

Determinants of FDI in Emerging Markets: The Case of Brazil, China, and India

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Abstract

This paper seeks to find the main incentives which have made Brazil, India and China attractive for foreign direct investment, and for that we consider new untested explanatory variables to assess the hypothesized impact of financial markets and economic conditions, as well as other social and political factors. Regressing net FDI inflows on these variables during the full data series (1980-2008), and after controlling for severe econometric problems, the nested block regression concludes that the economic/financial variables account for 57% of the change in net inward foreign direct investment, followed by social variables. The nested block regression shows that for the past ten-year data series (1999-2008), one social variable (life quality proxied by energy consumption) emerges first followed by financial variables including GDP, inflation, trade balance and sovereign credit risk (R^2 is 49% for life quality and 26% for financials, respectively), and India appear to lag behind China and Brazil. These findings represent our major contribution to the FDI determinants literature. Therefore, we recommend that countries which intend to attract more inward foreign direct investment may want to consider paying more attention to the economic/financial incentives, among others, to be able to optimize the amount of FDI flowing in from foreign investors.

1. INTRODUCTION

Foreign Direct Investment (FDI) is a prominent trend in the recent economic history of most developing nations. Until the early twentieth century, FDI took the form of investment in the extractive, mining, and agricultural industries in these countries. Extractive investments tended to be designed to satisfy local demand for particular goods and services, including infrastructure such as electricity and telephone systems. Since the 1980s, FDI in developing countries has been directed increasingly at export-oriented projects.

Eager to gain some share of these flows of FDI, emerging economies have been competing aggressively to attract foreign investors. This competition stands in sharp contrast to earlier eras when developing countries sought to close their economies to foreign investment or impose onerous regulatory conditions on foreign investors that sought entry to their countries for fear of political and/or economic repercussions. Since the 1980s, there has been a dramatic shift in the orientation of government's relations with foreign investors.

Where governments in developing countries once regulated foreign investment, they now seek to promote their countries as sites for foreign investment. They do so in a number of ways. They have continued to provide tax incentives, rebates on custom duties, change investment policies, improve regulations and procedures to make investment easier. Governments also promote their countries by engaging in active marketing efforts that include advertising and personal selling to prospective investors in the world's major capital markets. Yet, foreign investors often find that the rhetoric of government differs from the reality and that, despite liberalization policies, screening procedures and institutions continue to live on as vestiges of former eras.

Other developments have also affected the increased demand for FDI. The debt crisis of the early 1980s and its aftereffects have foreclosed for many developing countries the option of using private financing or government bilateral financing in their efforts to acquire capital for development. The increased movement toward privatization of state-owned enterprises in developing countries has also contributed to a demand for FDI. It is also necessary to take in to account that as more and more countries compete to attract FDI their regulatory framework are becoming similar. For example, in 2001, 208 changes in FDI laws were made by 71 countries in order to make the investment climate more favorable for inward FDI. As a result, the appeal of any particular host country to potential investors is increasingly determined by factors other than FDI regimes. These include the quality of its physical infrastructure among others such as macroeconomic environment, the size and growth of its market, the education level and skill composition of its human resources.

This paper expands on the contributions of Mathur and Singh (2007) who used panel data for the period 1980-2000 for twenty nine host countries including Brazil and Argentina in South America, India and

China in South Asia, and Indonesia, Malaysia, Philippines, and Thailand, in East Asia to study how a wide variety of factors relating to the competitive and economic environment in the host countries, affect these flows. While they delved into economic and political factors, we add on the financial aspect by considering new variables such as currency exchange rate risk, level of real interest rate, size of national debt, sovereign credit rating risk, total market size, inflation, and new social variables such as life expectancy at birth, people receptivity to foreign investors, and the number of graduate degree holders. We also update the sampling period to extend from 1980 until 2008.

We have limited our “pilot” study to cover three countries: Brazil, China and India. Beside the fact that these countries are among the most populated around the world representing about 40% of world population, and their ranking in terms of the Market Potential Index, they are among the top receivers of FDI in the past two decades (A.T., Kearney, *The Economist*, Feb. 17, 2000, as Cited by, Moosa, 2003). Nevertheless, the amount of FDI inflows varies each year; thus, there is no doubt that other than regulatory changes, other four basic dimensions for development—infrastructure, social, environmental, information and technology—play a pivotal role when determining FDI levels each year.

Therefore the purpose of this study is to determine those factors which dictate the preference by foreign investors for Brazil, China, and India. Using data from 1980 to 2008 for a set of 18 to 23 social, economic/financial and political variables, our hypothesis holds that for both the full data series (1980 to 2008) and the partial data series (1999 to 2008), the economic/financial variables emerge as the strongest set in explaining changes in FDI ($R^2 = 57\%$). These results hold for the full sampling period and especially the partial data set. This finding represents our major contribution to the FDI determinants literature. The implication to host countries is to focus more on the economic/financial incentives to be able to optimize the amount of FDI flowing in from foreign investors.

This paper is organized as follows. Section 2 synthesizes the literature on FDI determinants. Section 3 presents data sources and research methodology. Section 4 discusses tested findings, while section 5 concludes the paper.

2. A REVIEW OF FDI DETERMINANTS

The growth of foreign direct investment (FDI) in recent decades has generated three main trails of thought which have attempted to explain this phenomenon. First, the market imperfections hypothesis (Kindleberger, 1969, Hymer, 1972, and Horaguchi and Toyne, 1990) postulates that FDI is the direct result of an imperfect global market structure (concentration and economies of scale) and investing firms specific characteristics and comparative advantages (such as managerial skills, brand name, superior marketing distribution, bargaining and political power, access to raw materials, and patent-protected technology). Second, the internalization theory (Rugman, 1985 and 1986) suggests that FDI arises as multinationals replace external markets with more efficient internal ones (i.e., intr-firm transactions) to avoid problems such as time lags, transaction costs, bargaining and buyer uncertainties, and other externalities in the goods and factors markets. This trend continues until marginal benefits and marginal costs are equal. Third, the eclectic approach to international production (Dunning, 1986 and 1988) proposes that FDIs are motivated by (1) sustainable competitive or monopolistic advantages in ownership-specifics (namely, access to income generating assets, early mover entry, and as a consequence of multinationality), (2) internalization net benefits (intra-firm compared to contractual agreements with foreign firms) necessitated by the costs of transactional market failures being higher than administrative costs of operating a foreign branch, and (3) the location or the “where” of production advantages (e.g., access to capital, access to skilled and abundant labor, control over transfer price, reduction in exchange risks, lag and lead payments, etc), which will remain attractive as long as there are transactional gains from operating in different locations. All these advantages must be favorable enough to outweigh the costs setting up and operating a foreign operation.

We find the generality of the eclectic approach appealing to encompass more than one set of factors to explain what determine inward FDI. The purpose of this paper is to build on this approach to provide up-to-date explanation of demand factors that stand behind the strong preference of foreign investors for Brazil, India and China among other emerging economies. The demand determinants cannot be but diverse, and hence are assorted into three main categories: economic/financial, social, and political.

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 GDP), 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.

Hansen et al. (2003) focus on five East Asian economies-China, Malaysia, Indonesia, Thailand and Vietnam-and ask 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. Their paper, however, 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.

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. Rather, 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 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.

Other works, notably Wheeler and Moody (1992), Hines (1996), Wei (1999), Devereux and Griffith (2002) have also studied the relationship between corruption and FDI. In a study of foreign investment of U.S. firms, Wheeler and Moody (1992) did not 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. Hines (1996) use total inward FDI (instead of bilateral FDI), but did not corroborate the negative relationship between total inward FDI and the host countries corruption levels. However, Devereux and Griffith (2002) find a negative effect on FDI when considering the interaction between tax rates and the corruption index. Wei (2000) studied the effect of corruption on foreign direct investment in 45 host countries receiving FDI from twelve source countries. He also controlled for taxes. He found that a rise in either the corruption level or the tax rate on foreign firms reduces inward FDI. He also noted that an increase in the corruption level in Mexico over that of Singapore would have a negative effect on inward FDI equivalent in magnitude to raising the tax rate by fifty percentage points. Finally, for the year 1993, American investors were averse to host country corruption, but not necessarily more so than average OECD investors.

Mathur and Singh (2007) find that corruption perception does play a big role in investors' decisions on where to invest. Countries which rank poorly on the index receive low FDI flows relative to those that rank above them (after controlling for other factors). Second, FDI inflows to developing economies are highly interdependent. This is especially true within regions. For instance, they 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 such as Brazil and Mexico.

On another front, Mathur and Singh (2007) demonstrate that more democratic countries receive less FDI flows than less democratic countries. The same argument was presented by O'Donnell (1978) and Resnick and Li (2003). Their democracy measure is a measure of political rights and civil liberties of citizens. Investors are more likely to care about economic freedoms, such as the protection of personal property, few restrictions on capital mobility and trade openness. Surprisingly, these are not correlated with the democracy variable. More specifically, they find that low corruption perception countries receive more FDI flows when associated with robust property rights protection. The index, however, is less strongly correlated with other measures of economic freedom 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 (e.g., bribe-taking) when administrative decisions determine access to foreign exchange and increase the risk of discouraging legitimate and desirable transactions. One implication of their results is that democratizing developing countries are often unable to push through the kind of economic reforms which foreign investors desire, due to the presence of conflicting political interests. For instance, in India, foreign capital is widely viewed as being antagonistic to the interests of the poor and working classes. Therefore major liberalization measures often meet strong opposition from these groups. Less democratic countries

such as China, where political leaders are often unconstrained by similar pressures, may more easily offer investors such incentives.

