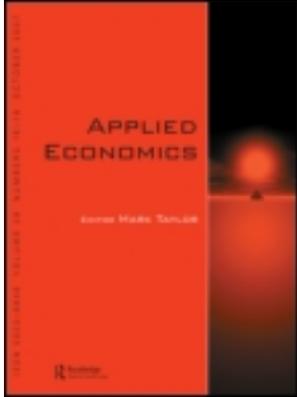


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Foreign direct investment, corruption and democracy

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This article is the first to show that foreign investors care about economic freedoms, rather than political freedoms, in making decisions about where to locate capital. Hence more democratic countries may receive less Foreign Direct Investment (FDI) flows if economic freedoms are not guaranteed. One reason could be that democratizing developing economies are often unable to push through the kind of economic reforms that investors desire due to the presence of competing political interests. This could potentially explain why countries like China and Singapore that rank poorly on the democracy index but are relatively high on the property rights index do well in terms of FDI inflows.

Keywords: foreign direct investment; spatial econometrics; emerging economies; panel data; democracy; corruption

JEL Classification: F2; C3; C21; C33; F23

I. Introduction

Every year, Transparency International (TI) provides a ranking of countries based on the ‘degree to which corruption is perceived to exist among public officials and politicians’. The organization defines ‘corruption’ as the ‘abuse of public office for private gain’. A higher score represents less corruption. For instance, in the most recent 2006 survey, both China and India scored a poor 3.3 out of 10, compared to the US at 7.3 and UK at 8.6.¹

Do these perceptions of corruption have real effects? In particular, our concern in this article is to study if they have any impact on foreign flows of investment to developing economies. Further, given that at any point of time investors face choices about where to locate their capital, do these perceptions translate into real trade-offs? Does a perceived

lowering of corruption in China affect Foreign Direct Investment (FDI) flows into India?

A second issue we address in the article is the complex and poorly understood relationship between democratic institutions and global capital flows. While it is a widely held belief that developing economies should develop more democratic institutions to promote foreign investment, the empirical and theoretical linkages justifying this belief are scant.

This article is a first attempt to address these questions by empirically modeling determinants of FDI flows to emerging market economies, using a spatial approach. The article uses data on FDI inflows to 29 host countries such as India and China in South Asia, Brazil and Argentina in South America, and Indonesia, Philippines, Thailand, Malaysia in East Asia. We use panel data for the period 1980–2000 to study how a wide variety of

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¹http://www.transparency.org/policy_research/surveys_indices/cpi/2006.

factors relating to the competitive and economic environment in the host countries, affect these flows.

The study focuses on factors that may affect these flows, such as the size of the market, degree of openness, availability of skilled labour, cost of labour and infrastructure. The unique contribution of this article is to see if conditions in 'neighbour countries' explain FDI flows into a country, apart from own-country fundamentals. Thus, the article studies whether there is competition between 'neighbour countries' for FDI or whether instead there are complementarities between FDI flows to 'neighbour countries'.

Our results clearly document the following. First, Corruption Perception (CP) does play a big role in investors' decision of where to invest. Countries which rank poorly on the index receive low FDI flows relative to those that rank above them (controlling for other factors). Second, FDI inflows to developing economies are highly interdependent. This is especially true within regions. For instance, we find that lower perceived corruption in China could significantly impact FDI flows to other countries in the South Asian region. This makes it important for policy makers to take these 'neighbourhood' effects into account when designing and identifying appropriate strategies for attracting FDI. One reason for the interdependence could be that some of these countries receive the bulk of their FDI from a common source. For example, on average, almost 60% of inward FDI to China, Malaysia and Thailand originates from no more than three sources. The US is one of the three biggest investors in both China and India, as well as the Latin American countries. Similarly, Malaysia and Indonesia share Japan as a key source of FDI.²

Finally, more democratic countries receive less FDI flows than less democratic countries. Our democracy measure is a measure of political rights and civil liberties of citizens, but not a good measure of economic freedoms. Investors are more likely to care about the latter, such as the protection of personal property, few restrictions on capital mobility and trade openness. Perhaps, surprisingly, these are not correlated with the democracy variable.

Linking the first section of the article with the second, we also find that CP is highly correlated with at least one measure of economic freedom which is property rights protection, and less strongly but

positively correlated with other measures such as free mobility of capital and trade openness. This is not surprising since the greater the number of restrictions that governments impose on citizens, the greater the potential for corruption (such as bribe-taking) when administrative decisions determine access to foreign exchange and increase the risk of discouraging legitimate and desirable transactions.

The article is organized as follows. Section II reviews some of the existing literature on FDI flows to developing economies. Section III details the empirical model that we use for estimation. Section IV discusses the data and some summary statistics. Section V presents the econometric results from various specifications linking FDI and corruption. Section VI discusses our results for democracy, FDI and corruption. Section VII concludes.

II. Literature Review

In this section, we detail the main empirical studies that attempt to estimate the importance of the different determinants of FDI flows. The main variables generally used are locational or *pull* factors, such as the size of the market, and *push* factors, relating to conditions in the source country.

