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CAN BETTER INSTITUTIONS ATTRACT MORE FOREIGN DIRECT INVESTMENT (FDI)? EVIDENCE FROM DEVELOPING COUNTRIES

Abstract

This paper tries to fill up the gap in the literature explaining Foreign Direct Investment (FDI) flows in developing countries by emphasising the role or quality of institutions, often unaddressed in current empiricism, yet of paramount importance. Control of corruption, better rule of law, political stability and better freedom of expression of the media are used as indicators of good governance and institutional quality in this research endeavour. A selection of 45 developing countries in the African, Latin American and Asian regions is undertaken in our empirical analysis. After having controlled for the usual variables and performed a battery of robustness tests, under multiple scenarios, the findings primarily prompt us to conclude that the quality of some institutions in the host country has an enormous impact on inward FDI. Furthermore, as the different institutional indicators are complementary to each other, their combined effect is found to reinforce the level of FDI inflows to the host country.

Key words:

Foreign Direct Investment, International Finance, Institutions, Developing Countries.

JEL: D730, F300, G280, G320.

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1. Introduction

The successful Singaporean experience and that of other countries in South Eastern Asia have been an important catalyst for many countries to engage in activities aimed at attracting increasing flows of Foreign Direct Investment (FDI). FDI is believed to have beneficial effects on economic growth, transferring technology and managerial expertise, as well as providing capital especially for emerging economies. As both the advanced and developing countries are showing rising interest in attracting FDI, the competition for FDI inflows is intensifying. Recipient governments typically attract investments by providing fiscal incentives essentially through lowering taxation levels and relaxed repatriation of property income laws to prospective foreign direct investors. In addition, providing the necessary infrastructure including communication networks constitute other key elements to attracting more FDIs. Hence, the level of public expenditure directed at improving the physical capital of the recipient country constitutes a substantial indicator of government's commitment to boost up the economy through the attraction of foreign capital flows. However, in recent years, an even more important factor has been good governance and political economy variables as determinants of FDI flows. Activities of host governments affect the economic performance of the economy. Thus, expectations about future economic conditions of the host country play an important role in investment decisions today as FDI entails a substantial and lasting ownership stake in the host country. Therefore, countries have to create an attractive business environment to retain the existing inflows as well as to attract more investors. Since the late 1990s, with the literature by North (1990) and Williamson (2000), the importance of institutional quality has been pinpointed and found very pertinent in addressing growth, public spending, income distribution and FDI issues. Ndulu (2008) and Collier (2006) explain in t why it is important to promote institutional quality for economic advancement in the African context. Collier (2006) emphasizes the role of the «big bang» as it would appear in the growth literature. A significant increase in FDI may contribute to push up physical capital inclusive of technical change leading to higher economic growth. Without such a push, many countries may stagnate for decades. Moreover, differences in the quality of our institutions remain a key explanation of cross-country differences in both growth rates and income per capita (IMF, 2003). Efficient protection of civil and property rights, extended economic and political freedom and low level of corruption have been in particular shown to be associated with higher prosperity.

Simultaneously, there has been a growing interest in the determinants of foreign direct investment in developing countries, as FDI is considered one of the most important components of capital flows to developing countries. Not surprisingly, thus, the link between institutions and FDI can prove to be an interesting one and this has not been thoroughly investigated in the perspective of developing countries.

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In trying to identify the several reasons why the quality of institutions may matter in attracting FDI, there are several avenues that may be discussed and that need be highlighted. To start with, good governance often tracked by political stability and free and fair elections can provide stability of the fiscal regime and in diplomatic relationships of the host country are more likely to convince and attract foreign investors. As pointed out by Wei (2000) lack of good institutional quality reflected in corruption by civil servants and high levels of extortions may generate a climate of mistrust and hence be unhealthy for the business community both domestic and foreign. Thus, poor institutional quality may lead to unnecessarily high costs in doing business in a highly corrupt economy. Ill-defined property rights and therefore high risks of expropriation may discourage investors to patent their products to local enterprises. There is good reason to believe that well defined contracts and company laws should be enforced altogether to make the international business community more at ease and confident to invest their capital. All in all, the service delivery by public enterprises should be effective and efficient to reduce unnecessary administrative hurdles as well as high level of red tapism and excessive bureaucracy.