Nevertheless, to the extent that democratic countries are able to offer more economic freedom and a better business climate for investors, which are increasingly the case as the World Investment Report (2006) suggests, the findings by Mathur and Singh (2007) could potentially be reversed in the years after 2000. For instance, the financial crises in East Asia and South America have made other developing countries wary of liberalizing too quickly, leading to a reversion to state protectionism. Mathur and Singh (2007) also 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.

This paper seeks to improve on the work for Mathur and Singh (2007), by analyzing data from the year 1980 to 2008 (compared to 1980-2000), and also included other financial variables relating to currency exchange rate risk, level of real interest rate, size of national debt, sovereign credit rating risk, total market capitalization, restriction on capital repatriation, expectancy at birth, people receptivity to foreign investors, and the number of graduate degree holders to diversify the economic/financial factors of demand.

3. DATA DESCRIPTION AND RESEARCH METHODOLOGY

Three blocks of variables were examined: economic/financial, social variables, and political variables. The economic/financial variable set expands on a prototype developed by Dunning (1981), which distinguishes three types of influences on inward FDI. First, it suggests some domestic market characteristics to influence FDI. They include the market size and the direction of trade flows. The market size (MKTSZ) is measured by the host country Gross Domestic Product (GDP) and emphasizes the importance of a large market for efficient utilization of resources and exploitation of economies of scale (see also Agarwal, 1980, Culem, 1988, and Tsai, 1991). A positive relationship is expected between MKTSZ and net inward FDI. We also include in our analysis GDP growth rate (GDPG). The relationship between the direction of the host country trade balance (TRADBLN), exports minus imports, and net FDI inflow appears to be complex (Yannopoulos, 1990, and Torrisi, 1985). Trade surpluses are indicative of a strong economy and may encourage the inflow of FDI. Trade deficits, on the other hand, may also stimulate inward FDI as a result of export diversification and import substitution policies.

Next, it considers host country production costs in terms of the unit cost of labor (i.e., hourly wages corrected by hourly productivity) as done by Culem (1988). However, due to insufficient data, labor productivity (LBRPRD) is used instead in our paper. The latter is measured by value added per worker, which is expected to positively affect the ability of the host country to attract FDI.

The third set of economic/financial factors include measures of the host country overall financial performance such as the inflation rate and the effectiveness of the service sector. High inflation rate (INF) in the host country, measured by the percentage change in GDP deflator, indicates the inability of the government to balance its budget, and failure of the central bank to conduct appropriate monetary policy (Schneider and Frey, 1985). Thus, it is expected that high inflation will inhibit inward FDI. The infrastructure is another relevant factor. Root and Ahmed (1978 and 1979) have presented evidence that an effective service sector (SRVCS) in terms of adequate infrastructure in the areas of banking, finance, insurance, telecommunications, transportation, and distribution, has a positive impact on the ability of the host country to attract FDI. The effectiveness of the SRVCS is measured by the percentage of GDP generated in services. In this paper, we contend that variables that reflect the strength of the country financial situation were not given enough attention in prior literature, and this paper reverses this trend. Total market capitalization (MKTCAP) is a common gauge of the host country stock market's significance in the national economy measured as a percentage of the annual GDP, and can be a positive attraction to FDI. A low score of currency rate risk (CURATERSK) affects negatively the return on investment and the payback period. CURATERSK is rated from 0 (for 'F' rating by Fich), which means risky currency, and 30 (for 'AAA'). High real interest rate (REALRATE) can imply a high cost of capital not anticipated at the time of investment. National debt (DEBT) is proxied by the value of all Treasury bonds in the host country. A host country in deep debt can be a deterrent for foreign investors. Sovereign debt risk (SOVGRSK), approximated by a credit rating (0 least creditworthy, 100 most creditworthy), reflects the expectations of leading international banks that a sovereign borrower will default on its debts, and has been used in the past to determine the investment climate of a nation. A low credit rating would have unfavorable reflection on net inward FDI. Also, it has been suggested by Schneider and Frey (1985) that the overall favorable investment climate (INVCLIM) of the host country has a positive effect on its ability to attract FDI. The last financial variable is the gross domestic product per capita (GDPPC).

Social factors of the host country have long been considered as an important determinant of FDI (Root and Ahmed, 1979, and Agarwal, 1980). However, there are difficulties in measuring exclusive social characteristics as well as possible correlations between social characteristics and economic factors. Consistent with the literature, our social model included the degree of human capital development (approximated by the host country literacy rate), the extent of urbanization (extent of urbanization is measured by the number of cities in the host country which exceed 500,000 inhabitants), the quality of life, and the adequacy of the health care system. Dunning (1981) and Schneider and Frey (1985) argue that the degree of human capital development (HCD) has a favorable impact on FDI inflow in terms of ensuring adequate supply of skilled labor. According to Root and Ahmed (1979) and Dunning (1981, 1986) the urbanization has a profound positive effect on FDI as multinationals prefer to establish subsidiaries in urban centers to benefit from the existing infrastructure. The quality of life (LIFEQUAL), approximated by the energy consumption per capita per \$1,000 of GDP (Levis, 1979), and the adequacy of the health care system proxied by life expectancy at birth (LIFEXPT) are also strong indicators of the host country social status, and are expected to exert a positive impact on the flow of FDI into the host country. Other social variables include country population, and people receptivity. Country population size (POPSZ) is considered a positive factor as the larger the population, the larger is the labor force and consuming society. However, people receptivity to foreign investors (RECEPTIV), proxied by trade as a percentage of GDP, is equally important. Positive receptivity can be a helpful factor for investment. Another measure for the level of highly educated labor, which is proxied by the number of college degree graduates in the host country (EDUC).

Political factors were also considered, but limited to those of strictly political nature (e.g., the political system and the ethics of the host government) as well as variables in which the political component is implicit but nevertheless dominant. One explicit political factor is the degree of democracy of the host country. Democracy is measured by an index (POLSYS) taking the values of 1 for multiparty, 2 for dominant party, 3 for one-party, and 4 for nonparty systems of government. The linearity of this variable is not certain as argued by Barro (1996).

The host government ethical adherence can impact the inflow of FDI, while widespread government financial corruption imposes difficulties for the effective conduct of business. Thus, we used corruption perception (CPI) index as 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. CPI is an index that ranges from 0 to 10, where 10 means an entirely *clean* country, and zero indicate a country where business transactions are entirely dominated by kickbacks, extortion etc. Schollhammer and Nigh (1984), Nigh (1985), Schneider and Frey (1985), Harms and Ursprung (2001), and Jensen (2003) have argued that the presence of a political system that is hospitable to foreign capital in terms of property rights protection and breadth of civil liberties can play a favorable role in attracting FDI. Thus, we test the international property protection index (IPRPI), which varies from 0 to 1, with higher values implying more protection; we expect a positive association with inward FDI. The level of civil liberty (CIVILIB) is an index that varies between 1 and 7, where 1 is equal to most free, and 7 represents the least free. The lower this index, the better is the environment for FDI. Restriction on foreign investment capital repatriation (RESTCAP) is a dummy variable where 0 = freedom of capital repatriation and 1 = restrictive. Freedom to expatriate capital is a positive attraction to inward FDI. The degree of economic openness (DOECOPEN) reflects seven components of economic freedom averaged to give an overall economic freedom score, assigning a grade in each using a scale from 0 to 100, where 100 represents the maximum freedom.

With regard to other implicit political factors, Terpstra and Yu (1988) have argued that FDI is influenced positively by geographic proximity (GEOPRX) of foreign investors. GEOPRX is measured in terms of aerial distance recorded as the inverse coding of the actual distance between the host country's most developed city (or largest city) and the capital city of country with the leading outward FDI to the host country. In this study, GEOPRX is used to approximate the strength of political cooperation between the investing and recipient countries. Foreign investor tax rate (FINVTAX) is another factor that can negatively affect inward flows of FDI. Finally, the number of western countries (WESTFDI) that had FDI in any of our sampled countries reflects the extent of interest by foreign investors. Regional affiliation, a factor that was used in previous studies, was not considered in our test as the number of sampled countries is small.

As reported in the literature, many of the tested variables may suffer from multi-collinearity. In order to improve on our test results, we control for multi-collinearity and for non-normality of data distribution by transforming. Transformation was done in two different ways; once using differencing with one period lag, and a second time by calculating the percentage change from one year to another, then we kept the transformed variables with paired-correlation among explanatory variables less than 50%, and with the lowest possible number of high correlation with other tested variables.

Sources of our data are presented in the Appendix. Using STATA statistical package, we run a regression analysis on our data twice; once over the full sampling period (1980-2008), and a second time using a partial data set covering the past 10 years (1999-2008). Our full data set was tested first using non-transformed data, but due to strong collinearity among tested variables, we repeat using transformed data. The same is done for the partial set. In addition to regression analysis, we tested and treated some econometric problems including (1) multicollinearity using VIF and Tolerance tests, (2) normality using chi-square tests of skewness and kurtosis as well as Kernel normality plots, (3) heteroscedasticity tested by chi-square, (4) serial auto-correlation using Durbin-Watson statistics, and (5) model specification error using hatsquared t-statistics for correctness of model specification, and F-statistics for testing variables omission. We also repeat all the above using stepwise regression to identify the most parsimonious model.

