database (UNCTAD, 2005). Net FDI flows refer to inflows net of outflows, where FDI refers to foreign investments for which multinational corporations own 10% or more of the (local) enterprise. While this threshold is somewhat arbitrary, we have to keep in mind another problem that might arise from this type of definition of multinationals' activities, which is that the FDI data cover only part of the resources invested by a multinational, since a share of the investment may be financed through debt or equity raised in the local market. Therefore our FDI variable underestimates the extent of activities by multinational corporations abroad. If this potential bias is uniform across countries and over time, the results do not change regarding sign and significance levels of the estimated coefficients. Yet the size of the coefficients is very likely to be overestimated.

Regarding the explanatory variables of foreign investment, a standard procedure is 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. 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 of 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 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 GDP or GNI per capita, is probably the most important factor in explaining foreign investment (Chakrabarti, 2001).<sup>10</sup> The size of a particular market may indicate the attractiveness of a specific location for the investment when a 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 this 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 increased by FDI, pointing to the problem of endogeneity in the empirical analysis (Carkovic and Levine, 2005).

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 quantification of trade restrictions.<sup>11</sup> In general, the impact of openness to trade is linked to

<sup>10</sup> Note that we are using FDI per capita as the dependent variable. Thus we have to use GNI (or GDP) per capita as well.

<sup>11</sup> See Gastanaga et al. (1998) for a discussion of different indicators to measure the degree of openness.



the type of foreign investment (Asiedu, 2002). Horizontal FDI may be attracted by higher trade barriers, which 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 or 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 may thus be positively or negatively associated with FDI, depending on the country sample. The empirical evidence suggests however 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. Apart from increasing 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 increase FDI. As a (proximate) measure for various forms of macroeconomic imbalances, we added the inflation rate to the regressions, as inflation can be expected to be closely linked to a range of forms of policy inadequacy such as fiscal or monetary imbalances.<sup>12</sup>

With this background, we use the following four control variables in the regressions:<sup>13</sup>

- (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 inadequacies.

The first two variables are expected to be positively associated with FDI inflows, whereas for INFLATION we would expect a negative linkage. TRADE, on the other hand, can be positively or negatively associated with investment inflows.

### 3. Empirical specification and results

We now turn to the empirical linkages among political risk, institutions and FDI flows. We start with the cross-sectional technique, using averages for the entire period 1984–2003. As in most studies in the empirical literature on FDI flows, the logarithm for investment flows and the independent variables is used.<sup>14</sup> Since some of the observations for FDI (and GROWTH) are negative, we transform both variables using the following procedure:<sup>15</sup>

$$y = \ln\left(x + \sqrt{(x^2 + 1)}\right) \quad (1)$$

<sup>12</sup> Aizenman (2003) shows that macroeconomic volatility has a negative influence of multinationals' profits and thus on investment decisions. Easterly (2005), however, argues that institutions are behind macroeconomic volatility as well, and that country growth thus mainly depends on institutions.

<sup>13</sup> See Appendix A for data sources and Appendix B for descriptive statistics.

<sup>14</sup> An appropriate Box–Cox test showed that a double-log specification would be preferred.

<sup>15</sup> We are grateful to an anonymous referee for suggesting this transformation.



By employing this method, we maintain the sign of  $x$ . The values of  $x$  pass from a linear scale at small absolute values to a logarithmic scale at large values. The benchmark regression can be written as follows:<sup>16</sup>

$$\ln \text{FDI}_i = \beta_0 + \beta_1 \ln \text{GNI}_i + \beta_2 \ln \text{GROWTH}_i + \beta_3 \ln \text{TRADE}_i + \beta_4 \ln \text{INFLATION}_i + \beta_5 \text{REGIONAL DUMMY} + \beta_6 \text{POLITICAL}_i + e_i \quad (2)$$

where  $\beta_j$  are the estimated parameters, REGIONAL DUMMY stands for a set of six regional dummies (to control for regional characteristics),<sup>17</sup> POLITICAL<sub>*i*</sub> stands for one of the 12 indicators for political risk and institutions, and  $e_i$  is an error term. To avoid multicollinearity, the political risk indicators are added one by one to the benchmark regression.