It is therefore essential to take into account idiosyncratic elements in analyzing the political economy underpinning FDIs. The empirical evidence on the impact of institutional quality in explaining behaviour of FDI flows have been relatively limited despite the voluminous literature on the determinants of FDI. This paucity of empirical studies could be particularly explained by the lack of information and data on quantifying the quality of institutions in the past. Today, there are several measures and indicators of institutional quality that could be used and applied for an in-depth investigation of the role of institutional quality on FDIs amongst others.

Hence, in this paper we try to make up this gap by trying to assess the impact of the governance infrastructure on the level of FDI inflows for a cross section selection of developing countries in the African, Latin American and Asian regions. Our findings would thus allow us to draw on certain policy measures that could potentially explain the economic areas that developing countries' governments need to strengthen in the near future to achieve higher growth performance.

The rest of the paper is organised as follows: Section 2 reviews the existing theoretical literature and examines the available empirical findings from other countries and regions on the determinants of FDI and its links with other factors; Section 3 provides a brief overview of the historical and current economic, FDI flows and governance situation in the African, Latin American and East, South and South East Asian regions; Section 4 presents the data, methodology and empirical results while Section 5 summarises the key findings and accordingly concludes with some policy implications.

2. Empirical Evidence
Institutional Determinants of FDI

In general, a number of studies reached broad consensus about the importance of institutional variables and the location of FDI (see for example, Anghnel, (2005), Wernick (2008, 2009), Pournarakis and Varsakeli (2002), Daude and Stein (2007)). In a more precise context, some authors have focused on the importance of good economic institutions in the host countries (Bénassy-Quéré et *al.* (2007), Du (2008)) while others have tried to assess the impact of political institutions, government stability and political risks on FDI inflows (see for instance, Jensen (2008), Busse and Hefeker (2007), Biglaiser (2009), Roberts (2006)). A particular empirical work by Zheng (2006) finds strong statistical evidence to support an inverted U-shape relationship between political institutions and FDI. This signifies that in the initial stage of political economy progress (characterized by weak political governance), FDI is on the rise; as political stabililty sets in, FDI levels dropped continuously. In this specific case it could be argued that strengthening of political institutions simply diminished FDIs flows. The rationale that was put forward to explain this result is establishment of new rules (often hard) governing the fiscal regimes and repatriation of profits, thereby frustrating foreign direct investors. By and large, studies tend to differ in terms of approaches to ascertaining institutional quality and region-specific studies. Moreover, research methods applied tend to provide even a more diverse view as far as current empiricism is concerned. In a study by Asiedu (2003)**,** who uses panel data for 22 countries in Sub-Saharan Africa over the period 1984–2000, it was found that macroeconomic stability, efficient institutions; political stability and a good regulatory framework have a positive impact on FDI. More importantly, such a result would corroborate that Africa could simply attract more FDIs by promoting stronger institutions and others significant institutional reforms even if they are not naturally endowed. In addition, Daniele et *al* (2006) analysed the factors of FDI towards the MENA countries where the growth of FDI flows proved to be notably inferior to that recorded in the EU or in Asian economies, such as China and India. Their paper suggests that MENA countries require deep institutional reforms in order to improve the attractiveness in terms of FDI.

## 3. Historical and Geographical Evolution of FDI

From the late 19th century to well into the 20th century, most FDI flows had been geared towards the development of natural resource based industries. Latin America and Asia were particularly notable recipients of this investment. FDI in manufacturing expanded slowly through the early 20th century and more dramatically in the period after World War II and the geographic center for such investment shifted to Western Europe. This trend in turn was overtaken by developments in the services sector, particularly in finance in the past two decades

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with East Asia and Western Europe along with the United States as major areas of investment concentration.

