

Mathur, Aparna; Singh, Kartikeya

Working Paper

Foreign Direct Investment, corruption, and democracy

AEI Working Paper, No. 135

Provided in Cooperation with:

American Enterprise Institute (AEI), Washington, DC

Suggested Citation: Mathur, Aparna; Singh, Kartikeya (2007) : Foreign Direct Investment, corruption, and democracy, AEI Working Paper, No. 135, American Enterprise Institute (AEI), Washington, DC

This Version is available at:

<https://hdl.handle.net/10419/280484>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



American Enterprise Institute for Public Policy Research

Foreign Direct Investment, Corruption, and Democracy

Aparna Mathur

American Enterprise Institute

and

Kartikeya Singh

PricewaterhouseCoopers

AEI WORKING PAPER #135, MAY 15, 2007

www.aei.org/workingpapers
<http://www.aei.org/publication26180>
21706

Foreign Direct Investment, Corruption, and Democracy

Aparna Mathur¹

and

Kartikeya Singh²

Version: May 2007

Abstract

This paper studies how factors such as corruption perception and the level of democracy influence foreign direct investment to developing economies. Our results suggest that less corrupt countries and *less* democratic countries receive more foreign direct investment. What could account for this pattern of investment?

This paper is the first to show that perceptions of corruption are highly correlated with indices of *economic* freedom, but uncorrelated with indices of *political* freedom. Hence less corrupt countries which provide the right kind of economic environment for investors, 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 receive more FDI flows. At the same time, while democratic countries ensure provision of political and civil rights for citizens, these are not an automatic guarantee of economic freedoms. In fact, the correlation between the democracy index and these indices of economic freedom is surprisingly low. Hence more democratic countries may receive less FDI flows if economic freedoms are not guaranteed. There could be at least two explanations for why this may happen. First, 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. For instance, in some countries such as India, foreign capital is viewed by certain sections as being antagonistic to the interests of the poor and working classes. Hence liberalization measures often meet strong opposition from these groups. This is corroborated by the significant negative coefficient on left-leaning democracies in our regression equation. Second, our sample includes several countries in East Asia and South America that underwent major financial crises in the 1990s. Our results could partly be driven by the inability of these countries to liberalize economically and attract foreign capital subsequent to these crises. Hence the negative coefficient on democracy needs to be interpreted with caution. Democratization could encourage capital inflows provided political freedoms go hand in hand with economic freedoms. Our results might help explain why countries like China and Singapore that rank poorly on the democracy index but are relatively high on the property rights index (and in the case of Singapore, on the capital mobility index as well), do well in terms of FDI inflows.

Our results also suggest that there is a diversion of FDI towards countries that are perceived to be less corrupt along these dimensions away from more corrupt countries. For instance, an improvement in the relative level of (perceived) corruption in China could (*ceteris paribus*) have adverse consequences for other countries in the South Asian region.

Further, we find that former and current communist countries that started out with inefficiently high capital-output ratios due to heavy state-led industrialization may attract more inflows as they attempt to substitute 'efficient' foreign capital for 'inefficient' domestic capital.

JEL Classification: F2, C3

Keywords: Foreign Direct Investment, Spatial econometrics, Emerging economies

¹ Research Fellow, American Enterprise Institute. Email: amathur@aei.org. We thank John Shea, Harry Kelejian, Kevin Hassett and seminar participants at the University of Maryland for useful comments and suggestions.

² Pricewaterhouse Coopers

1. Introduction

Every year, Transparency International 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 U.S. at 7.3 and U.K. at 8.6.³

Do these perceptions of corruption have real effects? In particular, our concern in this paper 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 flows into India?

A second issue we address in the paper 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 paper is a first attempt to address these questions by empirically modeling determinants of FDI flows to emerging market economies, using a spatial approach. The paper uses data on FDI inflows to twenty-nine 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

³ http://www.transparency.org/policy_research/surveys_indices/cpi/2006

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

In the 1970s, FDI made up only 12% of all financial flows to developing countries. Between 1981 and 1984 there was a sharp fall in private lending, as international banks lost confidence in borrowing countries' financial stability following the debt crisis of 1982. Since the mid-1980s the growing integration of markets and financial institutions, increased economic liberalization, and rapid innovation in financial instruments and technologies, especially in terms of computing and telecommunications, have contributed to a near doubling of private flows. Most significant has been the steady progression of FDI to developing countries accounting for a 59% share in 2005.

The largest recipients among developing economies have been China and Hong Kong, followed by Singapore, Mexico and Brazil. China received an impressive 86% of the total FDI to low-income countries in 1995, and about 67 percent in 2005. Beginning with its liberalization in 1979, it received increasing FDI averaging US\$2.5 billion per year between 1982 and 1991, thereafter accelerating by over 700% to US\$ 37.5 billion in 1995 and US\$72 billion in 2005. India received about US\$7 billion out of a total of US\$10 billion flows to the South Asian region. Incentives initiated in 1991 and subsequent 'open door' policies have brought a cumulative FDI flow of US\$ 2.9 billion during 1991-1995, compared with a total of US\$ 1.0 billion during the previous two decades. Most of this flow is going into infrastructure, particularly power and telecommunications, and petroleum refining, petrochemicals and automobiles in the

manufacturing sector.⁴ Africa received about 3 percent of global FDI flows, with South Africa, Egypt and Nigeria as the top three recipients in the region.⁵

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

Our results clearly document the following. First, corruption perception 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 “neighborhood” 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.⁶

⁴ Overseas Development Institute (1997)

⁵ http://www.unctad.org/en/docs/wir2006_en.pdf

⁶ Hansen et al (2003)

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. Hence one interpretation of our results is 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. For instance, in some countries such as India, foreign capital is widely viewed as being antagonistic to the interests of the poor and working classes. Hence major liberalization measures often meet strong opposition from these groups. The financial crises in East Asia and South America have also made other developing countries wary of liberalizing too quickly, leading to a reversion to state protectionism. Less democratic countries such as China, where political leaders are often unconstrained by similar pressures, may more easily offer investors such incentives. Hence, to the extent that democratic countries are able to offer a better business climate for investors, which is increasingly the case as the latest World Investment Report (2006) suggests, our results could potentially be reversed.

Linking the first section of the paper with the second, we also find that corruption perception 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 paper is organized as follows. Section 2 reviews some of the existing literature on FDI flows to developing economies. Section 3 details the empirical model that we use for estimation. Section 4 discusses the data and some summary statistics. Section 5 presents the econometric results from various specifications linking FDI and corruption. Section 6 discusses our results for democracy, FDI and Corruption. Section 7 concludes.