Nonnenberg and Mendonca (2004) use a panel of 38 developing economies over the period 1975–2000. They find significant and positive effects for size of the economy (as measured by Gross National Product (GNP)), the average rate of growth in previous years, the level of schooling, and the degree of openness. They do not, however, model any spatial interactions among these economies.

A paper that motivates our analysis is Hansen *et al.* (2003). This article focuses on five East Asian economies – China, Malaysia, Indonesia, Thailand and Vietnam – and asks the question whether FDI to individual countries stimulates or crowds out investment to regional counterparts. They use a Vector Autoregressive (VAR) framework, and find significant interdependence among these Asian countries.³

In a recent working paper, Eichengreen and Tong (2005) use bilateral FDI flow data to study if the emergence of China as a destination for investment has diverted FDI receipts from other countries,

² Hansen *et al.* (2003).

³ As they say, on average almost 60% of inward FDI to China, Malaysia, Thailand and Vietnam originate from no more than three sources. In the case of Indonesia this share is 33%. Similarly, FDI is generally highly concentrated in only a few sectors. These patterns no doubt can help explain the above general findings about the interrelationship of FDI flows. For example, the strong negative co-movement between Malaysia and Indonesia is in all likelihood closely related to the fact that two out of the three most important FDI sectors are common and in addition they share Japan as a key source of FDI.

Asian countries in particular. The aggregate analysis does not indicate FDI diversion from other Asian countries. Shang Jin Wei (2000) studies the effect of corruption on FDI. The sample covers bilateral investment from 12 source countries to 45 host countries. The article finds that a rise in either the tax rate on multinational firms or the corruption level in a host country reduces inward FDI. This is a cross-sectional study relying on data for the year 1993.

Other papers, notably Wheeler and Mody (1992) and Hines (1995), have also studied the correlation between corruption and FDI. Finally, there are very few theoretical or empirical papers studying the effect of democratic institutions on FDI. Resnick (2001) and Resnick and Li (2003) find that the level of democracy has a negative impact on foreign capital flows. However, property rights protection goes a long way in encouraging FDI flows. We will discuss this literature further in Section VI.

III. Empirical Model

The objective of this section is to outline the model used to empirically test the effect of the aforementioned variables on FDI. The panel data methodology we use allows for variation in attributes relating to these countries both cross-sectionally and over time. The panel consists of 29 countries (listed in the Appendix), mainly emerging market or developing economies, over the time period 1980–2000.

The regression equation used to estimate the above model is as follows:

$$Y_{it} = \beta' X_{it} + \lambda' W_{it} Z_{it} + v_{it} \quad i = 1, \dots, 29; t = 1, \dots, 20$$

where

$$v_{it} = \alpha_i + u_{it} \quad \alpha_i \sim N(0, 1) \quad u_{it} \sim N(0, \sigma_u^2)$$

Y_{it} is the observed dependent variable, measured as the level of net inward FDI (in logs) received by country i , at time period t .

X_{it} is a vector of demographic characteristics of a country that influence the inward flow of FDI. The first important set of characteristics relate to the domestic market. The market size is measured by host country's Gross Domestic Product (GDP) or GDP growth. This emphasizes the importance of a large market for efficient utilization of resources and exploitation of economies of scale. A positive

relationship is expected between GDP and inward flow of FDI.

The relationship between the direction of the host country trade balance and FDI inflow could be complex. Trade surpluses are indicative of a strong economy and may encourage the flow of inward FDI. Trade deficits may also stimulate inward FDI as a result of export diversification and import substitution policies (Ioannatos, 2004). We also use another measure of openness, which is the level of imports as a fraction of GDP. The greater the degree of openness, the larger the expected FDI flows. Second, host country cost considerations would be a factor. To capture this effect, we can use either the unit cost of labour (hourly wages corrected by hourly productivity) or value added per worker. Labour productivity is expected to directly affect the ability of the host country to attract FDI. Third, we include factors affecting the country's overall financial performance such as the inflation rate or the host country government's budget deficit. High inflation would inhibit inward FDI. Other studies (Root and Ahmed, 1979) find that investment in services, such as banking or telecommunication also has a positive impact on FDI flows. We will use the spread of telephone lines to control for this effect.

Among social factors that may be important, we could use the literacy rate and the degree of urbanization. Both are expected to exert a direct impact on the flow of FDI into the host country.

Finally, we include political factors related to the degree of corruption in the host country, as widespread corruption imposes difficulties for the effective conduct of business. To this end, we use a CP index developed by TI. The TI corruption index is an initiative taken by the Berlin-based international nongovernmental organization, TI, together with Dr Johann Graf Lambsdorff, an economist with the University of Goettingen. The index is a 'poll of polls', representing the average scores which individual countries have been given by international businessmen and financial journalists when polled in a variety of contexts. A 10 equals an entirely *clean* country while zero equals a country where business transactions are entirely dominated by kickbacks, extortion etc. The data is available for the years 1980–1985, 1988–1992 and 1995–2000. However, there is no variation in the index within the first two periods.