Since the 1970s, there has been a clear increase in the flows of FDI in the world economy and not only has the FDI flow mushroomed, but it has also soared faster than the growth in world trade and world output as shown in the following graph.

Figure 1

Growth in FDI flows as compared to World Trade and Output since the 1970s
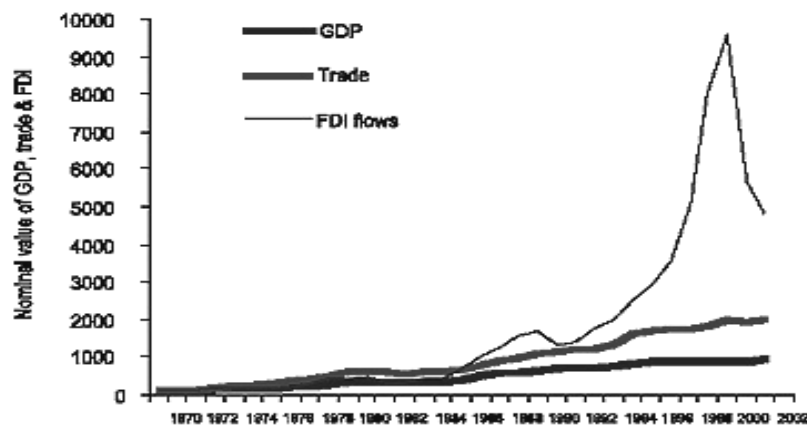
1970 = 100
Source: US Bureau of Economic Analysis, 4 quarter moving average.

Compared to other capital flows, FDI inflows remain the largest component of net resource flows to developing countries. Developing countries have gained in importance as recipients of FDI in terms of both inward flows and stocks. Their share in total world inflows rose from an average of 20% in 1978–1980 to an average of 35% in 2003–2005, though the performance of the different regional groups was uneven. Brazil, China, Hong Kong, Mexico and Singapore – that have been the five largest host developing economies almost every year since 1996 – accounted for some 48% of total flows to developing countries.

3.1 FDI to the African, Latin American and East, South and South East Asian regions: Motivations and Patterns

Extraction of Africa's natural resources accounts for the uneven spread of FDI flows across the continent. The 24 African countries classified by the World Bank as oil – and mineral-dependent have, on average, accounted for close to three quarters of annual FDI flows over the past two decades. Three countries are likely to continue to dominate FDI in sub-Saharan Africa: South Africa and Nigeria (the two largest economies in terms of GDP) followed by Angola. In the case of Nigeria and Angola, development of the oil and gas sector has been the driving force. The attraction of South Africa is more diverse: in addition to mineral wealth, there is also the appeal of relative financial sophistication and closer integration into the world economy.

The share of African countries gradually fell from 10% of total inflows to developing countries in 1978–1980 to around 5% in 1998–2000 but in the past few years it has improved. Nonetheless, the region's share in global FDI continued to be low. The bulk of FDI remains concentrated in resource-based industries. As in the past, with a few exceptions such as Sudan, most of the region's 34 least developed countries (LDCs) attracted very little FDI. Overall, after almost a decade of uninterrupted growth, FDI flows to Africa declined by 19% in 2009, to $59 billion. The decrease in FDI in 2009 was mainly due to a contraction of global demand for, and prices of, African export commodities (UNCTAD 2010). On the other hand, the share of Asia, particularly of South, East and South-East Asia, increased rapidly – driven partly by flows to China, which appeared on the FDI scene only in the late 1970s – until the end of the 1990s and then slowed down in the early 2000s.Last year, ASEAN's share of total global FDI inflows increased to 3.6 per cent, from 2.8 per cent the year before despite the global financial crisis, which demonstrated ASEAN's attractiveness as an investment destination. FDI inflows into ASEAN were expected to rise in the year 2010 and beyond (ASEAN, 2010).