2. 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, the rate of GNP growth, economic stability, degree of openness of the economy, as well as several institutional variables, and *push* factors, relating to conditions in the source country.

Nonnenberg et al (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 GNP), the average rate of growth in previous years, the level of schooling, and the degree of openness. Inflation and a country's risk rating had a significant and negative effect upon the inflow of FDI. Finally, they find that capital market growth in developed countries is a strong determinant of outflows of these investments. They do not, however, model any spatial interactions among these economies.

A paper that motivates our analysis is Hansen, Rand and Tarp (2003). This paper 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 VAR framework, and find interesting and significant correlations among FDI flows to countries. For example, while China generally benefits from FDI flows to the region, Malaysia competes for FDI with the sampled countries. Countries like Thailand and Indonesia sometimes compete and sometimes complement FDI flows to the region. In conclusion, they find significant interdependence among these Asian countries.⁷ This paper does not model economic and political factors in developing economies as determinants of FDI inflows. In particular, it does not consider whether corruption perception or labor productivity in these countries significantly affect flows to the region.

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, Asian countries in particular. To do this, they include in the regression analysis for any particular host country, the share of China's receipts of FDI from the same *source* country. The aggregate analysis employing bilateral FDI flows from OECD sources to OECD and non-OECD destinations does not indicate FDI diversion from other Asian countries. If anything, there is some evidence that developments making China a more attractive destination for FDI also make other Asian countries more attractive destinations for FDI, as would be the case if China and these other economies are part of the same global production networks. Japanese firms appear

⁷ 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.

to be among the leaders in attempting to exploit these complementarities. On the other hand there is some evidence of FDI diversion from OECD recipients. The difference with our paper is that we include a weighted average of (perceived) business conditions in “neighboring countries” as a determinant of FDI flows to a particular host country, whereas they include China’s (share of) actual FDI flows to measure the crowding out effect. This enables us to highlight the relevant variables, such as corruption perception or labor productivity, that may be of interest to policy makers in host country governments. Further, our study allows all developing economies to be potential competitors for FDI, not just China.

Shang Jin Wei (2000) studies the effect of corruption on foreign direct investment. The sample covers bilateral investment from twelve source countries to 45 host countries. There are two central findings. First, a rise in either the tax rate on multinational firms or the corruption level in a host country reduces inward foreign direct investment. In a benchmark estimation, an increase in the corruption level from that of Singapore to that of Mexico would have the same negative effect on inward FDI as raising the tax rate by fifty percentage points. Second, American investors are averse to corruption in host countries, but not necessarily more so than average OECD investors. 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. In a study of foreign investment of U.S. firms, Wheeler and Mody (1992) failed to find a significant correlation between the size of FDI and the host country’s risk factor, a composite measure that includes perception of corruption as one of the components. Similarly, more recently, using total

inward FDI (as opposed to bilateral FDI) Hines (1995) failed to find a negative correlation between total inward FDI and the corruption level in host countries. None of these papers has studied the effect of competing conditions in neighboring countries as a significant determinant of these flows.

Finally, there are very few theoretical or empirical papers studying the effect of democratic institutions on FDI. Resnick and Li (2003) and Resnick (2001) 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 6.

3. Empirical Model

The objective of this section is to outline the model used to empirically test the effect of the aforementioned variables on foreign direct investment. 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 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 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 labor (hourly wages corrected by hourly productivity) or value added per worker. Labor 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, 1978) 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 Corruption Perception Index developed by Transparency International. The Transparency International (TI) Corruption Index is an initiative taken by the Berlin-based international non-governmental 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 ten 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, 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.⁸ Higher ratings are for countries with *lower* taxes. The 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 neighboring countries, including variables such as the corruption perception index and the democracy index.

⁸ Gwartney, James and Robert Lawson (2004). *Economic Freedom of the World: 2004 Annual Report*. Vancouver: Data retrieved from www.freetheworld.com

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

4. 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 Appendix A.2). Thus Indonesia has negative FDI Inflows between 1998 to 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 Figure 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 (.67), than for South Asia and South America (.35) or even East Asia and South America (.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 (.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 of 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.

5. Econometric Results

5. A. 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 Corruption Perception Index are not available for some years.⁹ For the missing data points, we substituted the most recent years data to make the series continuous.¹⁰ 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 GLS regression of Log (FDI Inflows) on various economic and political characteristics of the host country, suggests that the host country market size and

⁹ See appendix for years for which the CPI is available.

¹⁰ We can also drop these years from the sample without affecting our results.

GDP growth rate, productivity of labor and the level of trade (as a fraction of GDP), are significant determinants of the ability of the host country to attract FDI.^{11,12} 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, 1988-1992, and there is annual variation only from 1996-2000. 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.

In the simplest specification, since the sample size is fairly limited, we do not put in too many additional variables. 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, GROSSINV, which relates to the level of fixed investment in the country. The coefficient was positive and significant.

¹¹We did a Granger causality test of FDI Flows and GDP as described in Nonnenberg (2004). Results indicate that while FDI is granger-caused by GDP, GDP is not significantly influenced by FDI Flows.

¹² We can easily include only log(GDP) or log (GDPGrowth) instead of both in the regression, without affecting the results.

One of the main variables of interest is the Corruption Perception Index (CP). Figure 2A 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. In China particularly, the combination of authoritarian rule and the state's economic dominance has bred a form of crony capitalism, where scarce resources are funneled to local elites and bureaucratic constituencies. The World Bank estimates that between 1991 and 2000, almost a third of investment decisions in China were misguided. The Chinese Central Bank's research shows that politically directed lending was responsible for nearly 60 percent of bad bank loans in 2001-2002.¹³ Similar forms of crony capitalism and red tape exist in Malaysia.¹⁴ Surveys of business owners in Brazil also reveal that bribes and nepotism are frequent in government procurement.¹⁵

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 were to reduce corruption to the level of Singapore, it would see nearly a 100 percent (8x.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

¹³ <http://www.carnegieendowment.org/publications/index.cfm?fa=view&id=18110>

¹⁴ <http://www.jahilgoblog.net/image/mea.pdf>

¹⁵ <http://homepages.mty.itesm.mx/bpalifka/Palifka.pdf>

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 Corruption Perception 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 percent, while other region Corruption Perception was negative but not significant. Thus there appears to be a lot of interdependence in flows, at least within the same region.

5. B. Impact of China

In Table 3, we isolate the effect of China's CP on all regions. In recent times, China has emerged as a growing destination for FDI, and it is perceived to be drawing FDI away from other countries. Our results indicate that this is indeed the case.