4. DISCUSSION OF EMPIRICAL ANALYSIS RESULTS

Table 1 details some major characteristics of the sampled three countries. It shows the number of western countries that had FDI in any of our sampled countries, and geographic proximity to FDI sources (in miles). The higher these numbers reflect a stronger interest from well developed rich countries to invest in developing markets. In this context, China scores the most. Corporate tax rate levels are also reported in Table 1; once again China has relatively the lowest tax rate. Other relevant characteristics are listed here to show the level of infrastructure and economic development of the three countries; they include the size of zoned industrial land,

Table 1. Characteristics of Brazil, China, India

Country	No. of Western FDI Country Sources	Geographic Proximity of Sources of FDI (miles)	Tax Rate for Foreign Investors (%)	Size of Zoned Industrial Land (Sq Km)	Agricultural Land Size (Sq Km)	Urbanization (cities with population > 500,000)	Labor Productivity Index	Total Market Capitalization (Billions)
Brazil	4 -United States of America -Canada -Germany -United Kingdom	4,805 -This is the distance between Brazil and United States if America which accounts for 26% of total inward FDI	35% -Corporate income tax The Federal constitution of 1988 established a new taxation system. The system is very complex and includes at least 50 types of taxes. Corporate income tax is levied at a rate of 15% on each year's taxable profit. The income surcharge is assessed at 10%. Branches of foreign companies in Brazil pay tax at a standard of 15% and the above mentioned additional rate. A holding company is subject to the taxation system applicable to corporations mentioned above.	32,761	75,288	41	1980-1985: 4.0 1990-1995: 4.4 2000-2005: 4.9	2006: 711,100 2007: 1,370,000 2008: 589,400
China	5 -British Virgin Island -USA -Germany -Cayman Island -Western Samoa	6,867 -This is the distance between China and United States of America which is the third largest source of inward FDI after Hong Kong, and British Virgin Island	33% -The 1994 tax reform in China marked a turning point - it abolished the dual-tax system and adopted a single unified tax system for domestic and foreign companies (either wholly foreign-owned or joint venture), to close up the gap with international common practices. Before 1994, none of the tax reforms, including decentralization and profit-to-taxation transaction, had made fundamental changes to the system -From 1995 up until 2007, despite a stated corporate tax rate of 33% , foreign firms often benefit from tax waivers, credits and incentives that bring their tax rate down to an average of 15% . - In 2008, China's top legislature began discussing a new law on corporate income tax that is likely to result in a unified tax rate of 25% for both domestic and foreign companies. If the law is approved, foreign firms are likely to lose a major tax advantage.	280,910	121,537	78	1980-1985: 6.5 1990-1995: 6.9 2000-2005: 8.7	2006: 2,426,100 2007: 6,226,000 2008: 2,794,000
India	4 -Mauritius -United States -France -Germany	3613 -This is the distance between Mauritius and India. Mauritius is the leading source of inward FDI to India	40% -Foreign companies pay 40%. Education cess of 3% (on the tax) is payable, yielding effective tax rates of 41.2% for foreign companies. -Section 90 of the Indian Income Tax Act authorizes the government of India to enter into Double Tax Avoidance Agreements (tax treaties) with other countries. The object of such agreements is to evolve an equitable basis for the allocation of the right to tax different types of income between the 'source' and 'residence' states ensuring in that process tax neutrality in transactions between residents and non-residents.	190,801	83,249	82	1980-1985: 2.0 1990-1995: 3.1 2000-2005: 4.1	2006: 818,900 2007: 1,890,000 2008: 645,500

The size of agriculture land, the level of urbanization proxied by the number of cities with a population exceeding 500,000, the labor productivity index, and the total market capitalization (in billions).

Overall, China appears the most advanced of all three emerging markets, while India is a distant second, followed by Brazil.

Table 2 reports the mean and standard deviation of all tested variables in both samples (1980-2008 and 1999-2008). China emerges as the favorite of the three sampled countries. For the 1980-2008 period, China has had the biggest economy, greatest GDP growth, better investment climate, less inflation, least corrupted, strongest energy consumption, highest life expectancy, highest literacy rates and more holders of graduate degrees, and Chinese people are the most receptive to foreign investors. Yet, China is the largest populated country on earth, less democratic, less political freedom and less protection to property rights compared to Brazil and India, and falls in between the other two countries in terms of GDP per capita. In the past 10 years, China maintained its position in all above variables, improved its ranking in terms of property rights protection, but went down a bit on the corruption perception index, while Brazil went ahead in literacy rates. With regard to the new variables observed in the past 10 years, China has had more exports, less currency risk, better debt rating, lower real interest rate (and therefore lower cost of financing), but higher debt levels and less dependence on services sector.

Table 3 demonstrates paired-correlation between all tested variables. In Panel A, we show correlation for the set of variables for the full sampling period (1980-2008), while Panel B reports correlation for all variables observed during the partial sampling period (1999-2008).

Table 2. Mean and Standard Deviation of Tested Variables by Country

Panel A: Full Sampling Period (1980-2008)

Variable	Brazil		India		China	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Net Inwards FDI	8.7545	9.6433	6.2621	15.8117	26.0793	24.4068
Market size (GDP)	1028.1379	436.4301	1732.8621	991.9373	3407.8621	2640.0940
GDP Growth Rate	0.0556	0.0347	0.0774	0.0631	0.1157	0.0841
Inflation %	1.1824	1.5001	0.0799	0.0310	0.0592	0.0658
GDP per Capita	6307	1823	1190	666	1863	1603
Investment Climate	25.17	3.66	36.10	6.06	45.48	6.15
Human Capital Development (Literacy Rate)	0.4	0.03	0.55	0.04	0.68	0.07
Education Level (College Degree Graduates)	0.80	0.06	0.86	0.05	0.91	0.04
Energy Consumption per Capita per \$1,000 (PPP) GDP	256.1655	86.0025	296.4655	142.5749	995.5255	708.2644
Life Expectancy at Birth	66.67	3.12	60.61	3.88	69.87	1.81
Population Size	156.0224	21.9905	896.0103	147.8022	1181.6241	108.2271
People Receptivity to Foreign Investors	11.69	10.34	10.72	10.15	17.66	12.16
Degree of Democracy Index	1.24	0.44	1.31	0.47	2.21	0.41
Economic Openness	26.6552	17.7166	29.8621	12.9580	1.0000	0.0000
IPRPI	3.6379	0.6366	3.8414	0.9937	3.4069	0.8053
CPI	2.8414	0.9417	2.5828	0.5078	3.3069	0.1438
CIVLIB	3.0690	0.6509	3.2069	0.4913	6.3793	0.4938

Panel B: Partial Sampling Period (1999-2008)

Variable	Brazil		India		China	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Net Inwards FDI	17.1500	7.5179	16.7800	24.2509	52.1900	12.8460
Market size (GDP)	1517.5000	285.9985	2911.2000	431.0509	6585.3000	1355.4331
GDP Growth Rate	0.0614	0.0382	0.0481	0.1019	0.0752	0.1364
Inflation%	0.0691	0.0316	0.0496	0.0151	0.0180	0.0238
Net Trade Balance	22.9168	18.4154	-34.5900	36.9073	98.3800	108.4071
Currency Rate Risk	22.80	2.66	24.60	0.70	29.60	0.84
Real Interest Rate	16.60	3.17	6.08	1.49	5.82	0.60
Sovereign Debt Credit Risk	22.30	1.42	24.30	0.67	28.00	1.56
National Debt	212.2100	26.6528	130.1100	52.6576	220.7600	105.7662
GDP per Capita	8300	1203	1942	524	3695	1302
Infrastructure as % of GDP	56.7500	5.6957	50.8400	4.5353	38.3400	5.7351
Investment Climate	27.80	2.57	40.60	5.74	44.80	9.07
Human Capital Development (Literacy Rate)	0.77	0.02	0.60	0.00	0.75	0.00
Education Level (College Degree Graduates)	0.86	0.01	0.91	0.00	0.95	0.02

Table 3. Correlation Analysis

Panel A: Full Sampling Period (1980-2008)