Latin America has experienced a noticeable decline from its dominant position of the 1970s and early 1980s. Trends varied by country. «Good regional growth and resource-seeking investors were the principal forces behind this performance». «However», according to *World Investment Prospects to 2010: Boom or Backlash* «structural weakness will constrain FDI into Latin America during the years ahead». A major driving factor of this situation is the macroeconomic crisis and uncertainties affecting certain Latin American countries as well as the burden of servicing substantial levels of external debt. FDI inflows will also be hindered by costs to business deriving from excessive bureaucracy, deficiencies in infrastructure and under-investment in human capital.

The increase in global FDI flows has been driven by many factors: macroeconomic, institutional and microeconomic (corporate). The most important fac-

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tor at the macroeconomic level has been continued economic growth. We consequently analyse the policy framework and the other economic and institutional factors that affect mainly the locational decisions of multinationals.

Most countries continued to liberalize their investment environment, but others took steps to protect their economies from foreign competition or to increase state influence in certain industries such as in the case of the Latin American oil and gas industries. To explain the differences in the flow of FDI among developing countries, some analysts point in particular to the salience of democracy, transparency and good governance while others emphasize the need for a stable macroeconomic environment and the capacity for economic management (World Bank (1997)). More recently, new institutional economists have extolled the role of institutions such as property rights, the rule of law and economic freedom in mobilising both foreign and domestic capital for growth and development (Collier and Gunning (1999)). Indeed, although the economic determinants of FDI are crucial, they can only come into play if and when the regulatory framework is enabling. The risk of adverse changes in regulatory frameworks represents the single most important threat to the future of FDI flows. Various other risks also loom including geopolitical risks and the risk of political violence or government instability.

An important aspect of industrial policies towards FDI includes administrative procedures and rules on ownership. Administrative procedures can form a significant barrier to FDI, especially in developing countries (Emery et *al.* (2000)). Once the decision to locate has been made, the implementation process can be tedious. For instance, in Ghana and Uganda it can take one or two years to establish a business and become operational, 18 months to three years in Tanzania and Mozambique, 60 months to one year in Namibia, but only six months in Malaysia. This is a major factor which has contributed to countries' success stories in attracting FDI such as in the case of Singapore. The overly complex registration procedures, combined with a lack of institutional capacity in host countries can lead to additional expenses to foreign investors, whose nature and size are difficult to predict and furthermore this may engender corruption along the way. In addition, this situation sends a wrong signal to other potential investors.

Moreover, according to the *World investment prospects to 2011: Foreign direct investment and the challenge of political risk,* a global survey of 602 executives conducted for this report foresee a marked heightening of political risks that could undermine the success of overseas investment strategies. The survey reveals that political risk has jumped towards the top of corporate agendas. Political risk is seen as posing a considerably greater threat to business over the next five years than in the recent past. This is especially so for emerging markets, where generic political risk is identified as the main investment constraint. All four forms of political risk namely risks of political violence, FDI protectionism and threats associated with geopolitical tensions and governmental instability having a material impact on business in emerging markets are seen as increasing over the next five years.

African countries have witnessed a noteworthy improvement in terms of democratic practices during the last two decades. The political sphere has been progressively opened up with varying degrees of stability and legitimacy but despite this progress, challenges to political governance persist in many African countries and the democratic process remains fragile and uneven. The voting procedure is a key form of participation and serves as a benchmark for democracy. The electoral process and outcome has sometimes sparked serious controversies in certain of the countries and has even resulted in rebellion and overthrow of the government.

African countries' public institutions are also are perceived to be plagued by corruption because they are weak and not independent from political interferences. In societies where civil service compensation levels are relatively low, bureaucrats and civil servants attempt to increase the level of income accruing to them by providing services to interest groups including foreign investors that seek favours from the government. Politicians seek ways to subvert the existing rules to redistribute national income and wealth in their favour and achieve their objectives by bribing civil servants whose jobs are to enforce state regulations. The audit departments in many of the countries are also poorly staffed, lack resources and autonomy or are partners in corruption.