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, this could have clear adverse consequences for other countries. To see the effect more clearly for each region, Specification 2 in Table 3 interacts each region's dummy with a variable measuring that region's average CP. It also interacts each regions dummy with China's CP. Naturally, for any particular country, the average CP in the region, includes the CP of all it's regional neighbors, *excluding itself*, since by definition, no country is a neighbor 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.

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. This is particularly relevant for competing locations within the same region, such as South Asia. However, China exerts a strong negative influence even on countries outside the region. A better business environment in China could divert investment away from countries even in South America.

Note that perceptions of corruption are formed from interactions of businessmen with country politicians, government officials, the legal system, etc. Hence the greater the state intervention in the economy, the more rampant corruption is likely to be. In the next section, we explore how the existence of corruption is correlated with the absence of economic freedoms, and whether political freedoms, captured through a democracy index, are relevant for investor decisions.

6. FDI and Democracy

This section explores the impact of democratic institutions on the flow of foreign direct investment 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 only papers we came across that are closely linked to ours are Resnick and Li (2003), Resnick (2001), Harms and Ursprung (2002) and Jensen (2003).

The study of this relationship is especially important in the context of developing economies, many of which have adopted democratizing principles in pursuit of their economic goals. It is generally a belief among these economies that deepening democratic governance enhances a country's ability to attract FDI and hence to reap economic benefits from foreign capital. However, the theoretical and empirical link between FDI and democratic institutions is not well-established.

A defining feature of well-established democracies is the existence and protection of property rights. Investors obviously prefer such regimes where their assets are shielded from being taken over autocratically by other groups due to incomplete property

rights. However a contrasting view offered by O' Donnell (1978) suggests that investors often share a cozy relationship with the autocrats, wherein the political leaders protect foreign capital against the popular pressure for higher wages, stronger labor protection, or less capital-friendly taxation.

Along the same lines, 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.¹⁶

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. The regression analysis however fails to control for the level of economic development in the country, and it is highly likely that the results are driven by the correlation between the political rights indices and the omitted economic development variables, rather than truly capturing the effect of these freedoms on inflows. Jensen (2003) also finds a significant positive effect of democracy on FDI inflows. However, the panel comprises not just developing economies, but rich OECD economies as well. Since these economies are likely to be significantly different from emerging developing economies in terms of the democratic institutions, markets and economic freedoms in place, it is not improbable that the effects differ across economies.

¹⁶ Their measure of democracy is derived from the Polity IV measure of Marshall and Jaggers (2000)

As we acknowledge later in the paper, our results are very likely to be biased by our particular sample of countries and time periods chosen.

6.A. 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.¹⁷

Following Rodrik (1999), we combine these two ratings into a single index with values ranging from 0 to 1 by using the transformation $[14 - \text{civillib} - \text{polrights}]/12$. The transformed variable signifies higher values for more democratic countries. Consistent time series for this variable are available from 1970. Figure 2B 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 on the index (become less democratic, such as Venezuela, Ecuador, Malaysia, China), others have moved up (Pakistan, Morocco, Brazil, Senegal, S. Korea).

Our results with this measure are presented in Table 7. Model 1 uses exactly the same specification as we had for the Corruption Perception variable in Table 2, without the CP variable. Controlling for the level of economic development and growth, and

¹⁷ There is no data for Hong Kong for this variable.

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 percent. This is in line with results obtained by Resnick and Li (2003) and Resnick (2001). This result holds when we include the corruption perception 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 percent (-2.2×0.6) using specification 2 in Table 7. The corresponding result for the corruption perception 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 percent (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 corruption perception 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 .0149. In fact, a regression of the property rights index (and separately, the corruption perception index), controlling for the level of economic development, on the level of democracy (and GDP) revealed no significant coefficient on the democracy index.¹⁸ A case in point is India. India scores well on the democracy index, with an average value of close to 0.75 for the entire period. However, investors perceive it to be a highly corrupt country with a CP score of less than 3 over the entire period. A recent study conducted by Transparency International and the Center for Media Studies (2005) finds that common

¹⁸ The property rights index is discussed in detail later.

citizens are forced to pay bribes even to receive regular services from government officials and departments, such as the Police, Judiciary, Municipal Services, Government Hospitals etc. About 62 percent of citizens reported that they had had a first-hand experience of paying a bribe or “using a contact” to get a job done in a public office.¹⁹

On the other hand, Indonesia, scores poorly both on the democracy index and the corruption index. It is a well-known fact that under Suharto, there was widespread misuse of public funds, and regulations such as licenses and levies imposed by local officials led to payment of bribes.

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.²⁰ To see what might be driving this result, we tried to compare countries with a similar level of corruption perception. For instance, both India and China received average CPI 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. Hence, even controlling for country size or market size, the difference is pretty stark. One explanation for this is that the Chinese government has been able to offer more generous financial and fiscal incentives than the

¹⁹ <http://www.cmsindia.org/cms/events/corruption.pdf>

²⁰ 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.

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 fact, FDI was banned in India in the 1970s, and was only recently allowed in in a big scale in 1991. China opened up it's economy nearly a decade earlier and since then has aggressively attracted FDI by offering low rates of corporate taxation, tax holidays, and setting up laws establishing the legitimate rights of domestic and foreign investors (under WTO rules and regulations) in their special economic zones.

Nigeria is another country that has a high level of corruption perception, a low level of democracy, but high foreign flows. In this case, however, the natural resources of the region may account for the flows. Most foreign investment is in the energy sector.

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 foreign direct investment (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.

6.B. 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 corruption perception, with a contemporaneous correlation of 0.7. While earlier studies, such as Wei (1999) have concluded that corruption perception is important for investment, this is the first paper 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.²¹

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.

²¹ This also suggests that in Wei (1999), the corruption variable may simply be a proxy for property rights protection.

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

Hence, in general, the negative sign on the democracy variable combined with the positive coefficient on various measures of economic freedoms probably reflect the fact that the system of political participation and representation of interests of multiple parties puts political constraints on democratic governments. These constraints may often prevent governments from being able to undertake the kind (or the pace) of economic liberalization that they may want, since they have to balance the interests of the majority, while pushing ahead with any major reform. This can be particularly difficult in the case of free capital mobility or trade openness, since greater integration with the world economy has benefits, but also costs associated with the instability of short-term investment ("hot" money) and the lack of control over world prices. This often leads to pressures for slowing down the pace of reforms or stopping them altogether. For instance, Argentina in the early 1990s went in for wholesale privatization and a peso peg to the dollar, reversing decades of state intervention. International capital was allowed to flow

in freely. But by the late 1990s, the building up of foreign debt and the South East Asian crisis plunged the economy into a recession and foreign investment dried up. This led to massive protests by the working classes and caused the government to revert to some form of state intervention and protectionism. Another example is Ecuador, where in 1993-94, there were major protests against the privatization of power, not only by the labor unions and working classes, but also by the army who protested the sell-off on the grounds of national security.