We also include a Maximum Tax Rate Index and a Capital Controls Index which rank countries on the basis of their tax rates and policies relating to capital flows, respectively. Data on the Maximum Marginal Income Tax Rate Index and Capital Controls index

was obtained from the Fraser Institute.⁴ Higher ratings are for countries with *lower* taxes. The International Monetary Fund (IMF) reports on 13 different types of capital controls. This component is based on the number of capital controls levied. The zero-to-10 rating is constructed by taking 13 minus the number of capital controls divided by 13 and multiplied by 10. Hence low ratings are for countries with *most* capital controls.

Finally, Z_{it} is a vector of business conditions in neighbouring countries, including variables such as the CP index and the democracy index.

v_{it} is assumed to have an error component structure. We allow for a random effects specification that assumes a host-specific error term.

IV. Data Description

Note that our measure of FDI inflows includes net FDI inflows, representing inward investment by foreigners less investment taken out of the country by foreigners. (for a list of countries used in the sample, see the Appendix). Thus Indonesia has negative FDI inflows between 1998 and 2000, as foreign investors took more money out than they brought in. As shown in Fig. 1 and Table 1, over the period 1980–2000, FDI inflows went up for most countries in the sample. On average, the highest inflows went to South Asia. The average corruption perception for this region is not significantly different than for other regions. However, in terms of GDP growth rates and worker productivity the region stands out above others. This may explain the attractiveness of this region as a potential FDI destination, as investors take advantage of the rapidly increasing market size and the relatively cheap and productive workforce.

Studying the patterns of regional flows in Fig. 1(a), we find that in the 1980s and in the 1990s there was a high positive correlation between flows to South Asia, South America and East Asia. However, having said that, the correlations were far stronger for South Asia and East Asia (0.67), than for South Asia and South America (0.35) or even East Asia and South America (0.55) in the 1980s. In the 1990s, perhaps due to the East Asian crisis, which did not affect South Asia too much, the correlation in flows was

much larger between South Asia and South America (0.83) than with East Asia.

Studying flows within regions in Fig. 1(b), countries in South Asia, such as India, China and Pakistan generally show a low, positive correlation in FDI inflows, though China stands out in terms of the magnitude of its' flows (Hong Kong, however, seems to move differently from the other three, sometimes showing exactly the opposite trend compared to China). This is also true for South America. However, in East Asia countries seem to compete with each other for FDI flows in some years. For example, around 1999, while there was a big dip in flows to Singapore and Malaysia, there was an increase in flows to Philippines and Thailand. Similarly, around 1995, when Malaysia and Indonesia experienced a drop in flows, Singapore actually experienced an increase.

V. Econometric Results

Corruption and investment in a spatial context

The panel is composed of 29 countries, which include emerging market and developing economies, over the period 1980–2000. The sample size is further constrained by the lack of data availability. In particular, values of the CP index are not available for some years.⁵ For the missing data points, we substituted the most recent years' data to make the series continuous.⁶ The dependent variable in the first set of results, reported in Table 2, is total FDI inflows (in logs) to a particular host country, following the specification used by other authors.

Table 2 starts with the simplest specification of the equation determining FDI inflows. A random effects Generalized Least Square (GLS) regression of $\log(\text{FDI inflows})$ on various economic and political characteristics of the host country, suggests that the host country market size and GDP growth rate, productivity of labour and the level of trade (as a fraction of GDP), are significant determinants of the ability of the host country to attract FDI.^{7,8} We use a random effects specification since there is extremely limited within group (country) time series variation in the corruption index. Values of this index remained essentially unchanged between 1980–1985, 1988–

⁴ Gwartney and Lawson (2004).

⁵ See the Appendix for years for which the CPI is available.

⁶ We can also drop these years from the sample without affecting our results.

⁷ We did a Granger causality test of FDI flows and GDP as described in Nonnenberg and Mendonca (2004). Results indicate that while FDI is Granger-caused by GDP, GDP is not significantly influenced by FDI flows.

⁸ We can easily include only $\log(\text{GDP})$ or $\log(\text{GDP growth})$ instead of both in the regression, without affecting the results.