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% or 5% level. 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, religious tensions, and democracy have a positive impact on FDI inflows, as the coefficients are positive and statistically significant at the 5% or 10% 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.

Yet only 3 out of 12 indicators for political risk and institutions have a significant impact on FDI flows. Moreover, one of them (GOVST) is barely significant at the 10% level. One reason for this outcome might be 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 2500% in 1990 but single-digit figures since 1997. Taking the average for the 20-year period yields 552%, which is still a very high number. On the other hand, FDI flows to Brazil increased significantly in the 1990s, which, in turn, increased 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, leading to a questioning of the reliability of the cross-country results.

As a remedy, we add a cross-sectional time-series analysis, using an unbalanced panel. 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.<sup>18</sup> Thus, five 4-year averages for the period from 1984 to 2003, that is, 1984–1987, 1988–1991, and so on, are used rather than annual data.<sup>19</sup>

<sup>16</sup> Note that FDI and GROWTH are transformed using Eq. (1).

<sup>17</sup> The set-up of the regional dummies is based on the World Bank (2005) classification of regions. See Appendix A for details.

<sup>18</sup> In 2003, 31 out of 83 countries in our sample had a total population of less than 10 million people.

<sup>19</sup> Likewise, 4-year averages for all other variables are used in the regressions. Due to insufficient data, Gabon had to be excluded from the time-series analysis. Hence, the number of countries included decreased to 82.

Table 2  
Cross-country analysis, average 1984–2003

Political risk variable	Dependent variable: ln FDI												
		Government stability	Socio-economic conditions	Investment profile	Internal conflict	External conflict	Corruption	Military in politics	Religious tensions	Law and order	Ethnic tensions	Democratic accountability	Quality bureaucracy
(POLITICAL)		GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Independent variables													
ln GNI	0.97*** (6.31)	1.09*** (6.63)	0.88*** (4.15)	0.90*** (3.65)	0.94*** (6.16)	0.90*** (5.60)	1.00*** (5.78)	0.93*** (5.37)	0.93*** (6.02)	0.98*** (6.19)	0.98*** (6.25)	0.84*** (5.47)	0.80*** (4.00)
ln GROWTH	0.27** (2.13)	0.32*** (2.67)	0.24** (1.98)	0.24* (1.95)	0.26** (2.09)	0.29** (2.24)	0.28** (2.31)	0.26** (2.13)	0.26** (2.01)	0.27** (2.18)	0.27** (2.16)	0.26*** (5.47)	0.26** (2.08)
ln TRADE	0.98*** (3.40)	1.08*** (3.82)	0.93*** (3.40)	0.92*** (3.60)	0.94*** (3.24)	0.97*** (3.51)	1.00*** (3.40)	0.93*** (2.73)	0.89*** (3.30)	0.98*** (3.31)	0.98*** (3.39)	0.90*** (3.21)	0.95*** (3.38)
ln INFLATION	0.07 (0.77)	0.61 (0.71)	0.08 (0.81)	0.07 (0.77)	0.08 (0.81)	0.06 (0.70)	0.08 (0.86)	0.07 (0.79)	0.02 (0.23)	0.07 (0.71)	0.07 (0.77)	0.04 (0.50)	0.08 (0.84)
REGIONAL DUMMY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
POLITICAL		0.27* (1.66)	0.10 (0.61)	0.92 (0.42)	0.05 (0.59)	0.16 (1.54)	−0.04 (−0.35)	0.02 (0.39)	0.13** (2.01)	−0.00 (−0.05)	−0.01 (−0.21)	0.14** (2.29)	0.07 (1.27)
R <sup>2</sup>	0.67	0.68	0.67	0.67	0.67	0.68	0.67	0.67	0.70	0.67	0.67	0.70	0.67
No. of obs.	83	83	83	83	83	83	83	83	83	83	83	83	83

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.

While a suitable  $F$ -test suggested not using a common intercept for all countries, the statistics from the Hausman (1978) test suggests using a fixed-effects instead of a random-effects model.<sup>20</sup> The specification of the fixed-effects model is as follows:<sup>21</sup>

$$\ln \text{FDI}_{it} = \beta_0 + \beta_1 \ln \text{GNI}_{it} + \beta_2 \ln \text{GROWTH}_{it} + \beta_3 \ln \text{TRADE}_{it} + \beta_4 \ln \text{INFLATION}_{it} + \beta_5 \text{POLITICAL}_{it} + e_{it} \quad (3)$$

where  $\beta_0$  is the country-specific fixed effect and, again,  $\text{POLITICAL}_{it}$  stands for the 12 indicators for political risk and institutions (for country  $i$  and period  $t$ ).