Going by these examples, we need to also 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're 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. For instance, it is hard to believe that democratic institutions in the U.S. or U.K. are likely to hinder foreign flows.

6. C. Type of Government and Democracy

Finally, in specification 6, we tested to see if the type of government, as captured by a distinction between right-wing or left-wing, had an impact on inflows. None of the

papers that we mentioned earlier bring up this distinction when classifying countries as more or less democratic. Data for this classification were obtained from the World Bank's Database of Political Institutions compiled by Beck et al. (2001). From their dataset, we used the information categorizing governments as Right, Left, or Center based on the Chief Executive's political party affiliation. Data are available for the entire period of our sample. Combining this information with our democracy index, we find that the level of democracy per se does not influence the kind of government that exists in developing economies. For instance, many democratic countries such as Ecuador, India, Poland (since 1989), Mexico etc had left governments for substantial periods of time, similar to many autocratic governments such as China and Poland (in the 1980s). There are fewer right-wing dictatorships (Lebanon, Paraguay) though, than right-wing democracies (Argentina, Bolivia, Brazil) in our sample.

Interacting the dummy for left-wing government with the level of democracy variable, we find that democratic, left-leaning countries are less likely to attract inflows, while left governments per se attract more inflows. This result again contradicts traditional thinking on the role of right leaning governments in protecting the interests of capital. Left-leaning governments are generally viewed as favoring the interests of labor over capital, and the opposite holds for right leaning governments. However, irrespective of their leanings, most developing countries have opened up their borders and are actively seeking foreign direct investment as a way to boost their economic growth. In fact, as mentioned earlier, some of the largest recipients of FDI have been left-leaning countries such as China, Mexico and India.²² For instance, between 1987 and 1993, the Mexican

²² Mexico had a left-government between 1975 and 2000, and India between 1975 to 1999. These results are robust to excluding China from the sample.

government led by Carlos Salinas, in an effort to encourage capital investment, lowered domestic borrowing costs, privatized the banking sector and started talks for a free-trade agreement with the United States. This led to cumulative foreign investment worth US \$34 billion by 1993, exceeding the government's official target for that period by 40 percent.²³ We've also earlier discussed the case of China and India, which have offered various incentives for foreign investors and are now large recipients of FDI.

The difference within left-leaning economies appears to be in the extent and the pace of economic liberalization which less democratic economies are able to adopt relative to more democratic countries. This may explain the negative coefficient on the interaction term. The overall effect of being Left is obtained by summing up the coefficients on Left and Left-Democratic, where Left-Democratic is evaluated at the mean of the democracy variable (0.6). This yields an overall positive coefficient of being Left equal to 0.5. This result reinforces the idea that left-leaning dictatorships are more likely to nurture capitalists and cater to the interests of foreign capital than left-leaning democracies. This goes back to O' Donnell's (1978) idea that investors often share a cozy relationship with the autocrats, wherein the political leaders protect foreign capital against the popular pressure for higher wages, stronger labor protection, or less capital-friendly taxation.

6. D. Capital-Output Ratios and Government Type

In general, we may expect that economies that start out with relatively lower capital-output (K/Y) ratios are more likely to attract foreign capital. The intuition derives from the Solow growth model. In economies with relatively low K/Y ratios, the marginal

²³ http://www.photius.com/countries/mexico/economy/mexico_economy_current_account.html

productivity of capital is high. Hence capital may easily flow to these economies, leading to economic growth at least in the short run. Over time, however, as more and more capital accumulates, the productivity of capital declines, diminishing marginal returns set in and growth slows down. This may also cause flows of capital to decline to this economy. For a discussion of the effect of investment on growth, see Auerbach, Hassett and Oliner (1994).

To see how well our model predicts this, we included the beginning of period K/Y ratio as an additional explanatory variable in our regressions. Data on K/Y ratios were obtained from the Extended Penn World Table (Version 2.1). Table 5 presents results with this additional variable. Specification 1 with the Corruption Perception variable yields the expected result. The coefficient on the 1981 stock of capital (as a fraction of output) is negative and significant at 1 percent, suggesting that the lower the beginning of period stock of capital, the greater the rate of capital accumulation.

However, including the democracy variable in Specification 2 causes the coefficient on K/Y to become insignificant. This is surprising since we would not ex-ante expect the two variables to be highly correlated and it's unclear why including democracy should crowd out the impact of capital. To explore this further, we interacted K/Y with a dummy for whether the economy could be classified as Left-leaning. The coefficient on this variable is positive and significant, implying that Left economies that started out with high K/Y ratios, were more likely to attract FDI.

Our intuition is that some of the Left (especially state planned) economies such as Communist China, Poland and India, came into the 1980s after a period of state-driven

industrialization and investment in heavy industry, machinery and equipment. These were largely closed economies in the 1970s with the allocation of capital and investment being driven not by market forces, but by state planning. Thus the state would issue licenses for what could be produced, in how much quantity, when and where. This resulted in extremely inefficient utilization of all factors of production, including capital, and the excessive reliance on capital as a factor of production, may be responsible for the extremely high capital output ratios in these economies at the beginning of the period.²⁴

When these economies opened up in the 1980s, it was after a period of realizing that the system of planning and controls and licenses was inhibiting productivity and growth. Opening up the economies to market forces, either in the domestic sphere by less state planning or to the outside world through freer capital mobility, could improve the efficiency of capital utilization. Hence foreign capital may be viewed as a means of substituting more ‘efficient’ capital for more ‘inefficient’ domestic capital. This may partly explain why the coefficient on Left economies is positive and significant. The more ‘inefficient’ capital these economies had to start with i.e the higher the K/Y ratio, the more they encouraged the substitution with ‘efficient’ foreign capital.

This result is even stronger for Left Dictatorships, such as China, where years of centralized planning resulted in inefficient factor utilization and low productivity, especially of capital. Openness to foreign capital and market forces could be viewed as a way of reversing this trend of low productivity and growth.

²⁴ For instance, in our sample, for the Left Economies the average K/Y in 1981 was close to 1.04, for the Left Dictatorships, the average was 1.19 and the average for all other economies was 1.15. Thus the Left dictatorships, on average, had slightly higher K/Y ratios than other economies.

6. E. Specification Tests

We also tested for reverse causality i.e the effect that investment might have on movements towards democracy. It is possible that the economic benefits associated with foreign investment lead to better development of institutions for protection of property rights and rule of law. To test for this, we regressed changes in democracy (over five year periods) on initial level of foreign inflows. The results indicate that initial inflows exert no significant effect on subsequent changes in democracy.