	FDINET	MKTSZ	INF	GDPG	GDPPC	HCD	EDUC	LIFE QUAL	LIF EXPT	POPSZ	RECE PTIV	POLSYS	DOEC OPEN	IPRPI	INV CLIM	CPI	CVI LIB	China	India
FDINET	1																		
MKTSZ	0.8461	1																	
INF	-0.2466	-0.2744	1																
GDPG	-0.1074	-0.0126	-0.1559	1															
GDPPC	0.2313	0.0576	0.2682	-0.3363	1														
HCD	0.4751	0.3520	0.2292	-0.1971	0.8251	1													
EDUC	0.6186	0.7584	-0.4753	0.0916	-0.1585	0.1078	1												
LIFEQUAL	0.8493	0.9513	-0.2339	-0.0145	0.0745	0.3989	0.7122	1											
LIFEXPT	0.5937	0.5474	-0.0258	0.0224	0.4335	0.7806	0.5277	0.6102	1										
POPSZ	0.4221	0.6111	-0.5079	0.2558	-0.6830	-0.3523	0.7876	0.5849	0.1908	1									
RECEPTIV	-0.4202	-0.4653	0.1824	0.2937	-0.4555	-0.3678	-0.4359	-0.3011	-0.2458	-0.0137	1								
POLSYS	0.0698	0.0726	-0.1813	0.4153	-0.4785	-0.1611	0.0490	0.2307	0.1241	0.4127	0.7377	1							
DOECOPEN	-0.1549	-0.1959	-0.1203	-0.3121	0.3805	-0.0074	-0.0782	-0.3656	-0.2485	-0.3737	-0.5436	-0.6998	1						
IPRPI	0.5340	0.5491	-0.2275	-0.3117	0.3968	0.3252	0.5238	0.3844	0.3469	0.1458	-0.8495	-0.6190	0.5517	1					
INVCLIM	0.4523	0.5883	-0.4602	0.2356	-0.4623	-0.1438	0.8112	0.5920	0.3683	0.8661	-0.0895	0.3329	-0.3553	0.1844	1				
CPI	0.5239	0.4149	-0.4165	-0.0293	0.3066	0.4378	0.6856	0.4238	0.6601	0.2779	-0.5085	-0.0909	0.1377	0.4694	0.4566	1			
CIVILIB	0.4303	0.4601	-0.2612	0.3238	-0.3785	0.1260	0.5606	0.5784	0.5370	0.6813	0.2040	0.6303	-0.7123	-0.1806	0.6894	0.4262	1		
China	0.4492	0.5025	-0.2684	0.3433	-0.3314	0.1607	0.6012	0.6344	0.6020	0.6950	0.2724	0.7115	-0.7162	-0.1890	0.7099	0.4113	0.9421	1	
India	-0.2698	-0.1202	-0.2548	-0.0577	-0.5088	-0.8036	0.0062	-0.2906	-0.7409	0.2408	-0.1668	-0.3162	0.4213	0.1812	0.0371	-0.3398	-0.4410	-0.5000	1

Panel B: Partial Sampling Period (1990-2008)

Panel B: Pa	FDINET	MKTSZ	INF	TRADBAL	CURATERSK	SOVGRSK	DEBT	GDPG	GDPPC	SERVICE	HCD	EDUC	LIFE QUAL	LIFEXPT	POPSZ	RECEPTIV
FDINET	1															
MKTSZ	0.7641	1														
INF	-0.2538	-0.586	1													
TRADBAL	0.461	0.584	-0.1553	1												
CURATERSK	0.7284	0.9413	-0.6513	0.5615	1											
SOVGRSK	0.7375	0.916	-0.5548	0.6025	0.9663	1										
DEBT	0.6351	0.3904	0.2048	0.7346	0.3464	0.4391	1									
GDPG	0.6798	0.819	-0.5784	0.3527	0.8534	0.8306	0.2868	1								
GDPPC	-0.107	-0.37	0.4276	0.2829	-0.3826	-0.3257	0.5419	-0.475	1							
SERVICE	-0.5217	-0.859	0.559	-0.426	-0.757	-0.6708	-0.0954	-0.622	0.4622	1						
HCD	0.2384	0.1387	-0.0282	0.5227	0.1081	0.0805	0.5368	-0.119	0.7709	-0.092	1					
EDUC	0.6738	0.9296	-0.5852	0.4962	0.9295	0.9088	0.2616	0.8701	-0.559	-0.795	-0.128	1				
LIFEQUAL	0.7833	0.9013	-0.3664	0.8387	0.8664	0.8852	0.6664	0.7199	-0.111	-0.708	0.2982	0.837	1			
LIFEXPT	0.5823	0.5317	-0.1921	0.5423	0.5702	0.5417	0.6156	0.3926	0.3751	-0.41	0.6857	0.3779	0.5868	1		
POPSZ	0.5435	0.799	-0.5866	0.1835	0.8203	0.7853	-0.0467	0.8229	-0.824	-0.726	-0.43	0.9113	0.6163	0.1226	1	
RECEPTIV	0.7231	0.8376	-0.4528	0.5474	0.7435	0.7029	0.4223	0.5808	-0.111	-0.739	0.4111	0.7322	0.7935	0.5879	0.5163	1
DOECOPEN	-0.7323	-0.913	0.6475	-0.5803	-0.9319	-0.8793	-0.3469	-0.727	0.2513	0.7879	-0.314	-0.819	-0.84	-0.592	-0.689	-0.826
IPRPI	0.0219	-0.194	0.3534	-0.292	-0.1037	0.0203	0.0941	0.0498	-0.136	0.3423	-0.544	-0.015	-0.166	-0.098	0.1033	-0.368
INVCLIM	0.4735	0.7286	-0.4169	0.2771	0.6919	0.6786	0.139	0.7199	-0.552	-0.706	-0.287	0.779	0.6038	0.1602	0.7702	0.4614
CPI	0.2495	-0.1708	0.4786	0.1934	-0.2537	-0.2122	0.5191	-0.287	0.7126	0.2053	0.6886	-0.414	0.041	0.3414	-0.559	0.0786
CIVILIB	0.6965	0.8785	-0.5727	0.5082	0.8563	0.7824	0.2223	0.675	-0.389	-0.817	0.2585	0.7831	0.7998	0.4901	0.7118	0.8151
Dummy China	0.7392	0.9197	-0.5959	0.6158	0.8977	0.8320	0.3647	0.6929	-0.224	-0.826	0.3894	0.7981	0.8675	0.6277	0.6543	0.8705
Dummy India	-0.3341	-0.2493	0.0526	-0.5645	-0.1890	-0.1548	-0.5500	0.0549	-0.68	0.1926	-0.982	0.0399	-0.393	-0.668	0.3259	-0.502

	DOECOPEN	IPRPI	INVCLIM	CPI	CIVILIB	China	India
DOECOPEN	1						
IPRPI	0.3002	1					
INVCLIM	-0.5646	0.0484	1				
CPI	0.0713	-0.21	-0.3944	1			
CIVILIB	-0.9157	-0.414	0.5016	-0.0143	1		
Dummy China	-0.9586	-0.422	0.533	0.0268	0.9688	1	
Dummy India	0.4103	0.6078	0.2116	-0.6979	-0.3906	-0.5	1

Some variables correlation analysis is missing from the table because they were dropped from analysis due to collinearity. More specifically, we spot any two variables with paired correlation greater than 50%, and then we drop one of them if it has high paired-correlation with at least six other variables. Other variables were dropped during the stepwise regression in order to achieve the most parsimonious model.

Table 4 reports the regression analysis of the full non-transformed model using the entire sampling period (1980-2008). The reported numbers for each variable are beta coefficients, t-statistics, p-value, collinearity statistics (tolerance and variance inflation factor VIF). The regression model significance is represented by F-statistics, p-value, and coefficient of determination R^2 . Also reported are Durbin-Watson statistics, Chi-Square test of heteroscedasticity and test of normality (namely skewness and kurtosis) along with their significance levels, and the test of model specification error using linktest (model specified correctly) and ovtest (no omitted variables). Panel A shows the results for the regression of the full sample model. Panel B shows the results of the stepwise regression. Panel C shows the block results for the nested regression. Statistical significance is denoted with double asterisks for the 5% significance level and one asterisk for the 10% significance level.

In table 4, we used the full raw data (1980-2008) to run a regression as shown on table 4 panel block A and the full model is significant at the 5% level. Our econometric test results, however, cast doubt on the raw data full model. The DW tests show that for China and India, there is statistical evidence that the error terms are not positively auto-correlated, which can imply a possible underestimation of the level of statistical significance in our model. Further, our heteroscedasticity test shows that the error variance is not constant over time, and this problem is statistically significant at the 5% level. One must note that the length of the sampling period spanning 28 years suggests that violation of homoscedasticity is not so surprising. Our normality tests show positively skewed data with a significance level of 7%. The distribution in these results is peaked and relatively flat, and so we have the possibility of a leptokurtic distribution (p-value is 0.27). Our model specification test shows that there is a specification error because the linktest was rejected.

Table 4. Full Multiple Regression Analysis Using Raw Data (1980 - 2009)

Regressing net FDI in Brazil, India and China for the sampling period between 1980 and 2009 on a set of 19 independent variables reflecting economic/financial variables (i.e., market size, inflation, GDP growth rate, GDP per capita, and services level); social variables (i.e., human capital development, level of education, quality of life, life expectancy at birth, population size, and host country people receptivity); political variables (i.e., political party system, degree of economic openness, international property rights perception index, investment climate, corruption perception index, and civil liberty). The reported numbers for each variable are beta coefficients, t-statistics, p-value, and collinearity statistics (tolerance and variance inflation factor VIF). The regression model significance is represented by F-statistics, p-value, and coefficient of determination R^2 . Also reported are Durbin-Watson statistics, Chi-Square test of heteroscedasticity and test of normality (namely skewness and kurtosis) along with their significance levels, and the test of model specification error using linktest (model specified correctly) and ovtest (no omitted variables). Panel A shows the results for the regression of full model. Panel B shows the results of the stepwise regression. Panel C shows the block results for the nested regression. The asterisks reflect the statistical significance.