An index compounded in the United Nations' Report «*Democracy in Latin America- towards a citizens' democracy*» reflects the progress in Latin America in terms of democracy. The Electoral Democracy Index (EDI) combines four variables namely the right to vote, free elections, fair elections and elections as a means of gaining access to public office. The range of the EDI is between zero and one, with zero indicating the total absence of electoral democracy and one representing total electoral democracy. The mean EDI for Latin America rose rapidly from 0.28 in the late 1970's to 0.93 in 2002. However, it should be noted that a number of coups or attempted coups have taken place in the region and that several countries have experienced severe institutional crises.

In addition, a traditional problem in the countries of Latin America is the fact that de facto powers play an important role in the region. Although written constitutions provide powers to the Executive and Legislative, real powers tend to reside with institutions to which the law assigns other functions as in the case of the armed forces or with groups that do not form part of the political institutional framework such as certain economic groups that function as powerful lobbies. This situation is underpinned by a widespread phenomenon of corruption. The persistent and prevalent corruption in public office extends uninhibited when citizens as well as foreign investors either resign themselves living with it or contribute to spreading it further as being the price to pay for making procedures and transactions work out in the public sector .

On the other hand, over the last decade, Asian societies have realised to what extent corruption damages their social welfare, political stability and economic growth. Twenty-seven countries of the region have committed to taking action against corruption. In the framework of the ADB OECD Anti-Corruption Initiative,

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they have developed the Anti-Corruption Action Plan for Asia and the Pacific and work together towards its implementation. Furthermore, according to the TIMES 2007 Asia political and security risk assessment, most Asian countries have been rated generally ranging from being insignificantly to low and medium risk as compared to other countries in the African or Latin American regions, which have been rated as being highly or extremely risky for foreign investments.

4. Methodological Issues
and Empirical Findings

As it is the case with many studies in the field of FDI, the analysis is a cross-sectional one instead of a panel data analysis due to the limited availability of data across time for both the measures of institutional quality and political and economic stability as well as for many of the control variables for the sample of countries under consideration namely the African, Latin American and South, East and South East Asian countries. Furthermore, the majority of the studies on the determinants of FDI to developing countries use pure cross-sectional data to determine the extent to which differences in host country characteristics explain the variation in FDI inflows across the countries. For the purpose of the analysis, a cross section of 15 African countries, 16 Latin American countries and 14 East, South and South East Asian countries, consist the sample of 45 countries for which the FDI inflows have been utilized as the dependent variable[2].

A vital element of the econometric analysis is the specification of the model. The choice of the variables has been dictated by the literature on the determinants of FDI. However, it has sometimes been constrained by the unavailability of data. The method used for the study is thus a regression analysis consisting of some of the important determinants of FDI flows as control variables as well as various institutional quality indices and indicators of political and economic stability with FDI inflows as the dependent variable.

The independent variables have been chosen to reflect the attractiveness of the host economies as potential locations for foreign investors. They serve basically as control variables in line with economic theory. Unless otherwise stated, all the data has been obtained from World Development Indicators 2005 by the World Bank.

The causal model for the FDI inflows is postulated as follows:

$$FDI_t = \beta_1 + \beta_2\, GDP_t + \beta_3\, OPEN_t + \beta_4\, PHO_t + \beta_5\, LGSE_t + \beta_6\, GOVEX_t +$$
$$+ \beta_7 \Delta INF_t + \beta_8 \Delta EXCH_t + \beta_9\, INSTITUTION_t + \beta_{10}\, POLST_t + \varepsilon_t$$

Where:

FDI: FDI inflows in 2005

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[2] Refer to List of Countries in the Appendix to this paper

$β_1$: Intercept term

GDP: Real GDP in 2005

OPEN: (Imports + Exports)/ GDP in 2005

PHO: Number of telephone lines per 1000 people in 2005 in log form

LGSE: Gross secondary enrolment rate for the year 2000 in log form

GOVEX: Government expenditure in 2005

INF: Change in the inflation rate between year 2004 and 2005

EXCH: Change in the real exchange rate between year 2004 and 2005

INSTITUTION refers to:-

REGQU: Regulatory Index in 2005 as a proxy for government effectiveness

CORR: Control of Corruption Index in 2005 as a measure of corruption

POLST: Political Stability Index in 2005 gauging the level of political instability

$ε_i$: Error term

4.1 Control Variables

The control variables include the real GDP, exports and imports as a percentage of GDP, the number telephones per 1000 inhabitants, the gross secondary enrolment rate (in log form) and government expenditure.