The results of the benchmark equation are reported in column 1 of Table 3. Now, all control variables have the expected sign and are statistically significant at the 1% or 5% level. The exception is TRADE, which has the expected positive sign but is no longer significant. This can easily be explained by differences in the dominance in horizontal and/or vertical FDI in the time-series regression analysis, as explained in the previous section. Again, the overall fit of the (panel) model is reasonable, taking the diversity of the country sample into account.

We then add 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 government stability, investment profile, internal and external conflicts, law and order, democratic accountability, and bureaucratic quality are positively associated with FDI flows, indicated by an estimated coefficient that is significant at least at the 10% level. The coefficient for SOCIO has a negative sign, meaning that an improvement in the socio-economic conditions is negatively associated with FDI inflows, but is not significant. GOVST, INVEST, ECONFL, and DEMOC are significant at the 1% level, indicating a particularly close positive linkage with FDI flows. The relative importance of the investment profile is hardly surprising, given that INVEST contains key sub-components, such as contract viability, expropriation of assets and 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 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. They argued 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 a substantial increase in FDI flows to developing countries (and improvements in democracy) since the mid-1990s.<sup>22</sup>

<sup>20</sup> The Hausman test result for the benchmark regression is  $\chi^2 = 28.9$  ( $p = 0.000$ ), that is, the assumption that a model using random effects is preferable is clearly rejected. The results do not change much if we add the 12 political risk variables one by one.

<sup>21</sup> In the panel analysis, FDI, GROWTH and INFLATION are transformed using Eq. (1).

<sup>22</sup> See Busse (2004) for a detailed analysis on changes in investment behaviour of multinationals in developing countries.

Table 3  
Panel analysis, country fixed-effects, 1984–2003 (4-year intervals)

Political risk variable	Dependent variable: ln FDI												
(POLITICAL)		Government stability	Socio-economic conditions	Investment profile	Internal conflict	External conflict	Corruption	Military in politics	Religious tensions	Law and order	Ethnic tensions	Democratic accountability	Quality bureaucracy
Variable		GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
ln GNI	2.58*** (8.30)	1.78*** (4.91)	2.55*** (8.16)	2.01*** (5.49)	2.36*** (7.11)	2.02*** (5.85)	2.62*** (8.29)	2.53*** (7.92)	2.50*** (7.81)	2.33*** (7.08)	2.46*** (7.52)	2.32*** (7.40)	2.41*** (7.60)
ln GROWTH	0.20*** (3.61)	0.15*** (2.62)	0.20*** (3.64)	0.16*** (2.69)	0.18*** (3.28)	0.17*** (3.04)	0.20*** (3.60)	0.20*** (3.50)	0.20*** (3.53)	0.18*** (3.28)	0.19*** (3.46)	0.17*** (2.99)	0.20*** (3.63)
ln TRADE	0.31 (0.90)	0.47 (1.39)	0.34 (0.99)	0.53 (1.51)	0.24 (0.68)	0.16 (0.47)	0.27 (0.77)	0.34 (0.97)	0.31 (0.88)	0.24 (0.70)	0.32 (0.92)	0.35 (1.01)	0.23 (0.65)
ln INFLATION	−0.12** (−2.12)	−0.08 (−1.39)	−0.13** (−2.25)	−0.08 (−1.26)	−0.12** (−1.98)	−0.14*** (−2.51)	−0.13** (−2.16)	−0.12** (−2.09)	−0.12** (−2.10)	−0.11** (−1.92)	−0.13** (−2.17)	−0.10* (−1.76)	−0.11* (−1.81)
POLITICAL		0.17*** (4.04)	−0.06 (−0.98)	0.15*** (2.77)	0.07* (1.79)	0.15*** (3.37)	0.06 (1.08)	0.02 (−0.56)	0.05 (1.03)	0.09** (2.05)	0.04 (0.97)	0.14*** (3.53)	0.08** (2.06)
R <sup>2</sup> (within)	0.30	0.34	0.30	0.32	0.31	0.33	0.34	0.30	0.30	0.31	0.30	0.33	0.31
R <sup>2</sup> (between)	0.50	0.52	0.50	0.53	0.51	0.52	0.52	0.50	0.52	0.50	0.50	0.52	0.50
Durbin–Watson	1.29	1.30	1.29	1.31	1.27	1.31	1.28	1.28	1.28	1.28	1.28	1.33	1.28
No. of groups	82	82	82	82	82	82	82	82	82	82	82	82	82
No. of obs.	396	395	395	395	395	>395	395	395	395	395	395	395	395