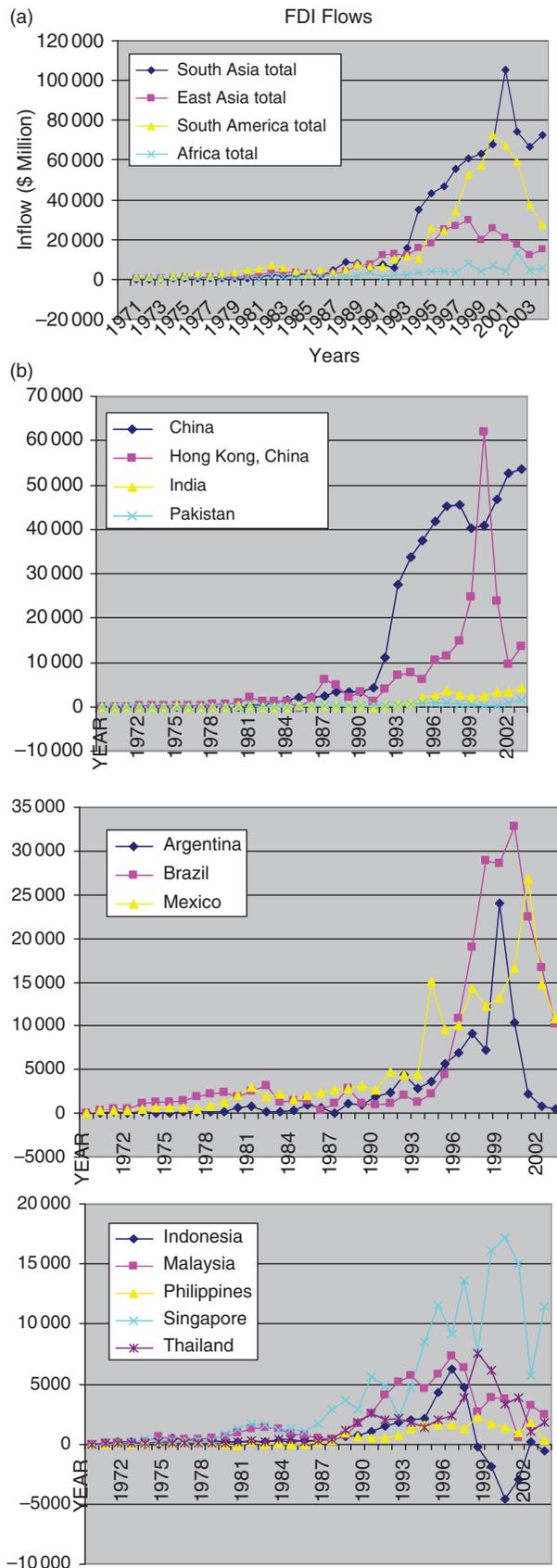


Fig. 1. Regional FDI inflows: (a) across region flows (millions US dollars); (b) within region flows

Table 1. Sample summary statistics

	Number of observations	Mean	SD
<i>FDI inflow (\$ million)</i>			
South Asia	136	5608.55	12848.75
East Asia	170	1844.67	3128.64
South America	272	1766.26	4675.74
Africa	204	437.73	745.62
<i>CP</i>			
South Asia	67	3.78	1.89
East Asia	97	3.87	2.81
South America	110	2.96	1.13
Africa	69	3.13	2.25
<i>Democracy</i>			
South Asia	72	0.380	0.277
East Asia	120	0.484	0.176
South America	216	0.684	0.177
Africa	144	0.368	0.236
<i>GDP growth</i>			
South Asia	83	6.61	3.37
East Asia	103	5.68	4.64
South America	166	2.18	4.53
Africa	124	2.81	4.98
<i>Value added per person</i>			
South Asia	79	147.63	34.14
East Asia	100	129.44	41.63
South America	80	89.02	9.17
<i>Trade/GDP</i>			
South Asia	83	80.53	94.20
East Asia	100	134.80	116.20
South America	166	42.67	15.57
Africa	115	60.24	19.58

1992, and there is annual variation only from 1996 to 2000. Imposing a fixed effects methodology would impose too strict a requirement on the identification. We do, however, allow for country specific random effects, region dummies and the full set of year dummies.

Note that the trade variable in this study includes the sum of exports and imports, unlike other studies, where authors include the trade balance, as a measure of openness. The coefficient on this variable is significantly positive as found by other authors. This result holds even when we use imports as a fraction of GDP, another measure commonly used in the literature. In other results not shown, we include host country adult literacy rates as an additional explanatory variable. The coefficient is positive and highly significant. The only variable capturing the level of infrastructure in the country is the spread of telephone lines. The coefficient on this is not significant. In some specifications, we proxied for infrastructure using another additional variable,

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Table 2. FDI and corruption

Dependent variable	(1)	(2)	(3)	(4)	(5)
Independent variables	log(FDI inflow)	log(FDI inflow)	log(FDI inflow)	log(FDI inflow)	log(FDI inflow)
log(GDP growth)	0.362*** (0.104)	0.302*** (0.090)	0.378*** (0.102)	0.320*** (0.088)	0.327*** (0.086)
log(GDP)	0.586*** (0.094)	0.740*** (0.083)	0.552*** (0.093)	0.716*** (0.080)	0.725*** (0.083)
Value added per person	0.007** (0.003)	0.010*** (0.002)	0.006** (0.003)	0.009*** (0.002)	0.009*** (0.002)
Trade/GDP	0.006*** (0.002)	0.0004 (0.002)	0.005*** (0.002)	-0.0005 (0.001)	-0.0002 (0.001)
Low tax rate		0.116*** (0.031)		0.114*** (0.030)	0.113*** (0.030)
Fewer cap. controls		0.222*** (0.037)		0.222*** (0.036)	0.222*** (0.036)
Telephone lines	-0.0002 (0.013)	0.006 (0.011)	0.010 (0.014)	0.018 (0.010)	0.007 (0.011)
CP	0.160*** (0.051)	0.095** (0.045)	0.141** (0.056)	0.094** (0.047)	0.101** (0.047)
Own region CP			-0.362** (0.174)	-0.225*** (0.064)	-0.160 (0.147)
Other region CP			-0.578 (0.726)		0.315 (0.613)
Region dummies	Yes	Yes	Yes	Yes	Yes
Number of observations	209	209	204	204	124
Overall R-square	0.7259	0.7400	0.4043	0.4541	0.4742

Notes: All specifications are estimated using a random effects GLS model, allowing for region and time dummies.