According to the market size hypothesis, FDI in any period is assumed to be a function of the size of the target market, hence the larger the market, the more opportunities it offers in terms of sales and profits to foreign investors (Wang and Swain (1995) and Moore (1993). Market size is generally measured by GDP, per capita income or GDP growth rate. In this case, real GDP has been used as the proxy for the size of the domestic market taking into account the effect of inflation. A number of studies have suggested that investments in developing countries are positively affected by the degree of openness of the host economy. This implies that foreign investors prefer countries with relatively liberal trade regimes, possibly within a region with free trade agreements (Blomstrom and Kokko (1997)). A measure computed by the share of trade i. e. [(exports plus imports)/ GDP] of each of the host economies has been used in the model to investigate whether and by what extent the investment decisions in the individual countries have been influenced by the degree of openness. Many studies also highlight the importance of good physical infrastructure in attracting FDI flows to a host country (see for example, Morisset (2000) and Asiedu (2002)). The number of telephones per 1000 inhabitants has been used to measure the level of infrastructural development of the country as prevailing in

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the literature. The rate has been logged in order to reduce the amount of correlation between the variable and the level of real GDP. The neo-classical theory of the determinants of FDI puts forward that host countries' labour supply influences foreign investors' location decisions through the labour cost and the quality of the skills of the labour force. Locations with low labour costs and/or highly skilled labour force are expected to be more attractive for foreign investors particularly for firms producing labour intensive goods (Wheeler and Mody (1992)). The importance of skilled labour force as an explanatory variable for inward FDI flows has been captured by the level of education attainment, which has been quantified by the gross secondary enrolment rate. The gross secondary enrolment ratio has been logged in order to reduce the amount of correlation between the variable and the level of real GDP.Higher government spending may indicate more expenditure on socially productive sectors such as education and health for a more efficient human capital (Montagna et *al*., (2007)) but also in terms of improved physical capital like infrastructure, which are crucial to attract FDI. However, both theory and empirical evidence also suggest that the relationship between the level of government spending in an economy and FDI inflows can be negative as well, in terms of the crowding-out effect (Goodspeed et *al.* (2006)). Furthermore, it could be argued that bigger government size in terms of expenditure in general represents more complex bureaucracies and are often linked to administrative inefficiencies and bribery which increase considerably the hassle costs of investing in the country **(** Bénassy-Quéré et *al.* (2007)). In addition, it can be argued that a high rate of inflation indicates internal economic instability. Therefore, under such circumstances multinational companies may avoid or reduce investments in such countries. Indeed, Schneider and Frey (1998) found that multinational firms invest less in emerging economies with high inflation and Apergis and Katrakilios (1998) found that inflation uncertainty in the host country is negatively associated with FDI inflows. Another measure of macroeconomic uncertainty is exchange rate volatility. The effect of changes in real exchange rates on FDI flows is indistinct. Harrison and Revenga (1995), and Elbadawi and Mwega (1998) used the real exchange rate as an indicator of a country's international competitiveness, theorizing that a real depreciation would attract larger FDI flows. However, a real depreciation increases the costs of imported inputs and reduces the foreign currency value of profit, both of which have adverse effects on the profitability of FDI projects (Görg and Wakelin (2002)).

4.2 Institutional Quality Variables

A favourable business environment is necessary for attracting FDI especially due to the long-term nature of FDI whereby it may take many years before a foreign investment becomes cost effective so that investors want to be guaranteed of the institutional quality and economic and political stability of the host countries. Empirical analyses have not consistently confirmed the negative relationship between corruption and FDI. Mauro (1995) and Wei (1998) found that

high levels of corruption would negatively impact the willingness of multinationals to consider investment in nations with corruption problems. On the other hand, some theorists (Leff (1964) and Huntington (1968)) suggest that corruption acts as a facilitator allowing investors to avoid bureaucratic red tape and accelerating the development of a project.