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

Similarly, multinational corporations seem to care about internal and external conflicts that affect the host country, because of the effects on economic and political instability. The threat of incidence of these conflicts, such as civil war, trade sanctions, cross-boarder conflicts or an all-out war, creates higher uncertainty. Thus, investors increase the risk premium of investment projects, which in turn reduces overall investment. 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 generally less attractive.

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 and significance level of the estimated coefficients are very similar. Due to reasons of space, the results are not reported.<sup>23</sup>

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 raw materials and/or semi-manufactured goods are imported and processed commodities are exported. Likewise, depending on the exact country circumstances, FDI may increase the host country capital stock, bringing new technologies and increasing 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).

Another econometric problem is 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 1.29, 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.<sup>24</sup> 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 to 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): 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

<sup>23</sup> The complete results for these further regressions as well as all other regressions can be obtained from the first author upon request.

<sup>24</sup> 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.

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:<sup>25</sup>

$$\Delta \ln \text{FDI}_{it} = \beta_0 + \beta_1 \Delta \ln \text{FDI}_{it-1} + \beta_2 \Delta \ln \text{GNI}_{it} + \beta_3 \Delta \ln \text{GROWTH}_{it} + \beta_4 \Delta \ln \text{TRADE}_{it} + \beta_5 \Delta \ln \text{INFLATION}_{it} + \beta_6 \Delta \text{POLITICAL}_{it} + \Delta e_{it} \quad (4)$$

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.

Table 4 shows the results for the dynamic panel estimation. The benchmark regression, displayed in column 1, shows a highly significant lagged dependent FDI variable. Variations in  $\text{FDI}(-1)$  clearly dominate in comparison to all other control variables. Apart from GDP growth rates, GNI, TRADE and INFLATION are no longer significant, though the first three 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 is never rejected.<sup>26</sup> 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 from five to three and hence reduces the number of observations over time that are used for the estimation of the coefficients. Nevertheless, we believe that the Arellano–Bond estimator is preferable to the other two estimation techniques, since it effectively deals with the shortcomings mentioned above.

The results for the 12 political indicators show that government stability, internal and external conflicts, corruption, law and order, ethnic tensions, democratic accountability, and bureaucratic quality of the government matter for the investment decision of multinationals, as the respective coefficients are positive and statistically significant. The strongest significance level (1% level) can be found for GOVST, ICONFL, ECONFL, and LAW, 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, internal and external conflicts, law and order, democratic accountability, and bureaucratic quality.

In contrast to the fixed-effects regressions, we obtain a significant (and positive) coefficient for CORR, indicating that the level of corruption does matter over time for foreign investment. This outcome is in line with the results reported by Wei (2000), who found that corruption negatively affects foreign investment inflows in a cross-sectional framework. While we are able to confirm Wei's results in a dynamic panel analysis, the significance level of the estimated coefficient is at the 10% level only, indicating that changes in the corruption

<sup>25</sup> Again, FDI, GROWTH and INFLATION are transformed.

<sup>26</sup> Likewise, first-order autocorrelation of the residuals is always rejected by another Arellano–Bond test.