Panel A: Full Regression Model – Full Sampling Period

	FDINET = 2531 + 0.0018 MKTSZ + 0.1807 INF - 10.1975 GDPG + 0.0063 GDPPC + 136.3881 HCD - 93.6175 EDUC + 0.0112 LIFEQUAL - 1.7525 LIFEPT + 0.1011 POPSZ + 0.6375 RECEPTIV + 2.0887 POLSYS - 0.2204 DOECOPEN + 7.2245 IPRI - 0.0252 INVCLIM + 14.9614 CPI + 1.5665 CIVILIB - 67.2365 China - 23.1601 India - 1.2878 Yr																			
	Coefficients	Std. Error	Coefficient Significance		Model Significance F-statistics (p-value)	Collinearity Diagnostics		R^2 Adj. R^2	DW	Chi-Square Test			Model Specification Hatsq T (p-value) F (p-value)							
			T-statistics	p-value		Tolerance	VIF			Heteroscedasticity (p-value)	Skewness (p-value)	Kurtosis (p-value)								
Constant	2531.0090	3836.939	0.6800	0.5120																
MKTSZ	0.0018	0.0036	0.5000	0.6150		53.4400	53.44													
Inflation	0.1897	1.5050	0.1300	0.9000		2.6500	2.65													
GDP growth rate	-10.1975	37.7340	-0.2700	0.7880		2.6600	2.66													
GDP per capita	0.0063	0.0063	1.1800	0.2410		235.1100	235.11													
Human Capacity Development	136.3881	79.8159	1.7100*	0.0920		59.5700	59.57													
Level of Education	-93.6175	71.9324	-1.3000	0.1980		25.9700	25.97													
Quality of Life	0.0112	0.0119	0.9400	0.3490		47.2900	47.29													
Life Expectancy	-1.7525	0.7699	2.2800**	0.0260		16.4400	16.44													
Population size	0.1011	0.0638	1.5800*	0.1180		940.1900	940.19													
Host country people receptivity	0.6375	0.3639	1.7500*	0.0840	19.81** (0.0000)	19.2500	19.25	0.8489 0.8060												
Political system of government	2.0887	5.1116	0.4100	0.6840		11.6100	11.61													
Degree of economic openness	-0.2204	0.1494	-1.4800	0.1450		8.3800	8.38													
International property rights perception Index	7.2245	5.0199	1.4400	0.1550		20.2500	20.25													
Investment Climate	-0.0252	0.2297	-0.1100	0.9130		5.9800	5.98													
Corruption perception index	14.9614	5.1970	2.8800**	0.0050		14.6600	14.66													
Civil Liberty	1.5665	2.5797	0.6100	0.5460		20.4300	20.43													
Dummy China	-67.2365	47.3627	-1.4200	0.1600		581.8900	581.89													
Dummy India	-23.1601	31.9028	-0.7300	0.4700		264.0100	264.01													
Year	-1.2878	1.9626	-0.6600	0.5140		314.7200	314.72													

Panel B: Stepwise Model – Full Sampling Period

FDINET = -25.4725 + 0.0412 POPSZ + 178.0455 HCD -111.0386 EDUC +8.2822 IPRPI- 1.4792 LIFEPT + 0.8576 RECEPTIV + 15.6639 CPI – 0.23962 DOECOPEN + 0.02316LIFEQUAL - 30.6393 China													
	Coefficients	Std. Error	Coefficient Significance		Model Significance F-statistics (p-value)	Collinearity Diagnostics		R ² Adj. R ²	DW	Chi-Square Test			Model Specification Hatsq T(p-value) F (p-value)
			T-statistics	p-value		Tolerance	VIF			Heteroscedasticity (p-value)	Skewness (p-value)	Kurtosis (p-value)	
Constant	-25.4725	56.0183	-0.45	0.6510	53.25** (0.0000)			0.8440 8.2351	Brazil 1.9970 China 1.1971 India 1.6898	85.64** (0.0305)	26.63** (0.003)	1.13** (0.2874)	5.4500** (0.0000) 637.8** (0.0000)
Population size	0.0411589	0.0200	2.06	0.0430**		0.0217	46.1						
Human Capital Development	178.0455	48.0114	3.71	0.0000**		0.0386	25.91						
Level of Education	-111.0386	42.0187	-2.64	0.0100**		0.086	11.62						
International property rights perception Index	8.282208	4.5028	1.84	0.0700*		0.0891	11.22						
Life Expectancy	-1.479215	0.7658	-1.93	0.0570*		0.0944	10.59						
Host country people receptivity	0.8576397	0.3601	2.38	0.0200**		0.0969	10.32						
Corruption Perception Index	15.66397	4.2062	3.72	0.0000**		0.16	6.25						
Degree of Economic Openness	-0.23962	0.0973	-2.46	0.0160**		0.1657	6.04						
Quality of Life	0.231676	0.0042	5.46	0.0000**		0.1768	5.66						
Dummy China	-30.63926	20.9713	-1.4600	0.1480		0.0199	50.38						

Panel C: Nested Regression Block Analysis – Full Sampling Period

FDINET = 0.7657 Block 1 + 0.0675 Block 2 + 0.0109 Block 3 + 0.0004 Block 4

Block	Block Significance		R ²	Change in R ²
	F-statistics	p-value		
1. Human Capital Development, Level of Education, Quality of Life, Life Expectancy, Population Size, People Receptivity.	43.56	0.0000	0.7656	
2. Human Capital Development, Level of Education, Quality of Life, Life Expectancy, Population Size, People Receptivity, Degree of economic openness, International property rights perception Index, Corruption perception index, Constant	10.37	0.0000	0.8331	0.0675
3. Human Capital Development, Level of Education, Quality of Life, Life Expectancy, Population Size, People Receptivity, Degree of economic openness, International property rights perception Index, Corruption perception index, Dummy China, Constant	5.31	0.0239	0.8440	0.0109
4. Human Capital Development, Level of Education, Quality of Life, Life Expectancy, Population Size, People Receptivity, Degree of economic openness, International property rights perception Index, Corruption perception index, Dummy China, Year, Constant	0.17	0.6813	0.8444	0.0004

** and * denotes rejection significance at the 5% level and 10% level, respectively.

Next we run stepwise regression, and we are left with 10 variables (from 19), nine of which are statistically significant as shown in Table 4. However, there was still some collinearity, and only 8 variables were still statistically significant after we corrected for heteroscedasticity.

More specifically, the results suggest that a host country with large population, skilled labor (measured by literacy rate, proxying for human capital development), and people receptivity to foreign investors attracts more inward FDI, and that these coefficients are positive and significant at the 5 percent level (or less). We also find that life quality (measured by energy consumption) and the international property rights perception index are both positive and significant at 1% and 7% respectively. Also intriguing is the corruption perception index which is significant at 5% with a positive coefficient. This seems to suggest that foreign investors would prefer to invest in countries where they can influence many levels of the governments. On the contrary, a country with a high percentage of aging groups (as reflected by high life expectancy at birth) does not favor inward FDI (coefficient is significant and negative at the 6% level). The coefficient for holding graduate degrees is significant but has negative reflection on FDI suggesting that foreign investors are more interested in skilled blue color type of labor. Also significant at the 2% level is the degree of economic openness with a negative coefficient, which suggests that foreign investors prefer such countries because of limited competition from other sources of inward FDI. This further supports our earlier observation that corruption would aid more inward FDI. Finally, we did a nested regression as shown on table 4 Panel c where results show that social factor variables followed by political variables contributed to a higher percentage increase of inward FDI.

Our regression results for the transformed data are reported in Table 5. Transformation was based on the correlation results reported in Table 3 (Panel A). The results show that market size (GDP), is negatively associated with net FDI, while GDP growth rate and GDP per capita are positively associated with net FDI and all three are statistically significant explanatory variables (significant at the 5 percent level). This finding implies that foreign investors are attracted by relatively smaller market size with a higher growth rate potential and good GDP per capita as shown in table 5 panel A. Population size is significant at 7% with a negative coefficient. This suggests that countries with very large populations can deter foreign investors. Yet China and India, which have large populations, still attract some of the largest amounts of FDI. We concluded that in this case, population size cannot be looked at in isolation of other factors when analyzing the data, because there must be a reason why China and India have defied this hypothesis. The political system of the government is positively associated with FDI and is significant at 5%. The positive coefficient implies that a less democratic government can attract more inward FDI, reflecting the foreign investors' desire to deal with decisive political hierarchy. The host country people receptivity has a negative coefficient suggesting that host countries people receptivity to foreign investors is not pre-condition to attract inward FDI unless the political system of government favors FDI.

Table 5. Full Multiple Regression Analysis Using Transformed Data (1980 – 2008)

Regressing net FDI in Brazil, India and China for the sampling period between 1980 and 2009 on a set of transformed independent variables economic/financial variables (i.e., market size, inflation, GDP growth rate, GDP per capita, and services level); social variables (i.e., human capital development, level of education, quality of life, life expectancy at birth, population size, and host country people receptivity); political variables (i.e., political party system, degree of economic openness, international property rights perception index, investment climate, corruption perception index, and civil liberty). The reported numbers for each variable are beta coefficients, t-statistics, p-value, collinearity statistics (tolerance and variance inflation factor VIF). The regression model significance is represented by F-statistics, p-value, and coefficient of determination R². Also reported are Durbin-Watson statistics, Chi-Square test of heteroscedasticity and test of normality (namely skewness and kurtosis) along with their significance levels, and the test of model specification error using linktest (model specified correctly) and ovtest (no omitted variables). Panel A shows the results for the regression of full model. Panel B shows the results of the stepwise regression. Panel C shows the block results for the nested regression. The asterisks reflect the statistical significance.