*** and ** denote significance at 1 and 5% levels, respectively.

GROSSINV, which relates to the level of fixed investment in the country. The coefficient was positive and significant.

One of the main variables of interest is the CP index. Figure 2(a) displays a visual scatter plot of country rankings along this index for two years, 1980 and 2000. Again, the higher the index, the less corrupt the country is perceived to be by international investors. As is evident from the graph, some countries like China, Malaysia, Argentina and Brazil are ranked worse in 2000, than they were in 1980.

The coefficient on CP is large, positive and significant. Thus perceived corruption in a host country is likely to significantly discourage investment. The quantitative significance of this estimate can be calculated as follows. Since the CP variable is not log transformed, we essentially calculate a semi-elasticity. Hence for instance, if Indonesia was to reduce corruption to the level of Singapore, it would see nearly a 100% (8×0.160) increase in FDI inflows!

Specification 2 includes some new variables into the previous regression to check for robustness of the sign on CP. The sign and significance of the relevant variables does not change. The new variables capture macroeconomic and investment climate conditions, such as the maximum tax rate that investors face, and

capital controls that countries may have imposed on flows of FDI. The Maximum Tax Rate and Capital Control variables take on the theoretically expected sign and are significant. Note that both these variables represent rankings of countries along these indices. Thus, a country with a higher ranking, has a lower maximum tax rate, and is an attractive FDI destination. Similarly, a country with a higher ranking for capital controls, actually has a lower number of these controls, and thus is expected to receive higher inflows. These results are also robust to the inclusion of a lagged dependent variable i.e. a lagged value of the FDI variable. This controls for any first-order autocorrelation or persistence in FDI flows.

In other specifications shown in Table 2, we tried the following experiment. We included in the regression for (log) FDI inflows, the host country's own CP, CP for the region of which it is a part, and average CP for all other regions in the sample. Interestingly, we got highly significant results for all the relevant variables. Own CP continued to be positive and significant, own region CP was negative and significant at 5%, while other region CP was negative but not significant. Thus there appears to be a lot of interdependence in flows, at least within the same region.