Table 4  
Arellano–Bond dynamic panel-data estimation, 1984–2003 (4-year intervals)

Political risk variable	Dependent variable: ln FDI												
(POLITICAL)		Government stability	Socio-economic conditions	Investment profile	Internal conflict	External conflict	Corruption	Military in politics	Religious tensions	Law and order	Ethnic tensions	Democratic accountability	Quality bureaucracy
Variable		GOVST	SOCIO	INVEST	ICONFL	ECONFL	CORR	MILIT	RELIG	LAW	ETHNIC	DEMOC	BUR
Independent variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
ln FDI (−1)	0.37*** (3.22)	0.36*** (3.19)	0.36*** (3.14)	0.37*** (3.22)	0.36*** (3.21)	0.33*** (3.04)	0.37*** (3.25)	0.38*** (3.31)	0.38*** (3.32)	0.33*** (3.01)	0.26*** (3.23)	0.35*** (2.95)	0.33*** (2.89)
ln GNI	0.69 (0.92)	0.58 (0.79)	0.64 (0.80)	0.87 (1.13)	0.53 (0.72)	0.69 (0.95)	0.71 (0.95)	0.32 (0.42)	0.60 (0.78)	0.36 (0.48)	0.44 (0.58)	0.66 (0.89)	0.29 (0.38)
ln GROWTH	0.16** (2.33)	0.14** (2.09)	0.16** (2.32)	0.17** (2.41)	0.15** (2.18)	0.14** (2.15)	0.16** (2.31)	0.15** (2.18)	0.16** (2.33)	0.14** (2.11)	0.16** (2.35)	0.16** (2.30)	0.15** (2.33)
ln TRADE	0.60 (1.20)	0.48 (0.97)	0.58 (1.15)	0.58 (1.14)	0.32 (0.63)	0.33 (0.66)	0.46 (0.91)	0.61 (1.21)	0.51 (0.99)	0.35 (0.70)	0.45 (0.90)	0.59 (1.19)	0.51 (1.04)
ln INFLATION	0.06 (0.71)	0.12 (1.29)	−0.06 (0.68)	0.04 (0.54)	0.08 (0.92)	0.04 (0.47)	0.05 (0.59)	0.08 (0.88)	0.07 (0.77)	0.07 (0.84)	0.06 (0.71)	0.06 (0.72)	0.07 (0.76)
POLITICAL		0.18*** (2.60)	0.01 (0.09)	−0.07 (−0.83)	0.15*** (2.86)	0.14*** (2.47)	0.12* (1.79)	0.13 (1.28)	0.07 (1.07)	0.14*** (2.53)	0.12** (2.09)	0.09* (1.89)	0.12** (2.11)
No. of groups	82	82	82	82	82	82	82	82	82	82	82	82	82
No. of obs.	234	234	234	234	234	234	234	234	234	234	234	234	234
Wald $\chi^2$ (6) <sup>1</sup>	20.8***	27.9***	20.4***	21.2***	26.0***	25.3***	23.1***	24.2***	21.8***	26.2***	23.6***	23.4***	27.0***
Sargan $\chi^2$ (5) <sup>1</sup>	19.7	12.3	20.7	19.9	13.6	16.9	14.7	18.4	16.0	10.5	12.4	19.9	19.1
AB test $H_0=0^2$ (z-value)	0.24	0.30	0.24	0.23	0.23	0.31	0.27	0.28	0.24	0.24	0.26	0.27	0.26

Notes: The results for the coefficients 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; <sup>1</sup>degrees of freedom in parentheses; note that there are only 5 degrees of freedom for the Wald test in the benchmark regression <sup>2</sup>Arellano–Bond test that average autocorrelation in residuals of order 2 is 0; autocorrelation of order 1 is always rejected (not reported).



variable are not as closely associated with changes in FDI per capita as GOVST, ICONFL, ECONFL, and LAW.

Also, contrary to the fixed-effects regressions, the degree of conflict among ethnic fractions (ETHNIC) is significantly associated with FDI in a dynamic setting. This outcome is basically in line with studies that have examined the linkage between ethnic tensions and economic growth and find that a high degree of conflict attributable to racial nationality or language divisions can – on average – negatively affect economic development. For example, [Easterly and Levine \(1997\)](#) found that ethnic diversity contributes to explaining cross-country differences in public policies and several economic indicators. This applies in particular to sub-Saharan Africa, where ethnic fragmentation is much greater in comparison to other regions.

Finally, the investment profile is no longer significant in the GMM dynamic regression analysis. At first glance, this outcome is surprising, given that INVEST consists of clearly relevant sub-components, such as expropriation of assets and the ability of multinationals to repatriate profits. Yet the Arellano–Bond method uses first differences and lags as instruments, which in effect implies that improvements in the investment profile in the previous periods are not closely associated with increases in FDI flows in more recent periods.