Panel A: Full Regression Model – Full Sampling Period

$$FDINET = -16.0289 - 373.1807 MKTSZ - 1.2458 INF + 0.0493 GDGP + 306.5682 GDPPC + 29.7833 HCD - 32.1663 LIFEQUAL - 44.3486 LIFEXPT - 719.6817 POPSZ - 7.1930 RECEPTIV + 8.0598 POLSYS - 0.2783 DOECOPEN + 4.2325 IPRPI - 5.5370 INVCLIM - 1.5953CPI - 5.7039 China - 1.2644 India$$

	Coefficients	Std. Error	Coefficient Significance		Model Significance	Model Significance		R ² Adj. R ²	DW	Chi-Square Test			Model Specification
			T-statistics	p-value		F-statistics (p-value)	Tolerance			VIF	Heteroscedasticity (p-value)	Skewness (p-value)	
Constant	-16.0289	42.9136	-0.37	0.7100	18.75 (0.0000)			0.8174 0.7738	Brazil 1.7925 China 1.7716 India 1.6321	84** (0.4487)**	11.36** (0.7869)**	2.49** (0.1143)**	1.68** (0.096) 189.09** (0.0000)
MKTSZ	-373.1807	69.3660	-5.38	0.0000**		20.8	20.8						
Inflation	-1.2458	1.3568	-0.92	0.3620		1.8	1.8						
GDP growth rate	0.0493	0.0098	5.02	0.0000**		12.94	12.94						
GDP per capita	306.5682	70.1989	4.37	0.0000**		9.01	9.01						
Human Capital Development	29.7833	54.6153	0.55	0.5870		22.61	22.61						
Quality of Life	-32.1663	36.6972	-0.88	0.3840		1.61	1.61						
Life Expectancy	-44.3486	69.7111	-0.64	0.5270		1.11	1.11						
Population size	-719.6817	392.0173	-1.84	0.0710*		4.03	4.03						
Host country people receptivity	-7.1930	1.5624	-4.6	0.0000**		3.03	3.03						
Political system of government	8.0598	3.9148	2.06	0.0430**		5.31	5.31						
Degree of economic openness	-0.2783	1.3052	-0.21	0.8320		1.13	1.13						
International property rights perception Index	4.2325	3.1431	1.35	0.1830		6.21	6.21						
Investment Climate	-5.5370	6.3740	-0.87	0.3880		1.12	1.12						
Corruption perception index	-1.5953	14.1984	-0.11	0.9110		1.36	1.36						
Dummy China	-5.7039	7.15340	-0.8	0.4280		10.79	10.79						
Dummy India	-1.2644	10.6781	-0.12	0.9060	24.03	24.03							

Panel B: Stepwise Model – Full Sampling Period

FDINET = -27.4754 - 326.6709 MKTSZ + 7.3993 POLSYS + 0.0420 GDPG + 252.1255 GDPPC + 31.0380 HCD + 6.0698 IPRPI - 6.3136 RECEPTIV - 670.0992 OPSZ													
	Coefficients	Std. Error	Coefficient Significance		Model Significance	Collinearity Diagnostics		R ² Adj. R ²	DW	Chi-Square Test			Model Specification
			T-statistics	p-value		F-statistics (p-value)	Tolerance			VIF	Heteroscedasticity (p-value)	Skewness (p-value)	
Constant	-27.4754	18.9690	-1.450	0.1520	39.21 (0.0000)			0.8070 0.7865	Brazil 0.9483 China 1.0096 India 1.0096	75.77*** (0.0021)**	3.84** (0.8713)**	1.74** (0.1877)**	9.92** (0.000) 228.52** (0.0000)
MKTSZ	-326.6709	50.7668	-6.430	0.0000**		0.0848	11.80						
GDP growth rate	0.0420	0.0070	6.000	0.0000**		0.144	6.94						
GDP per capita	252.1255	54.7160	4.610	0.0000**		0.1725	5.80						
Human Capital Development	31.0380	15.1854	2.040	0.0440**		0.5402	1.85						
Population size	-670.0992	328.8815	-2.040	0.0450**		0.3332	3.00						
Political system of government	7.3993	3.2915	2.250	0.0280**		0.2514	3.98						
International property rights perception Index	6.0698	2.4115	2.520	0.0140**		0.2583	3.87						
Host country people receptivity	-6.3136	1.3094	-4.820	0.0000**	0.4444	2.25							

Panel C: Nested Regression Block Analysis – Full Sampling Period

FDINET= 0.5675 Block 1 + 0.2224 Block 2 + 0.0171 Block 3

Block	Block Significance		R ²	Change in R ²
	F-statistics	p-value		
1. MKTSZ, GDP Growth Rate, GDP per Capita, Constant	34.99	0.0000	0.5675	0.5675
2. MKTSZ, GDP Growth Rate, GDP per Capita, Population Size, Host Country People Perception, Human Capital Development, Constant	27.17	0.0000	0.7899	0.2224
3. MKTSZ, GDP Growth Rate, GDP per Capita, Population Size, Host Country People Perception, Human Capital Development, Political System of Government, International Property Rights Perception Index, Constant	3.34	0.0409	0.8070	0.0172

** and * denotes rejection significance at the 5% level and 10% level, respectively.

Our normality tests show an improved result as compared with table 4 – Panel A. We now have a lower variation value (i.e., lower kurtosis p-value) to 0.1143 and our skewness p-value has dropped to 11.36 down from 26.3. However, the multicollinearity problem is strong in this regression, thus rendering any closures less conclusive. In addition, our model specification test failed to reject the assumption that our specification was correct and this is a proof that our model implying weak test results.

In table 5 panel B, stepwise regression results reconfirm all the results of the full model reported in Panel A; i.e., market size (GDP), GDP growth rate, GDP per capita, political system, population size, and people receptivity are all significant at the 5 percent level and have the same sign as before. Two additional variables are now significant, namely human capital development (literacy rate) and international property rights perception index and both have positive coefficients. What has changed in the stepwise regression is the normality test which has improved and the multicollinearity problem disappeared where the tolerance test value is below 1, and variance inflation factor is below 10) for 7 of the 8 significant explanatory variables. Also, we do not have a model specification error in our test.

In table 5 Panel C, the nested regression block analysis results show that the economic/financial variables contributed the lion's share in determining the percentage increase of inward FDI at R² of 57%, followed by social variables at 22%, and little contributions from political variables (only 1%).

We also considered data for 10 years only because we had more complete data for economic/financial variables in the past 10 year period. So we repeat the same steps done in Table 4 and 5 reported earlier. Using the partial raw data set (i.e., data for the 1999-2008 period) but with six additional new variables, Table 6 demonstrates that inflation and level of education are significant at the 10% level. Inflation coefficient is negative, which implies that high inflation rate in a country would discourage foreign investors from venturing in these countries. However, level of education has a positive coefficient, which suggests that an educated workforce would provide the necessary skills required for the job market. Corruption perception index also has significance at 5% with a positive coefficient. Again this would suggest that a higher level of corruption in the government would attract inward FDI because the investors have the

opportunity to influence certain government decisions in their favor. GDP per capita and degree of economic openness are both conducive to attract more inward FDI (both are significant at 5% and are positive). However, there is significant collinearity problem (the tolerance and variance levels are high) even though the heteroscedasticity and normality tests are acceptable. Due to collinearity, we could not achieve autocorrelation tests and stepwise regression tests. So we transformed the data to correct for collinearity.

Table 7 reports the results of partial data set after transforming some variables to correct for collinearity and heteroscedasticity. The transformed data in Panel A showed inflation, international property rights, degree of economic openness, and the constant all significant at the 5% level with a positive coefficient. On the contrary, human capital development and the dummy variable China had negative coefficients that are significant at 5%, while the sovereign debt risk is significant at 10% with a negative coefficient. These results mean that an open economic environment, strong international property rights protection, despite high inflation in local currency and low sovereign debt risk attracts more inward FDI. Surprisingly, a high literacy rate (HCD) and the host country being China has a negative influence on inward FDI. Collinearity, however, was still a problem even after transforming the data, which can distort the interpretation of the results. On the other hand, the model significance and heteroscedasticity tests are acceptable.

Table 6. Partial Multiple Regression Analysis Using Raw Data (1999-2009)

Regressing net FDI in Brazil, India and China for the sampling period between 1999 and 2009 on a set of 31 independent variables reflecting economic/financial variables (i.e., market size, inflation, trade balance, currency exchange risk, sovereign debt risk, interest rate, national debt, GDP growth rate, GDP per capita, and services level), social variables (i.e., human capital development, level of education, quality of life, life expectancy at birth, population size, and host country people receptivity), political variables (i.e., political party system, degree of economic openness, international property rights perception index, investment climate, corruption perception index, civil liberty). The reported numbers for each variable are beta coefficients, t-statistics, p-value, collinearity statistics (tolerance and variance inflation factor VIF). The regression model significance is represented by F-statistics, p-value, coefficient of determination R^2 , Durbin-Watson statistics, chi-square test of heteroscedasticity and normality (skewness and kurtosis), and test of model specification error using linktest (model specified correctly) and ovtest (no omitted variables). Panel A shows the results for the regression of full model. Panel B shows the results of the stepwise regression. Block C shows the block results for the nested regression. The asterisks reflect the statistical significance.