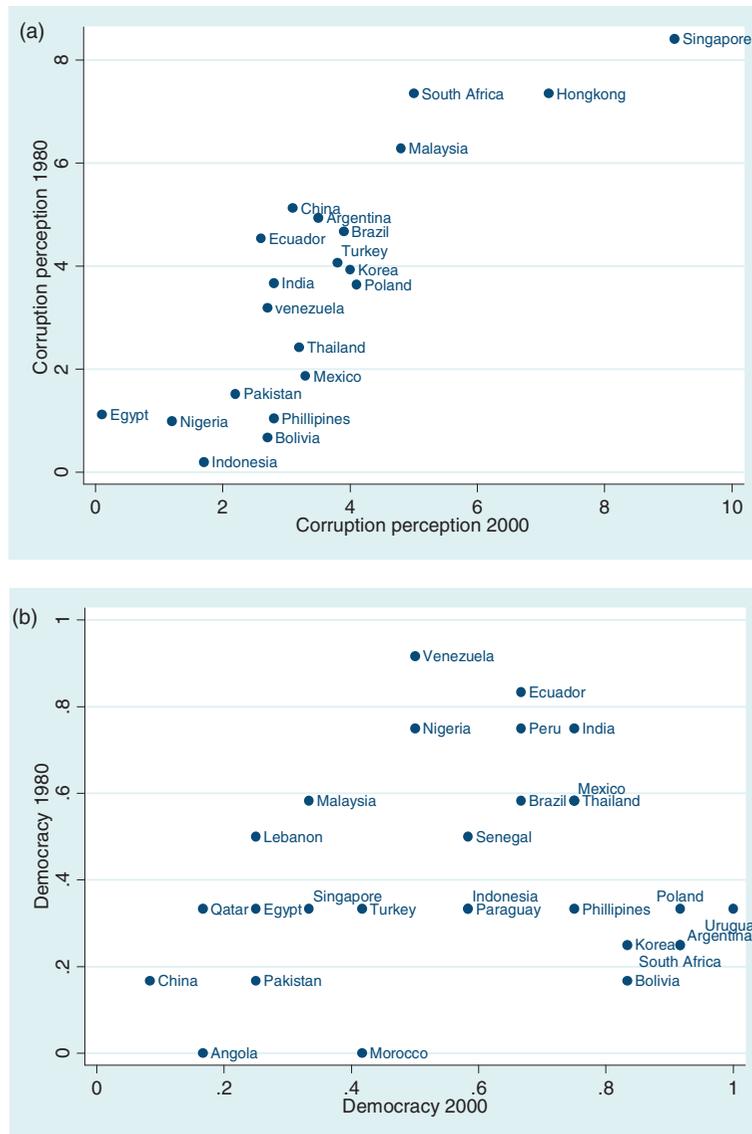


Fig. 2. Democracy and corruption indices, country scores: (a) CP index^a; (b) democracy index^b
 Notes: ^aHigher scores represent *less* corruption. ^bHigher scores represent *more* democratic countries.

Impact of China

In Table 3, we isolate the effect of China’s CP on all regions. In Specification 1 in Table 2, we simply included China’s CP as an additional explanatory variable in the regression equation. The coefficient is negative and highly significant, suggesting that as China’s image improves in the eyes of investors, and this could have clear adverse consequences for other countries. To see the effect more clearly for each region, Specification 2 in Table 3 interacts with each region’s dummy, and with a variable measuring that region’s average CP. It also interacts with each region’s dummy with China’s CP. Naturally, for any particular country, the average CP in the region,

includes the CP of all its regional neighbours, *excluding itself*, since by definition, no country is a neighbour to itself. The coefficient is negative and significant for South Asia, positive and significant for South America and insignificant for East Asia. Countries such as India and China in South Asia are possibly competing with each other for FDI, while flows within South America tend to be more positively correlated.

However, the impact of China on each of these regions is significantly negative, thus confirming the result in Specification 1.

Note that these results are robust to the inclusion of additional regional neighbours. For instance, in the

Table 3. Impact of China CP on FDI flows

Independent variables	Dependent variable	(1)	(2)
		log(FDI inflow)	log(FDI inflow)
log(GDP growth)		0.256*** (00.096)	0.362*** (0.095)
log(GDP)		0.263*** (0.095)	0.345*** (0.091)
Value added per person		0.003 (0.003)	0.004* (0.002)
Trade/GDP		0.006*** (0.001)	0.003** (0.001)
Telephone lines		0.008 (0.011)	0.025** (0.012)
CP		0.094* (0.050)	0.151*** (0.048)
China CP		-0.495*** (0.116)	
S.Asia * Own region CP			-0.508*** (0.151)
S.America * Own region CP			0.602*** (0.176)
E. Asia * Own region CP			-0.143 (0.099)
S.Asia * China CP			-0.246*** (0.064)
S.America * China CP			-0.413*** (0.152)
E. Asia * China CP			-0.307 (0.155)
Number of observations		209	209
Overall R-square		0.4540	0.7781

Notes: All specifications are estimated using a random effects GLS model, allowing for region and time dummies as appropriate.

***, ** and * denote significance at 1, 5 and 10% levels, respectively.

East Asian region, we tried additional specifications including Taiwan and Vietnam as neighbours, which have tremendous cross-border trades and investment. This had no impact on the results. Finally, we also tested to see if the inclusion of certain developed countries such as the US and the UK would significantly change our results. While including the US or the UK CP index as an additional explanatory variable does lead to a marginally significant, negative coefficient on that variable, suggesting that investment is sensitive to CPs in the developed world as well, the coefficient was significant at only 10%. Moreover, the effect of own CPI as well as own region CPI continued to be significant as before.

Results from this section demonstrate that investors' perception of host country corruption is a big

determinant of investment flows. Everything else held constant, an increase in the corruption cost of doing business, would cause investors to move investment to relatively lower corruption environments.

VI. FDI and Democracy

This section explores the impact of democratic institutions on the flow of FDI to developing countries. While the effect of FDI on democracy has long attracted attention among economists and the public, the reverse effect of democracy on FDI has been relatively less studied. The papers that are closely linked to ours are Resnick (2001), Harms and Ursprung (2002), Jensen (2003) and Resnick and Li (2003).

Resnick and Li (2003) argue that there are competing effects of democratic institutions on FDI flows. On the one hand, political participation and representation of the common citizen in the legislature ensures credible property rights protection. On the other, the democratic constraints over elected politicians tend to weaken the monopolistic positions of multinational enterprises. Their empirical results suggest that, controlling for property rights protection, democratic institutions reduce FDI inflows.⁹

Harms and Ursprung (2001) find the opposite result. Taking a sample of 65 developing countries, they conclude that investors are marginally more likely to invest in countries which respect political and civil liberties. Jensen (2003) also finds a significant positive effect of democracy on FDI inflows.

Democracy and corruption

Our measure of democracy is derived from the Freedom House, Freedom in the World Index. This source provides a subjective classification of countries based on a scale of 1 to 7 on civil liberties and political rights, separately, with higher values signifying less freedom. These overall scores are based on each country's scores in seven sub-categories: political process, political pluralism and participation, functioning of government (including transparency and corruption), freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights.¹⁰

Following Rodrik (1999), we combine these two ratings into a single index with values ranging from 0 to 1 by using the transformation

⁹Their measure of democracy is derived from the Polity IV measure of Marshall and Jaggers (2000).