At the same time, if we lag the democracy variable by a period of 5 to 10 years in a regression of FDI flows on democracy, the coefficient continues to be negative and significant. As other checks, we tested for non-linearity of the democracy variable, to see if the effect of democracies changed as countries provided greater levels of political freedoms and civil rights. Barro (1996) finds that there might be a marginally significant positive effect of democracies at low levels of political freedom, and a negative effect captured by the non-linear term. In our case, the non-linear term had no significant impact, though it too was negative. In a separate specification, following Barro (1996), we divided the democracy index into three parts, where the first part captured countries in the range (0-0.33), the second (0.33-0.67) and the rest of the countries in the remaining. We find that the results are primarily driven by the negative impact of highly democratic countries, but we find no significant effect (positive or negative) at the low or medium range of democracies. These results are robust to using either the political rights or the civil liberties sub-indices, and are not affected by the level of economic development (measured as GDP per capita) of the country concerned.

Results from this section demonstrate a somewhat counterintuitive relationship between the emergence of democratic institutions and foreign inflows. We find, controlling for other factors, including the level of corruption perception, that 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 freely in world markets. To the extent that these are not provided in democratic countries, but are provided in less-democratic countries eager for foreign capital, investors are more likely to invest in less-democratic countries. In fact, in our sample, few countries that scored above 0.5 on the democracy scale did well on the capital mobility index.

Hence rather than concluding that democracies receive less inflows, we would argue that countries that provide less economic freedom, whether democracies or dictatorships, receive less inflows.

7. 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 paper tests both these hypotheses empirically.

We find quite convincingly that corruption perception 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 corruption perception in *other* developing countries also affects flows to a particular host country. In order to study this impact, the paper uses spatial econometrics techniques which allow us to account for “neighbor” effects. In general, treating all countries other than the host country as potential neighbors, a lowering of average corruption perception in the neighbor countries adversely affects flows to the host country. Focusing more deeply on the relationships between individual countries within regions, we find, in particular, that countries within South Asia compete with each other for FDI while countries in South America benefit generally from flows to the region.

To study the specific impact of the rise of China as an attractive FDI destination on other regions, we included China’s CPI 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 corruption perception, 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.

However, we need to interpret our results with caution for at least two reasons. Our sample includes countries, such as Mexico and the South-East Asian economies that underwent major currency or banking crises during the time period under study. This would have had not only short-term but long term impacts on the level of investment going to these countries and their subsequent economic policies. Second, since we're dealing with newly emerging or developing economies, the results are likely to be 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 and free markets.

Appendix

A.1 Data Sources and Definitions

FDI Inflows: Millions of Dollars

Source: UNCTAD

Availability: 1980-2003

Other variables: International Financial Statistics, IMF

VALADDP: Value Added Per Person Employed (1980=100)

TRADEGDP: (Imports+Exports)/GDP

Corruption Perception Index:

The Transparency International (TI) Corruption Index is an initiative taken by the Berlin-based international non-governmental 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 ten 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, 1995-2000 from:

<http://www.transparency.org/>

Maximum Marginal Income Tax rate, Capital Controls

Gwartney, James and Robert Lawson (2004). *Economic Freedom of the World: 2004 Annual Report*. Vancouver: The Fraser Institute. Data retrieved from www.freetheworld.com. Higher

ratings are for countries with *lower* taxes. The 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.

Appendix A.2

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

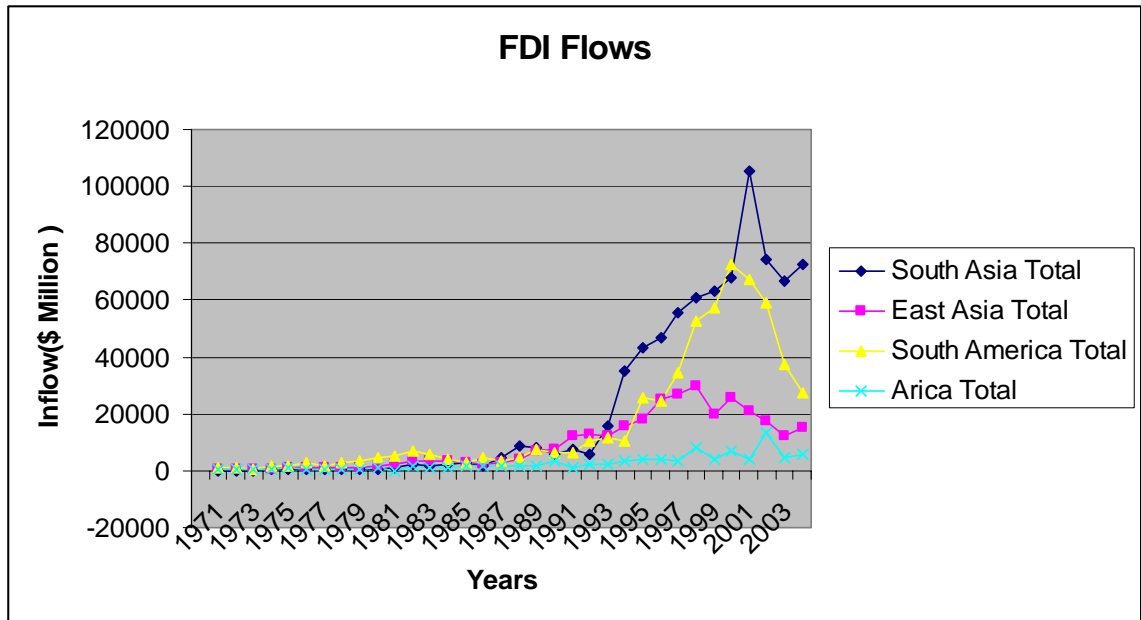
- Peru, Brazil, Argentina, Mexico, Paraguay, Bolivia, Uruguay, Venezuela,
Ecuador