FDINET = -535.5122 + 0.0068 MKTSZ - 450.7640 INF + 0.1771 TRADBAL - 0.3654 CURATERSK - 1.0565 REALRATE + 1.4402 SOVGRSK + 0.5708 DEBT - 7.2494 GDPG - 0.0393 GDPPC + 0.9673 SERVICE - 527.3587 HCD + 803.9130 EDUC - 0.0445 LIFEQUAL + 4.3274 LIFEXPT - 0.1881 POPSZ - 0.4747 RECEPTIV - 0.7340 DOECOPEN + 18.8896 IPRPI - 0.0060 INVCLIM + 44.1780 CPI - 12.4029 CIVILIB - 3.5279 China - 135.3971 India

	Coefficients	Std. Error	Coefficient Significance		Model Significance F-statistics (p-value)	Collinearity Diagnostics		R^2 Adj. R^2	DW	Chi-Square Test			Model Specification Hatsq T (p-value) F (p-value)
			T-statistics	p-value		Tolerance	VIF			Heteroscedasticity (p-value)	Skewness (p-value)	Kurtosis (p-value)	
Constant	-532.5122	358.5105	-1.4800	0.189	14.04** (0.0017)**			0.9818 0.9118	Brazil China India	30 (0.4140)	19.11 (0.8946)	0.08 (0.7839)	0.46 (0.65) 732.11 (0.0000)**
MKTSZ	0.0068	0.0057	1.1800	0.282		0.0075	107.5100						
Inflation	-450.7640	225.6767	-2.0000	0.093*		0.0190	31.8900						
Trade Balance	0.1771	0.2732	0.6500	0.541		0.0028	331.2500						
Currency Exchange Risk	-0.3654	1.9207	-0.1900	0.855		0.0395	25.1600						
Interest Rate	-1.0565	2.1249	-0.5000	0.637		0.0116	83.0300						
Sovereign Debt Risk	1.4402	4.8270	0.3100	0.766		0.0103	95.6700						
National Debt	0.5708	0.3185	1.7900	0.123		0.0017	390.5300						
GDP Growth Rate	-7.2494	132.2304	-0.0500	0.958		0.0864	11.5700						
GDP per Capita	-0.0393	0.0131	-2.9900	0.024**		0.0004	900.3700						
Services Level	0.9673	0.8528	1.1300	0.300		0.0211	39.0400						
Human Capital Development	-527.3587	874.3116	-0.7800	0.464		0.0005	1897.5800						
Level of education	803.9130	408.0585	1.9700	0.096*		0.0038	160.6900						
Quality of Life	-0.0445	0.0670	-0.6800	0.532		0.0004	2370.8800						
Life Expectancy	4.3274	3.3348	1.3000	0.242		0.0065	119.4600						
Population Size	-0.1881	0.1482	-1.2900	0.246		0.0002	3142.3500						
Host Country People receptivity	-0.4747	2.9799	-0.1600	0.879		0.0337	29.5300						
Degree of Economic openness	-0.7430	0.3948	-1.8800	0.109		0.0126	49.9000						
International Property Rights Perception Index	18.8896	15.9571	1.1800	0.281		0.0225	36.1000						
Investment Climate	0.0060	0.3795	0.0200	0.988		0.1233	8.1100						
Corruption Perception Index	44.1780	17.4182	2.5400	0.044**		0.0159	30.3100						
Civil Liberty	-12.4029	8.6452	-1.4300	0.201		0.0055	135.8300						
Dummy China	-3.5279	147.8228	-0.0200	0.982		0.0000	3078.5600						
Dummy India	-135.3971	178.8107	-0.7600	0.478		0.0002	4504.5500						

** and * denotes rejection significance at the 5% level and 10% level, respectively.

Table 7. Partial Multiple Regression Analysis Using Transformed Data (1999 – 2009)

Regressing net FDI in Brazil, India and China for the sampling period between 1999 and 2009 on a set of transformed independent variables reflecting economic/financial variables (i.e., market size, inflation, trade balance, currency exchange risk, sovereign debt risk, interest rate, national debt, GDP growth rate, GDP per capita, and services level), social variables (i.e., human capital development, level of education, quality of life, life expectancy at birth, population size, and host country people receptivity), political variables (i.e., political party system, degree of economic openness, international property rights perception index, investment climate, corruption perception index, civil liberty). The reported numbers for each variable are beta coefficients, t-statistics, p-value, collinearity statistics (tolerance and variance inflation factor VIF). The regression model significance is represented by F-statistics, p-value, coefficient of determination R², Durbin-Watson statistics, chi-square test of heteroscedasticity and normality (skewness and kurtosis), and test of model specification error using linktest (model specified correctly) and wtest (no omitted variables). Panel A shows the results for the regression of full model. Panel B shows the results of the stepwise regression. Block C shows the block results for the nested regression. The asterisks reflect the statistical significance.

Panel A: Partial Multiple Regression-Transformed data

FDINET = 598.4446 + 66.6617 MKTSZ + 1.5333 INF - 3.6403 TRADBAL + 73.9235 CURATERSK - 0.1099 REALRATE - 171.9060 SOVGRSK - 48.7060 DEBT + 39.7194 GDPG + 0.0029 GDPPC - 1083.5630 HCD + 224.1582 LIFEQUAL - 301.9694 LIFEEXPT + 2118.9320 POPSZ - 4.3019 RECEPCLIM + 45.5476 IPRPI - 10.8724 INVCLIM + 0.2595 CPI - 0.2330 CIVILIB - 207.6737 China + 25.5858 India

	Coefficients	Std. Error	Coefficient Significance		Model Significance	Collinearity Diagnostics		R ² Adj. R ²	Chi-Square Test		
			T-statistics	p-value		Tolerance	VIF		Heteroscedasticity (p-value)	Skewness (p-value)	Kurtosis (p-value)
Constant	598.4446	219.0889	2.7300	0.0410**		0.0161	62.1500				
MKTSZ	66.6617	49.8055	1.3400	0.2380		0.0571	12.8900				
Inflation	1.5333	0.2662	5.7600	0.0020**		0.0348	3.7600				
Trade Balance	-3.6403	1.8654	-1.9500	0.1080		0.1562	3.6300				
Currency exchange risk	73.9235	48.5357	1.5200	0.1880		0.1362	5.0100				
Interest rate	-0.1099	18.1914	-0.0100	0.9950		0.2448	4.0800				
Sovereign debt risk	-171.9060	73.3641	-2.3400	0.0660*		0.1286	3.7000				
National Debt	-48.7060	25.4842	-1.9100	0.1140		0.1362	4.2400				
GDP growth rate	39.7194	212.7013	0.1900	0.8590		0.0892	11.1300				
GDP per capita	0.0029	0.0058	0.5000	0.6390		0.0059	160.6200	0.8170			
Human Capital Development	-1083.5630	296.6567	-3.6500	0.0150**	18.75** (0.0000)	0.0009	299.0800	0.7738			
Quality of life	224.1582	134.3909	1.6700	0.1560		0.0168	38.2200				
Life expectancy	-301.9694	147.9243	-2.0400	0.0970		0.0741	7.3600				
Population size	2118.9320	1068.6370	1.9800	0.1040		0.0295	18.9800				
Host country people receptivity	-4.3019	5.9491	-0.7200	0.5020		0.2116	4.2800				
Degree of economic openness	46.1726	17.1011	2.7000	0.0430**		0.1206	3.3700				
International property rights perception index	45.5476	11.6748	3.9000	0.0110**		0.0147	16.7700				
Investment Climate	-10.8724	13.6815	-0.7900	0.4630		0.1152	7.7100				
Corruption perception index	0.2595	90.2173	0	0.9980		0.0711	14.0600				
Civil Liberty	-0.2330	9.5220	-0.0200	0.9810		0.0069	144.7000				
Dummy India	25.5858	47.5619	0.5400	0.6140		0.0033	514.4500				
Dummy China	-207.6737	63.8357	-3.2500	0.0230**		0.0006	285.5800				

Panel B: Stepwise Model – Full Sampling Period

FDINET = -122.1946 + 90.6060 MKTSZ + 0.9899 INF – 4.8193 TRADBAL + 29.6651 IPRPI – 159.9356 SOVGRSK + 296.2731 LIFEQUAL + 55.38766 DOECOPEN - 29.45257 India													
	Coefficients	Std. Error	Coefficient Significance		Model Significance F-statistics (p-value)	Collinearity Diagnostics		Chi-Square Test					
			T-statistics	p-value		Tolerance	VIF	R ² Adj. R ²	Heteroscedasticity (p-value)	Skewness (p-value)	Kurtosis (p-value)		
Constant	-122.1946	34.1255	-3.58	0.0020**									
MKTSZ	90.60603	29.53912	3.07	0.0070**		0.3626	1.3900						
Inflation	0.989951	0.26067	3.8	0.0010**		0.3621	1.11						
Trade Balance	-4.819284	2.066911	-2.33	0.0320**	9.67** (0.0000)**	0.3785	1.3700			0.8113	27 (0.4093)**	5.90 (0.6586)	1.73 (0.1881)
Sovereign debt risk	-159.9356	81.45682	-1.96	0.0650*		0.4262	1.4000			0.7275			
Quality of Life	296.2731	49.49608	5.99	0.0000**		0.1095	1.5900						
International property rights perception index	29.66506	7.736984	3.83	0.0010**		0.1909	2.2600						
Degree of economic openness	55.38766	19.13471	2.89	0.0100**		0.3806	1.300						
Dummy India	-29.45257	7.70045	-3.82	0.0010**		0.1736	2.300						