¹⁰There is no data for Hong Kong for this variable.

Table 4. FDI, democracy and corruption

Independent variables Dependent variable	(1)	(3)	(4)	(5)
	log(FDI inflow)	log(FDI inflow)	log(FDI inflow)	log(FDI inflow)
log(GDP growth)	0.261* (0.101)	0.323*** (0.087)	0.299*** (0.088)	0.177* (0.093)
log(GDP)	0.749*** (0.084)	0.465*** (0.079)	0.564*** (0.082)	0.611*** (0.089)
Value added per person	0.004*** (0.003)	0.006*** (0.003)	0.005*** (0.002)	0.002 (0.002)
Trade/GDP	0.008*** (0.001)	0.001 (0.001)	-0.001 (0.001)	0.001 (0.001)
Low tax rate			-0.019** (0.009)	-0.020** (0.010)
Fewer cap. controls			0.150*** (0.037)	0.162*** (0.039)
Telephone lines	0.041* (0.022)	-0.055*** (0.021)	-0.022 (0.020)	0.008 (0.019)
CP		0.449*** (0.082)	0.229*** (0.049)	
Democracy	-1.985*** (0.346)	-0.831 (0.599)	-1.82*** (0.318)	-1.730*** (0.010)
CP * Democracy		-0.422** (0.166)		
Legal system and property rights				0.260*** (0.056)
Region dummies	Yes	Yes	Yes	Yes
Number of observations	202	191	179	185

Notes: All specifications are estimated using a random effects GLS model, allowing for region and time dummies. In Specifications 4 and 5 we use the top statutory corporate tax rate derived from the AEI International Tax Database, instead of the tax index obtained from the Fraser Institute. Hence the sign change.

***, ** and * denote significance at 1, 5 and 10% levels, respectively.

[14-civillib-polrights]/12. The transformed variable signifies higher values for more democratic countries. Consistent time series for this variable are available from 1970. Figure 2(b) shows a partial scatter plot of countries and their democracy indices in 1980 and 2000. There is a lot of variation within our sample. While some countries have moved down the index (become less democratic, such as Venezuela, Ecuador, Malaysia, China), others have moved up (Pakistan, Morocco, Brazil, Senegal, South Korea).

Our results with this measure are presented in Table 4. Model 1 uses exactly the same specification as we had for the CP variable in Table 2, without the CP variable. Controlling for the level of economic development and growth, and degree of trade openness (among other variables), a more democratic country surprisingly attracts less foreign inflows. The level of democracy variable is negative and significant at 1%. This is in line with results obtained by Resnick (2001) and Resnick and Li (2003). This result holds when we include the CP variable, CP, in Specification 2. The coefficient

estimates suggest quantitatively large impacts. For instance, going from the level of democracy in China to that in India would cause China to lose FDI by nearly 132% (-2.2×0.6) using Specification 2 in Table 4. The corresponding result for the CP index would suggest that if India improved on the corruption index to the level of China, the corresponding impact on inflows would be approximately an increase of 27% (0.27×1). Hence countries pursuing democratic ideals could balance their interests by improving the business climate for investors through more transparent systems, rules and procedures, more efficient bureaucracy and less bribery, kickbacks etc.

To some extent, the CP variable may be capturing the protection of personal property rights, and may be correlated with the level of democracy. However, the contemporaneous correlation between the two variables is fairly low at 0.0149. In fact, a regression of the property rights index (and separately, the CP index), controlling for the level of economic

development, on the level of democracy (and GDP) revealed no significant coefficient on the democracy index.¹¹

In Specification 3, we interacted the two variables, CP and democracy. Controlling for the level of corruption, what is the impact on flows of a country becoming more democratic? The negative coefficient on this interacted variable implies that for the same level of corruption, a more democratic country is likely to receive *less* foreign inflows than a less democratic country.¹² To see what might be driving this result, we tried to compare countries with a similar level of CP. For instance, both India and China received average CP scores over this period of less than 4. However, they differ greatly in their political structures: while the Chinese government functions like an autocracy, the Indian system of government is highly democratic, with multiple political parties, elections and widespread voting. The average FDI flow to China over this entire period was nearly 17 times that of India. The number is close to 14 if we use FDI as a fraction of GDP. One explanation for this is that the Chinese government has been able to offer more generous financial and fiscal incentives than the Indian government. In India, foreign capital is still viewed widely as being antagonistic to the interests of the poor. The process of opening up sectors to foreign investment has therefore been very gradual and successive governments have had to appease the working classes and the farmers in order to move the process forward.

In Specification 5, we test to see if the results for democracy and CP are robust to the inclusion of the tax rate and capital controls indices, which they are. In this case, we experiment with a different measure of tax rates, which is the top statutory corporate tax rate in the country. A number of papers find a significant negative effect of this variable on FDI (see, Devereux and Griffith, 2002), and our results corroborate this finding. In a world of international capital mobility, high corporate tax rates discourage capital flight from high tax countries to low tax countries.