It needs be highlighted that there are two principal risks arising from political instability in the host country that the investor faces. The first is that domestic instability or civil war will reduce the profitability of operating in the host country because domestic sales or exports are disrupted or production is interrupted. The other consequence of political instability stems from the fact that it is likely to affect the value of the host country's currency, thus reducing the value of the assets invested in the host country as well as the future profits generated by the investment (Brada et *al.*, 2004).

The institutional quality indicators used namely the regulatory quality, control of corruption as well as the political stability indices used have been compiled in the Kaufmann et *al.* (2006) database which is widely used in the empirical literature on the impact of institutions. The institutional quality indicators are based on several hundred individual variables measuring perceptions of governance, drawn from 31 separate data sources constructed by 25 different organizations. The indicators take values ranging from –2.5 to 2.5 inclusive with an increase always representing better quality of institutions. In more specific terms, we define each measure of institutional quality as follows:

Regulatory quality is the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Control of corruption is the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as «capture» of the state by elites and private interests. Political stability and absence of violence denotes perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including political violence and terrorism.

A cross sectional equation examines the decade as a whole with the dependent variable being the FDI inflows for the sample of countries over the period 1996–2005. The average model remains a rich source of information because this framework allows us to study the considerable cross-sectional differences between the countries included in it while also taking into account the time factor which is crucial to study the impact of the evolution of the governance indicators.

To summarise, the estimated model now assumes the following form capturing the mean values of the aggregates used. The empirical estimates are reported in Table 1 below.

$$AFDI = \beta_1 + \beta_2\, AGDP + \beta_3\, AOPEN + \beta_4\, APHO + \beta_5\, LGSE + \beta_6\, AGOVEX +$$
$$+ \beta_7\, INVOL + \beta_8\, EXVOL + \beta_9\, AINSTITUTION + \beta_{10}\, APOLST + \varepsilon$$

Where:

AFDI: FDI inflows over the period 1996–2005 inclusive

β_1: Intercept term

AGDP: Average Real GDP over the period 1996–2005 inclusive

AOPEN: Average (Imports + Exports)/ GDP over the period 1996–2005 inclusive

APHO: Average number of telephone lines per 1000 people over the period 1996–2005 inclusive in log form

LGSE: Gross secondary enrolment for the year 2000 in log form

AGOVEX: Average government expenditure 1996–2005 inclusive

INVOL: Inflation rate volatility over the period 1996–2005 quantified by the standard deviation of the rate over the decade

EXVOL: Real exchange rate volatility over the period 1996–2005 measured by the standard deviation of the rate over the decade and has been computed from the exchange rates obtained from the Penn World Tables.

AINSTITUTION refers to:-

AREGQU: Average Regulatory Index 1996–2005 as a proxy for government effectiveness

ACORR: Average Control of Corruption Index 1996–2005 as a measure of corruption

APOLST: Average Political Stability Index 1996–2005 as a measure of political stability

ε: Error term

The figures in parentheses are based on White's Heteroscedasticity adjusted S.E.'s

Table 1 reports the univariate OLS estimates of the effect of the average control variables only on the average level of FDI inflows over the period 1996–2005. All the coefficient estimates have the positive expected signs and are statistically significant at either one of the customary 1,5,10 or 15 percent significance levels. Besides income level being a major determinant of FDI, the other control variables, such as the degree of openness and the quality of human capital as proxied by the gross secondary enrolment rate (Barro (1991)), also have a positive and significant stimulus on a country's income level and thus, through the transmission mechanism, implicitly impact on the FDI inflows level by means of the income channel as well.

Furthermore, if good governance is associated with growth and leads to higher levels of income and a higher income level is in turn linked with better institutions, as suggested in some of the recent literature on governance, then a virtuous circle will be created in which especially the African and Latin American countries stand to gain to a great extent. Therefore, the institutions set up should ensure that governments pursue a sound macroeconomic path, as any set of

policies that broadly promotes economic growth will indirectly promote increased inward FDI by encouraging a higher level of real GDP.