Mid-East

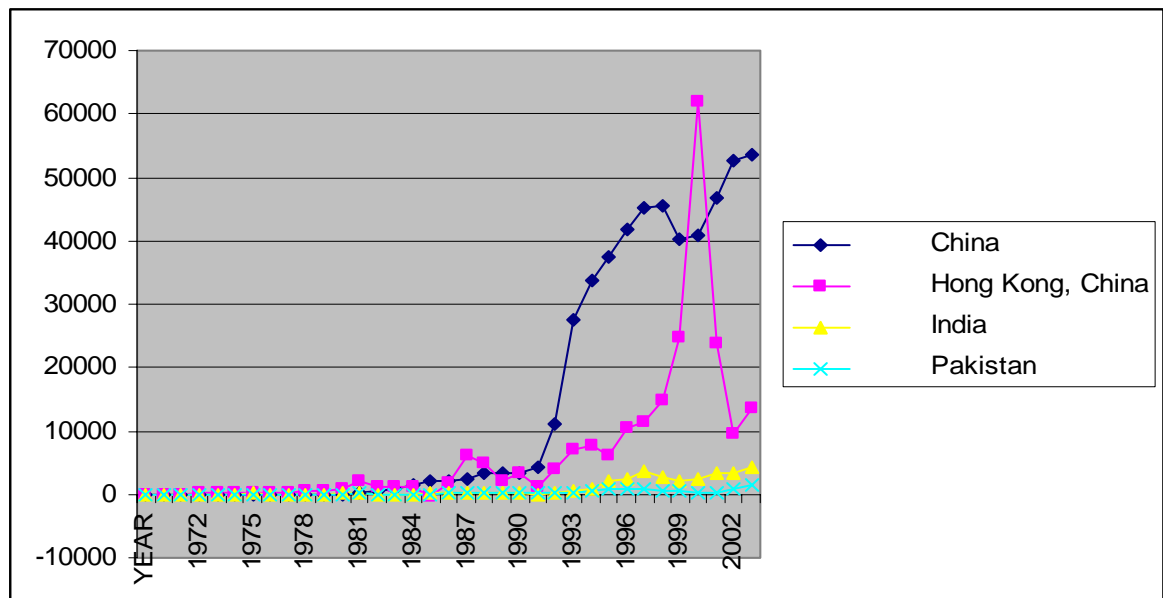
- Qatar, Lebanon, Turkey, Poland

Figure 1: Regional FDI Inflows

A: Across Region Flows (millions US dollars)



B: Within Region Flows



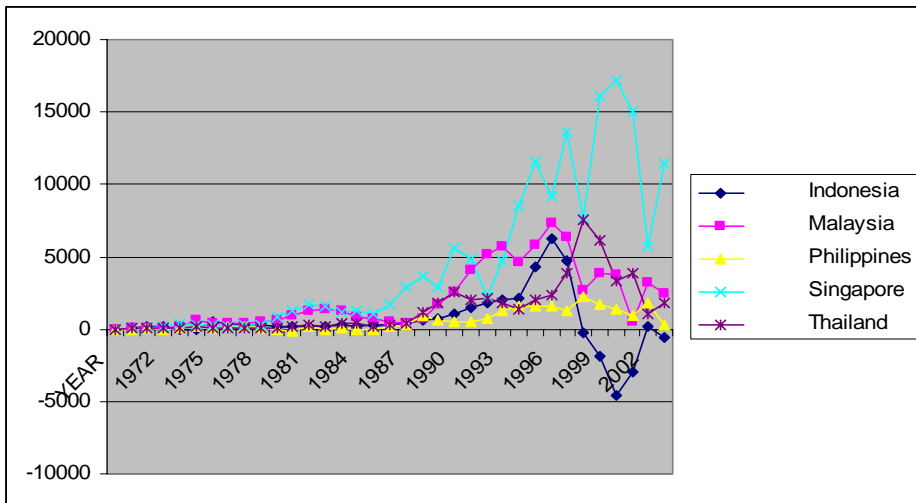
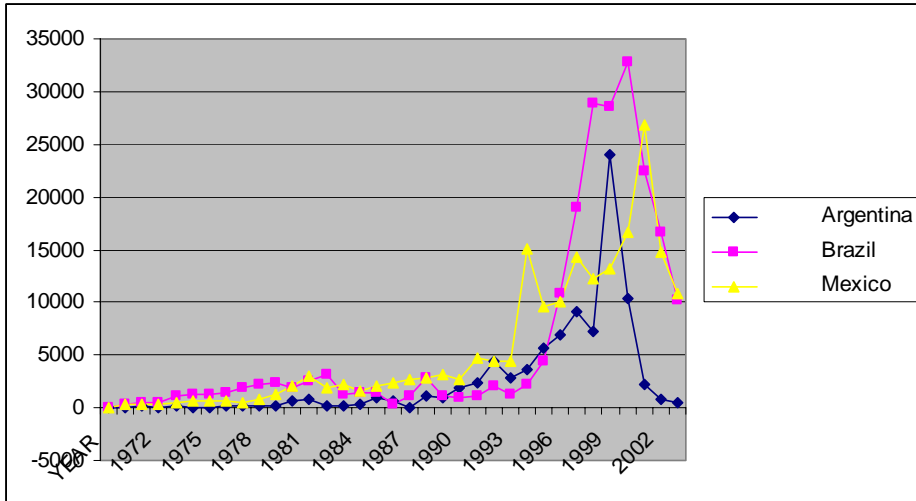
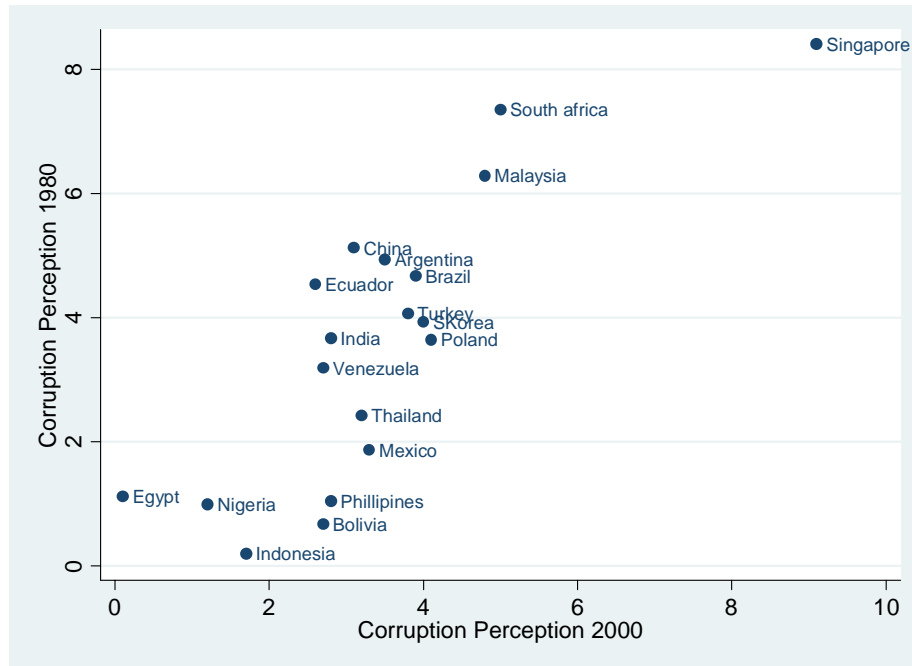