#### **4. Concluding remarks**

Foreign direct investment is a desirable form of capital inflow to emerging and developing countries because such investment is less susceptible to crises and sudden stops. The goal of this paper has been 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 recommendations but to distinguish several alternative hypotheses about the relative influence of risk premia and institutions.

The results of the paper are summarised as follows: First, in the cross-country analysis, covering a period of 20 years, we find only three indicators for political risk and institutions that are closely associated with FDI (government stability, religious tensions, and democratic accountability). Yet this approach, widely used in the literature up to the mid-1990s, neglects changes in the variables of interest over time, which are clearly relevant for the interpretation of the results. Second, we establish more than twice as many statistically significant links in the fixed-effects panel setting. Yet we suggest that even this specification may lead to biased results, due to autocorrelation and endogeneity of the independent variables. Third, when we use the Arellano–Bond GMM dynamic estimator, which effectively addresses both autocorrelation and endogeneity in the time-series analysis, the results show that in particular government stability, internal and external conflicts, law and order, ethnic tensions, bureaucratic quality and, to a lesser degree, corruption and democratic accountability are important determinants of foreign investment flows. Based on our results, these political risk and institutional indicators matter the most when multinational corporations confront decisions about where to invest in developing countries.

#### **Acknowledgements**

The paper was partly written while the first author was visiting the World Bank Development Economics Research Group Trade. The authors benefited from very helpful

suggestions and comments by Michael Funke, Katja Michaelowa, three anonymous referees and participants at an FDI workshop at Washington University St. Louis, and at the annual ETSG 2005 meeting in Dublin. Lars Vogel and Jenny Heithaus provided excellent research assistance.

## 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 and the Pacific, (4) Middle East and North Africa, (5) Latin America and 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	3627.6	3043.7	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	8242.3

## 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

---

## References

- Aizenman, J., 2003. Volatility, employment and the patterns of FDI in emerging markets. *Journal of Development Economics* 72, 585–601.
- Alesina, A., Devleeschauwer, A., Easterly, W., Kurlat, S., Wacziarg, R., 2003. Fractionalization. *Journal of Economic Growth* 8, 155–194.
- Arellano, M., Bond, S., 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies* 58, 277–297.
- Asiedu, E., 2002. On the determinants of foreign direct investment to developing countries: is Africa different? *World Development* 30, 107–119.
- Bolaky, B., Freund, C., 2004. Trade, regulations, and growth. World Bank Policy Research Paper 3255.
- Brunetti, A., Weder, B., 1998. Investment and institutional uncertainty: a comparative study of different uncertainty measures. *Weltwirtschaftliches Archiv* 134, 513–533.
- Busse, M., 2004. Transnational corporations and repression of political rights and civil liberties: an empirical analysis. *Kyklos* 57, 45–66.
- Butler, K., Joaquin, D., 1998. A note on political risk and the required return on foreign direct investment. *Journal of International Business Studies* 29, 599–608.
- Carkovic, M., Levine, R., 2005. Does foreign direct investment accelerate economic growth? In: Moran, T., Graham, E., Blomström, M. (Eds.), *Does Foreign Direct Investment Promote Development?* Institute for International Economics, Washington, DC, pp. 195–220.
- Chakrabarti, A., 2001. The determinants of foreign direct investment: sensitivity analyses of cross-country regressions. *Kyklos* 54, 89–113.
- Delios, A., Henisz, W., 2003. Political hazards, experience, and sequential entry strategies: the international expansion of Japanese firms, 1980–1998. *Strategic Management Journal* 24, 1153–1164.
- Easterly, W., 2005. National policies and economic growth: a reappraisal. In: Aghion, P., Durlauf, S.N. (Eds.), *Handbook of Economic Growth*, vol. 1A. Elsevier.
- Easterly, W., Levine, R., 1997. Africa's growth tragedy: policies and ethnic divisions. *Quarterly Journal of Economics* 112, 1203–1250.
- Egger, P., Winner, H., 2005. Evidence on corruption as an incentive for foreign direct investment. *European Journal of Political Economy* 21, 932–952.
- Faria, A., Mauro, P., 2004. Institutions and the external capital structure of countries. IMF Working Paper, vol. 04/236. International Monetary Fund, Washington DC.
- Gastanaga, V., Nugent, J., Pashamova, B., 1998. Host country reforms and FDI inflows: how much difference do they make? *World Development* 26, 1299–1314.
- Gelos, G., Wie, S.-J., 2002. Transparency and international investor behaviour. NBER Working Paper, vol. 9260. National Bureau of Economic Research, Cambridge MA.
- Harms, P., 2002. Political risk and equity investment in developing countries. *Applied Economics Letters* 9, 377–380.
- Harms, P., Ursprung, H., 2002. Do civil and political repression really boost foreign direct investment? *Economic Inquiry* 40, 651–663.
- Hausman, J., 1978. Specification tests in econometrics. *Econometrica* 46, 1251–1271.
- Henisz, W., 2000. The institutional environment for multinational investment. *Journal of Law, Economics, and Organization* 16, 334–364.