Property rights protection and corruption

In the final specification in Table 4, we add another dimension to the equation by using an index of property rights protection, available from the Fraser

Institute's Economic Freedom of the World Index (various years). The index varies from 1 to 10, with higher values implying more protection. As we suspected, and as found earlier by Resnick and Li (2003), the coefficient on property rights protection and legal systems is highly positive and significant. Thus investors value countries which guarantee property rights and where these rights are enforceable in courts. This might help explain why countries like China and Singapore that rank poorly on the democracy index but are high on the property rights index (>5), do well in terms of FDI inflows.

This variable is also highly correlated with our measure of CP, with a contemporaneous correlation of 0.7. Hence this is the first article to show that this measure is highly positively correlated with measures of economic freedom, such as property rights protection. Corruption is also positively correlated with capital mobility and trade openness with a correlation coefficient of 0.5. Hence countries that have low corruption also see better enforcement of economic freedoms. Hence we exclude CP from this specification.¹³

Together these results imply some interesting findings. To gain a clearer understanding of why our democracy variable negatively affects FDI flows, we need to remember that the variable is simply a measure of political rights and civil liberties. As such, it is only marginally correlated with any measure of *economic* freedom. For instance, the correlation between democracy and property rights (and capital controls) is close to 0.1. For trade openness it is low, and negative. Thus the provision of political and civil rights does not automatically guarantee economic freedoms.

In our regression specification, we can distinguish at least four variables that capture economic variables relevant for investors: the tax rate index or the top national corporate tax rate, the capital controls index which shows how easily capital can flow in and out of the country, the trade openness measure and finally the property rights protection index. Each of these is a component in the Fraser Institute's ranking of countries in terms of economic freedom. Hence a cleaner interpretation of our results is that investors value economic freedom above all else. To the extent that democracies are able to provide greater economic freedom to their citizens, they will also be more attractive places for investors. Note that, unlike Resnick and Li, we believe that all forms of economic

¹¹ The property rights index is discussed in detail later.

¹² If we include only the interacted variable and democracy on the right hand side, the coefficient on democracy is negative and significant, while the interacted variable does not turn up significant.

¹³ This also suggests that in Wei (1999), the corruption variable may simply be a proxy for property rights protection.

freedoms, not only property rights, are important for investment decisions.

We also need to interpret our results with caution. First, our sample includes time periods and countries, such as Mexico and the South-East Asian economies that underwent major currency or banking crises which affected the level of investment going to these countries and their economic policies. While a part of this should be captured by the country effects, region and time dummies, it is impossible to account for all the unobservables in this manner. Second, since we are dealing with newly emerging or developing economies, the results are likely to be heavily biased by the fact that democratic institutions and markets in these countries are still at a nascent stage of development. Our results could change dramatically if we focused on developed economies with well-established democratic institutions, property rights and free markets.

VII. Conclusion

Economic policies in developing countries have become increasingly focused on attracting FDI inflows. It is generally perceived that higher levels of democratic institutions and low levels of corruption are pre-requisites for such investment. This article tests both these hypotheses empirically.

We find quite convincingly that CP does play a big role in investors' decision of where to invest. The more corrupt a country is perceived to be, the less the flows of FDI to that country. An interesting new result that this study establishes is that CP in *other* developing countries also affects flows to a particular host country. In order to study this impact, the article uses spatial econometrics techniques which allow us to account for 'neighbour' effects. In general, treating all countries other than the host country as potential neighbours, a lowering of average CP in the neighbour countries adversely affects flows to the host country.

To study the specific impact of the rise of China as an attractive FDI destination on other regions, we included China's CP as an additional explanatory variable for flows to different regions. Interestingly, in most cases, China does have a large negative impact on FDI flows to other countries.

We also find a somewhat counterintuitive relationship between the emergence of democratic institutions and foreign inflows. Controlling for other factors, including the level of CP, more democratic countries receive less inflows. Our hypothesis is that while democratic countries ensure provision of

political and civil rights for citizens, these are not an automatic guarantee of economic freedoms, such as personal property protection, the right to move capital in and out of the country, or the ability to trade openly in world markets. Investors value countries which guarantee these rights and where these rights are enforceable in courts. This might help explain why countries like China and Singapore that rank poorly on the democracy index but are high on the property rights index, do well in terms of FDI inflows.

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Appendix

List of countries used in sample by region (own classification):

South Asia

- India, China, Hong Kong, Pakistan

East Asia

- Indonesia, Philippines, Thailand, South Korea, Singapore, Malaysia

Africa

- Egypt, South Africa, Morocco, Nigeria, Senegal, Angola

South America

- Peru, Brazil, Argentina, Mexico, Paraguay, Bolivia, Uruguay, Venezuela, Ecuador

Mid-East

- Qatar, Lebanon, Turkey, Poland