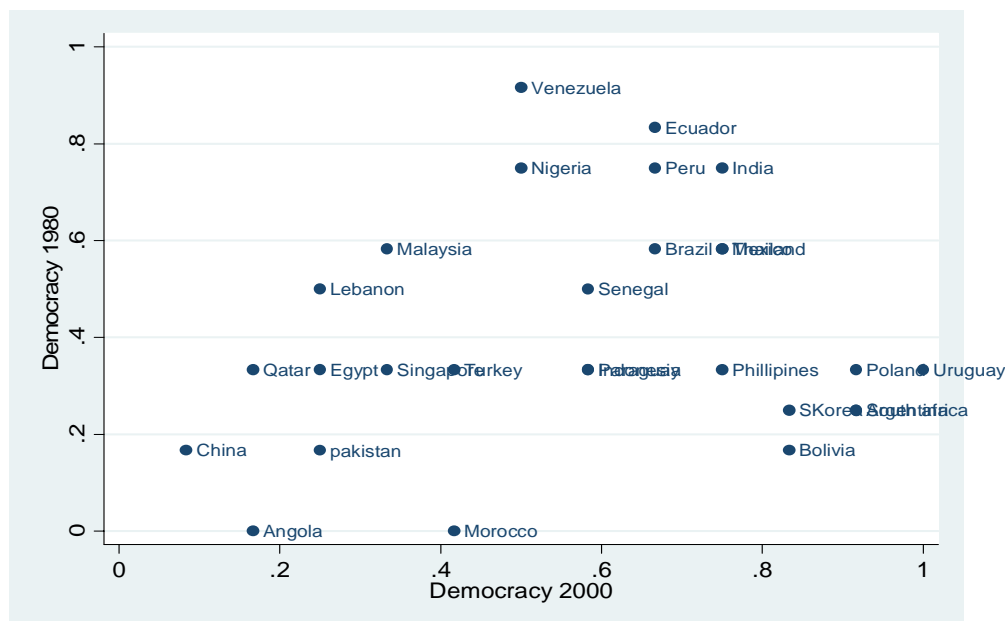
Figure 2: Democracy and Corruption Indices, Country Scores

A. Corruption Perception Index



Note: Higher Scores represent *less* Corruption

B. Democracy Index



Note: Higher Scores represent *more* democratic countries

Table 1
Sample Summary Statistics

	No. of Observations	Mean	Std. Dev
FDI Inflow (\$ million)			
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
CP			
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
Democracy			
South Asia	72	.380	.277
East Asia	120	.484	.176
South America	216	.684	.177
Africa	144	.368	.236
GDP Growth			
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
Value Added Per Person			
South Asia	79	147.63	34.14
East Asia	100	129.44	41.63
South America	80	89.02	9.17
Trade/GDP			
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

Table 2
FDI and Corruption

	(1)	(2)	(3)	(4)	(5)
Dependent Variable	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)
Independent variables					
Log(GDP Growth)	0.362*** (.104)	.302*** (.090)	.378*** (.102)	0.320*** (.088)	0.327*** (.086)
Log (GDP)	0.586*** (.094)	0.740*** (.083)	0.552*** (.093)	0.716*** (.080)	0.725*** (.083)
Value Added Per Person	.007** (.003)	.010*** (.002)	.006** (.003)	0.009*** (.002)	0.009*** (.002)
Trade/GDP	.006*** (.002)	.0004 (.002)	.005*** (.002)	-0.0005 (.001)	-0.0002 (.001)
Low Tax Rate		0.116*** (.031)		0.114*** (.030)	0.113*** (.030)
Fewer Cap. Controls		0.222*** (.037)		0.222*** (.036)	0.222*** (.036)
Telephone lines	-0.0002 (.013)	.006 (.011)	.010 (.014)	0.018 (.010)	0.007 (.011)
CP	.160*** (.051)	.095** (.045)	.141** (.056)	0.094** (.043)	0.101** (.047)
Own Region CP			-.362** (.174)	-0.225*** (.064)	-0.160 (.147)
Other Region CP			-0.578 (.726)		0.315 (.613)
Region Dummies	Yes	Yes	Yes	Yes	Yes
No. Of Observations	209	209	204	204	124
Overall R-square	.7259	.7400	.4043	.4541	.4742

***significant at 1%, **significant at 5%, *significant at 10%

Notes:

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

Table 3

Impact of China CP on FDI Flows

	(1)	(2)
Dependent Variable	Log(FDI Inflow)	Log(FDI Inflow)
Independent variables		
Log(GDP Growth)	.256*** (.096)	0.362*** (.095)
Log(GDP)	0.263*** (.095)	0.345*** (.091)
Value Added Per Person	.003 (.003)	0.004* (.002)
Trade/GDP	.006*** (.001)	0.003** (.001)
Telephone Lines	0.008 (.011)	0.025** (.012)
CP	0.094* (.050)	0.151*** (.048)
China CP	-0.495*** (.116)	
S.Asia*Own Region CP		-0.508*** (.151)
S.America*Own Region CP		0.602*** (.176)
E. Asia*Own Region CP		-0.143 (.099)
S.Asia*China CP		-0.246*** (.064)
S.America*China CP		-0.413*** (.152)
E. Asia*China CP		-0.307 (.155)
S. Asia*Other Region CP		
S. America*Other Region CP		
E. Asia*Other Region CP		
No. of Observations	209	209
Overall R-square	.4540	.7781

***significant at 1%, **significant at 5%, *significant at 10%

Notes: 1. All specifications are estimated using a random effects GLS model, allowing for region and time dummies as appropriate.

Table 4: FDI, Democracy and Corruption

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)
Independent variables						
Log(GDP Growth)	0.261* (.101)	.314*** (.088)	0.323*** (.087)	0.299*** (.088)	0.177* (.093)	0.302*** (.078)
Log (GDP)	0.749*** (.084)	0.488*** (.080)	0.465*** (.079)	0.564*** (.082)	0.611*** (.089)	0.227*** (.086)
Value Added Per Person	0.004*** (.003)	0.006*** (.003)	0.006*** (.003)	0.005*** (.002)	0.002 (.002)	0.007*** (.002)
Trade/GDP	0.008*** (.001)	0.001 (.001)	0.001 (.001)	-0.001 (.001)	0.001 (.001)	0.002 (.001)
Low Tax Rate				-0.019** (.009)	-0.020** (.010)	
Fewer Cap. Controls				0.150*** (.037)	0.162*** (.039)	
Telephone lines	0.041* (0.022)	.015 (.023)	-0.055*** (.021)	-0.022 (.020)	0.008 (.019)	-0.027 (.020)
CP		0.274* (.057)	0.449*** (.082)	0.229*** (.049)		0.155*** (.045)
Democracy	-1.985*** (0.346)	-2.168*** (0.359)	-0.831 (.599)	-1.82*** (.318)	-1.730*** (.010)	-0.642* (.362)
CP*Democracy			-0.422** (0.166)			
Legal System and Property Rights					0.260*** (.056)	
Left Government						2.353*** (.341)
Left Democratic Government						-3.023*** (.498)
Region Dummies	Yes	Yes	Yes	Yes	Yes	Yes
No. Of Observations	202	191	191	179	185	191

***significant at 1%, **significant at 5%, *significant at 10%

Notes:

1. All specifications are estimated using a random effects GLS model, allowing for region and time dummies.
2. 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.