- Henisz, W., 2002. The institutional environment for infrastructure investment. *Industrial and Corporate Change* 11, 355–389.
- Jensen, N., 2003. Democratic governance and multinational corporations: political regimes and inflows of foreign direct investment. *International Organization* 57, 587–616.
- Jun, K., Singh, H., 1996. The determinants of foreign direct investment in developing countries. *Transnational Corporations* 5, 67–105.
- Kaufmann, D., Kraay, A., Zoido-Lobaton, P., 1999. Governance matters. Policy Research Working Paper, vol. 2196. The World Bank, Washington DC.
- Keefer, P., 2004. What does political economy tell us about economic development — and vice versa? Policy Research Working Paper, vol. 3250. The World Bank, Washington DC.
- Lee, J.-Y., Mansfield, E., 1996. Intellectual property protection and U.S. foreign direct investment. *Review of Economics and Statistics* 78, 181–186.
- Li, Q., Resnick, A., 2003. Reversal of fortunes: democratic institutions and foreign direct investment inflows to developing countries. *International Organization* 57, 175–211.
- Lipsey, R., 1999. The location and characteristics of US affiliates in Asia. NBER Working Paper, vol. 6876. National Bureau of Economic Research, Cambridge MA.
- Loree, D., Guisinger, S., 1995. Policy and non-policy determinants of U.S. equity foreign direct investment. *Journal of International Business Studies* 26, 281–300.
- Noguer, M., Siscart, M., 2005. Trade raises income: a precise and robust result. *Journal of International Economics* 65, 447–460.
- Prasad, E., Rogoff, K., Wei, S.-J., Kose, A., 2003. Effects of financial globalization on developing countries: some empirical evidence. IMF Occasional Paper, vol. 220. International Monetary Fund, Washington DC.
- PRS Group, 2005a. About ICRG: the political risk rating. Internet posting: <http://www.icrgonline.com/page.aspx?page=icrgmethods>.
- PRS Group, 2005b. International country risk guide: political risk (Table 3b). Internet posting: <http://www.icrgonline.com/default.aspx>.
- Rodrik, D., Subramanian, A., Trebbi, F., 2004. Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of Economic Growth* 9, 131–165.
- Schneider, F., Frey, B., 1985. Economic and political determinants of foreign direct investment. *World Development* 13, 161–175.
- Stasavage, D., 2002. Private investment and political institutions. *Economics and Politics* 14, 41–63.
- UNCTAD, 2005. Foreign direct investment database (online). Internet Posting: <http://www.unctad.org/Templates/Page.asp?intItemID=1923&lang=1>.
- Wei, S.-J., 2000. How taxing is corruption on international investors? *Review of Economics and Statistics* 82, 1–11.
- Wheeler, D., Mody, A., 1992. International investment location decisions: the case of U.S. firms. *Journal of International Economics* 33, 57–76.
- White, H., 1980. A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica* 48, 817–838.
- World Bank, 2005. World Development Indicators 2005. Data on CD-ROM, World Bank, Washington, DC.
- WTO, 2004. World Trade Report 2004: Exploring the Linkage Between the Domestic Policy Environment and International Trade. World Trade Organisation, Geneva.