Panel C: Nested Regression Block Analysis – Full Sampling Period

FDINET = 0.2583 Block 1 + 0.4907 Block 2 + 0.0325 Block 3 + 0.0527 Block 4

Block	Block Significance		R ²	Change in R ²
	F-statistics	p-value		
1. MKTSZ, Inflation, Trade Balance, Currency exchange risk, Sovereign debt risk, National Debt.	1.1600	0.3655	0.2583	0.2583
2. MKTSZ, Inflation, Trade Balance, Currency exchange risk, Sovereign debt risk, National Debt, Quality of Life, Life Expectancy, Population Size, Host country people receptivity.	7.82	0.0011	0.7489	0.4907
3. MKTSZ, Inflation, Trade Balance, Currency exchange risk, Sovereign debt risk, National Debt, Quality of Life, Life Expectancy, Population Size, Host country people receptivity, International property rights perception index, Investment Climate, Degree of economic openness.	0.64	0.6007	0.0325	0.0325
4. MKTSZ, Inflation, Trade Balance, Currency exchange risk, Sovereign debt risk, National Debt, Quality of Life, Life Expectancy, Population Size, Host country people receptivity, International property rights perception index, Investment Climate, Degree of economic openness, Dummy India	3.81	0.0745	0.8341	0.0527

** and * denotes rejection significance at the 5% level and 10% level, respectively.

Next, we conduct stepwise regression as shown on table 7 panel B to correct for collinearity. Stepwise yields a much better tolerance and variance inflation results, i.e., the data is free from any multicollinearity problem. Normality was also fine. Four financial variables, namely market size (i.e., GDP), inflation, net trade balance (i.e., exports – imports), and sovereign debt risk are all significant at 5% with a positive coefficient for market size and inflation, but a negative coefficient for trade balance and sovereign debt risk. The only significant social variable (at the 5% level) is life quality and is positive. The two political variables international property rights index and degree of economic openness are significant at 5% and are both positive. These results mean that a host country with a strong economy with large GDP, low net trade balance, strong country credit rating, good living standards with high consumption of energy, and where foreign investors can enjoy solid property protection and an open economy are characteristics of countries that are successful in attracting inward FDI even if the host country suffer from high inflation. India was, however, at a disadvantage compared to Brazil and China. The results of the nested regression for all transformed variables displayed in Table 7 - Panel C demonstrate that the financial and social variables contribute most to the attraction of inward FDI (26% and 49%, respectively) when compared with political variables (only 3%).

5. CONCLUSIONS

The main goal of this paper is to identify the relevant set of incentives which have made Brazil, China and India the penchant for foreign direct investment. Of the three competing theories reported in the literature (namely, the market imperfection theory, the internationalization theory, and the eclectic approach to international production), this paper focuses on the eclectic approach where FDI are motivated by ownership, internationalization, and location advantages.

Our paper expands Mathur and Singh (2007) analysis to include a larger set of explanatory variables, especially to reflect the effect of financial markets and economic conditions (such as currency exchange rate risk, level of real interest rate, size of national debt, sovereign credit rating risk, and inflation). We also introduce new social variables (such as life expectancy at birth, people receptivity to foreign investors, and the number of graduate degree holders) and new political variables (host country level of restriction on capital repatriation). More, we use a longer sampling period (1980-2008)., We also ensure that our results are free from econometric problems.

Regressing net FDI inflows on all financial, social and political variables during the full data series (1980-2008), and after controlling for severe econometric problems, the nested block regression concludes that the economic/financial variables account for 57% of the change in net inward foreign direct investment, followed by social variables (22%) and political variables (1%). This particular finding constitutes our major contribution to the FDI determinants literature. The nested regression shows that for the past ten-year data series (1999-2008), one social variable (life quality proxied by energy consumption) emerges first followed by financial variables (R^2 is 49% for life quality and 26% for financials, respectively), and India appear to lag behind China and Brazil. Also, controlling for various econometric problems proved to be crucial to our analysis.

For the 1980-2008 sample, we conclude that a country with strong economic (GDP) growth, strong purchasing power (measured by GDP per capita), abundant skilled blue color labor (measured by literacy rate, proxying for human capital development), less democratic but with strong international property rights protection, will attract large FDI, even if the host country economy size (GDP) is modest and despite the lack of receptivity by local people. Intriguingly, democracy is not a pre-condition for foreign investors, which suggests that they would prefer to invest in countries where they can influence the government's decision making. Strong single handed governments that can protect property rights can substitute for favorable investment climate, high degree of economic openness, restrictions on capital repatriation, and poor ranking on the corruption perception index.

The past ten years data series (1999-2008) demonstrates that a host country with strong financial characteristics (sizable GDP economy, low net trade balance, strong country credit rating), strong social endorsement represented by good living standards (high consumption of energy), and where foreign investors can enjoy solid property protection and an open economy are characteristics of countries that are successful in attracting inward FDI, even if the host country suffer from high inflation. India was, however, at a disadvantage compared to Brazil and China.

Based on the above, we recommend that countries which intend to attract more inward foreign direct investment may consider focusing more on the financial incentives to be able to optimize the amount of FDI flowing in from foreign investors.

However, our results are not without limitations. Our sample is limited to three of the most populated countries that had attracted significant FDIs in the past two decades. Considering tests of smaller or less

attractive countries would be A larger set of countries can be useful before any final conclusions can be drawn.

Appendix

Variable Symbol & Definition	Database Source
FDINET - Net Inward Foreign Direct Investment	UNCTAD (World Bank)
MKTSZ - Market Size (GDP)	World Bank, World Development Report 1980-2008
GDPG - GDP growth Rate	World Bank, World Development Report 1980-2008
TRADBAL - Net Trade Balance	International Financial Statistics Yearbook 1980-2008.
INF - Inflation Rate	International Financial Statistics Yearbook 1980-2008.
SERVICE - Infrastructure as % of GDP	World Bank, World Development Report 1980-2008.
GDPPC - Gross Domestic Product Per Capita	http://www.indexmundi.com/
REALRATE - Real interest Rate	http://www.tradingeconomics.com/Economics/Stock-Market.aspx?Symbol=BRL
CURATERSK - Currency Rate Risk	http://www.ifecorp.com/Papers-PDFs/Noyen1099.pdf
DEBT - National debt	www.NationMaster.com
SOVGRSK - Sovereign Debt Credit Risk	Fitch Rating
INVCLIM - Investment Climate	http://globaleedge.msu.edu/resourceDesk/mpi
LIFEQUAL - Energy Consumption per Capita per \$1,000 (PPP) GDP Year Value	World Development Report 1980-2008
LIFEXPT - Average Number of Years to be Lived by a Group of People Born in the Same Year	http://www.indexmundi.com/g/g.aspx?c=in&v=71
HCD – Human Capital Development (literacy rate)	http://www.indexmundi.com
EDUC - College Degree Graduates	www.NationMaster.com
POPSZ - Population Size	www.indexmundi.com
RECEPTIV - Receptivity to Foreign Investors	http://globaleedge.msu.edu/resourceDesk/mpi
POLSYS - Democracy Index	World Bank's Database of Political Institutions
CPI - Corruption Perception Index	www.transparency.org
IPRPI - International Property Rights Perception Index	The Fraser Institute's Economic Freedom of the World Index (various years)
CIVILIB - Level of Civil Liberty	http://earthtrends.wri.org/text/environmental-governance/variable-508.html
DOECOPEN - Country Degree of Economic Openness	http://globaleedge.msu.edu/resourceDesk/mpi
RESTCAP - Restriction on Foreign Investment Capital Repatriation	www.freetheworld.com and The IMF's Annual Report on Exchange Arrangements and Exchange Restrictions
LBRPRD - Labor Productivity (value added per worker)	Industry and Development Report, Global Report 2006/2007, United Nations Industrial Development Organization, Vienna, 2003
MKTCPT - Total Stock Market Capitalization as % of GDP	http://www.indexmundi.com/
URBAN - The Number of Cities in the Host Country with More Than 500,000 Inhabitants	The World Bank World Development Reports (1980-2008, 1980-2007, 1980-2005)
GEOPRX - Geographic Proximity of Host Country to Country of FDI Origin	Air Distances Manual, International Air Transport Association IAL- 2008.
WESTFDI - Number of Western FDI country sources.	UNCTAD (World Bank)
SZNDINSTLND - Size (i.e., AREA) of Zoned Industrial Land	CIA world fact book
AGRCLNDSZ - Agricultural Land Size (i.e., AREA)	CIA world fact book
FINVTAX - Foreign Investor Tax Rate	Nationmaster.comforeign-companies-tax-holidays-in-china.html

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