Table 5: Capital-Output Ratios and Government Type

	(1)	(2)	(3)	(4)
Dependent Variable	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)	Log (FDI Inflow)
Independent variables				
Log(GDP Growth)	0.072*** (.016)	0.055*** (.014)	0.067*** (.015)	0.050*** (.013)
Log (GDP)	0.641*** (.090)	0.538*** (.080)	0.632*** (.104)	0.326*** (.089)
Value Added Per Person	0.008*** (.002)	0.006*** (.002)	0.008*** (.002)	.009*** (.002)
Trade/GDP	0.008*** (.001)	0.001 (.001)	0.007*** (.001)	0.006*** (.002)
Telephone lines	0.008 (.010)	-0.036 (.019)	0.009 (.011)	0.004 (.019)
Capital Output Ratio (K/Y) in 1981	-0.547** (.231)	0.184 (.221)	-0.421*** (.216)	-0.565** (.244)
CP	0.151*** (.053)	0.234 (.050)	0.132*** (.046)	0.095*** (.051)
Democracy		-2.294*** (.334)	0.145 (.455)	
Left*K/Y(1981)			0.984*** (.428)	
Left Government			1.715*** (.581)	0.365* (.196)
Dictatorship (Democracy<0.5)				-0.092 (.196)
Left*Dictatorship*K/Y(1981)				2.238*** (.321)
Region Dummies	Yes	Yes	Yes	Yes
No. Of Observations	220	203	203	203

***significant at 1%, **significant at 5%,*significant at 10%

Notes:

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

References

- A.T. Kearney, Inc. (2002), *FDI Confidence Index*, 5, September.
- Auerbach, A., Hassett, K. and Oliner, Stephen (1994), "Reassessing the Social Returns to Equipment Investment", *Quarterly Journal of Economics*, Vol. 109, No. 3.
- Bajpai, N and Dasgupta, N (2004), "What constitutes Foreign Direct Investment? Comparison of India and China", CGSD Working Paper No. 1, January 2004
- Barro, Robert J. (1996), "Democracy and Growth", *Journal of Economic Growth*, Vol. 1, pp.1-27
- Thorsten Beck, George Clarke, Alberto Groff, Philip Keefer, and Patrick Walsh(2001), "New tools in comparative political economy: The Database of Political Institutions" , 15:1, 165-176 (September), *World Bank Economic Review*.
- Dunning, John (2002), "Determinants of Foreign Direct Investment: Globalization Induced Changes and the Role of FDI Policies", Rutgers and Reading Universities, published as an article in *World Investment Prospects*, London: the Economist Intelligence Unit, available at:
[http://wbln0018.worldbank.org/eurvp/web.nsf/Pages/Paper+by+Dunning/\\$File/DUNNING+1.PDF](http://wbln0018.worldbank.org/eurvp/web.nsf/Pages/Paper+by+Dunning/$File/DUNNING+1.PDF)
- Devereux, M. and Griffith, Rachel (2002), "The Impact of Corporate Taxation on the Location of Capital: A Review" , *Swedish Economic Policy Review* 9, pages 9-33
- Eichengreen, B and Tong, H (2005), "Is China's FDI Coming at the Expense of Other Countries?" NBER Working Paper 11335, available at <http://www.nber.org/papers/w11335>
- Greene, H, *Econometrics*, various editions
- Hansen, Henrik, Rand, John and Tarp, Finn (2003), "Are FDI Inflows Complements or Substitutes Across Borders: Empirical Evidence from Five Asian Economies", Institute of Economics, University of Copenhagen
- Harms, Philipp and Ursprung, Heinrich W. (2002), "Do Civil and Political Repression Really Boost Foreign Direct Investments?", *Economic Enquiry*, Vol. 40, No. 4, pp.651-663

International Monetary Fund (IMF), *International Financial Statistics*, various issues

Ioannatos, Petros (2004), “The Demand Determinants of Foreign Direct Investment: Evidence from Nonnested Hypothesis”, University of Kettering, available at www.apfpress.com/book3/pdf_files/7.pdf

Jensen, Nathan (2003), “Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment”, *International Organization*, Vol. 57, No. 3, pp 587-616

Kerr, Ian and Peter, Vasanthi (2001), “The Determinants of Foreign Direct Investment in China”, Curtin University of Technology, available at: http://www.econs.ecel.uwa.edu.au/economics/econs/ecom_conf/kerr.pdf

Kelejian, Harry (2003), “Spatial Econometrics”, University of Maryland, College Park

Marr, Anna (1997), “Foreign Direct Investment to Low Income Countries: A Review of the Evidence”, Overseas Development Institute, 1997 (3) September

Nonnenberg, M. and Mendonca, M (2004), “The Determinants of Direct Foreign Investment In Developing Countries”, IPEA, available at: <http://ssrn.com/abstract=525462>

O'Donnell, Guillermo (1978), “Reflections on the Pattern of Change in the Bureaucratic Authoritarian State”, *Latin American Research Review* 13 (1), pp. 3-38

Overseas Development Institute, 1997 (3) September

Resnick, Adam. (2001), “Investors, Turbulence and Transition: Democratic Transition and Foreign Direct Investment in Nineteen Developing Countries”, *International Interactions* 27 (4), pp. 381-98

Resnick, Adam and Li, Quan (2003), “Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Inflows to Developing Countries”, *International Organization*, Vol. 57, No. 1 (Winter 2003), pp. 175-211

Rodrik, D. (1999), “Democracies Pay Higher Wages”, *Quarterly Journal of Economics*, Vol. 114, No.3, pp.707-738.

UNCTAD, World Investment Report, various issues

World Bank, World Development Report, 2005

Wei, Shang-Jin (2000), “How taxing is Corruption on International Investors?”, The Review of Economics and Statistics, February 2000, No.1

Wei, Shang-Jin (1999), “Can India and China double their Inward Foreign Direct Investment?”, available at

<http://www.nber.org/~confer/99/indiaf99/India-China-FDI.PDF>