Table 1

Impact of control variables and economic stability indicators on cross-country differences of FDI inflows over the period 1996–2005

Independent Variables	Dependent Variable: Average FDI Inflows 1996-2005		
Intercept	-167.9627 (-0.12651)	51.2330 (0.037773)	252.2981 (0.1774)
Average Real GDP 1996–2005	0.021346 (4.0324)***	0.021425 3.9176)***	0.021524 (3.9928)***
Average Openness 1996–2005	0.024392 (2.8467)***	0.024267 (2.7620)***	0.024416 (2.8980)***
Average Infrastructure 1996–2005	13.4142 (2.7269)***	13.1923 (2.8093)***	13.5631 (2.8677)***
Education	992.0310 (2.2097)**	966.0031 (2.2932)**	1006.8 (2.3337)**
Average Government Expenditure 1996–2005	113.0094 (1.6235)*	106.6689 (1.7094)*	102.5359 (1.6940)*
Inflation Volatility 1996–2005	…	-20.7856 (-0.42743)	-42.9144 (-0.55869)
Real Exchange rate Volatility 1996–2005			0.13389 (0.85650)
R-Bar-Squared	**0.92359**	**0.92532**	**0.92610**

Source: Author's computation

In our results, openness has positive effect on FDI inflows, confirmed by all the regressions. Furthermore, empirical observation amply illustrates the fact that countries that have chosen to open their economies over the last two decades have achieved considerably higher growth rates compared to countries that remained comparatively closed. Today, almost all countries in the world seek to attract FDI and they are pursuing increasingly similar strategies in this respect. The most basic strategy has been, and continues to be, to make the regulatory framework geared towards FDI more welcoming. This includes, first of all, opening up more sectors to foreign investment.

However, excessive government expenditure has been found to exert a negative impact on the foreign investment level. Perhaps the significant conclusion is that governance matters and that improved political governance does not necessarily oblige governments to make large investments. Indeed, improved governance might be more consistent, in many cases, with a smaller economic

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and regulatory role for government. Nevertheless, for many developing countries, public goods arguments for improved health and educational systems, as well as for a more sanitary environment, may trump considerations about their impacts on FDI. The complementarily between public goods investments and inward FDI strengthens the case for such investments in developing countries.

It is interesting to observe that the coefficient of education is negative and significant. Since a negative sign on the coefficient of an explanatory variable shows an increase in efficiency in our model, this is an important finding, especially for developing countries with low literacy levels and unskilled labour. These nations cannot thus rationally attract FDI without increasing the level of education of the economically active population. An effective way in which government can contribute is by promoting participation in the educational system by constructing enough schools and legislating for compulsory education.

In addition, investments by governments in providing efficient physical infrastructural facilities improve the investment climate for FDI by subsidizing the cost of total investment by foreign investors and thus raising the rate of return. MNEs may be particularly sensitive to infrastructure availability for locating their investments designed to feed the global, regional or home country markets, as these investments are efficiency-seeking in nature. The slackening of public investment in infrastructure development in a number of developing countries, such as India, could be the focus of structural adjustment programs of international bodies like the World Bank in order to help channel funds to these sectors.

The inflation volatility variable has a negative impact of FDI inflows as in the study of Apergis and Katrakilios (1998) as demonstrated by its negative coefficient and as for the exchange rate volatility variable whose coefficient is positive, this means that though it has been suggested that for a risk averse firm, higher exchange rate volatility lowers the certainty equivalence value of the investing firm and hence FDI decreases as exchange rate volatility increases (Wihlborg (1978)), in our case, the exchange rate volatility is actually having a positive impact on FDI inflows. According to Itagaki (1981) and Goldberg and Kolstad (1994), if an investing firm can choose to serve foreign markets via exports or FDI, then an increase in exchange rate volatility might lead the firm to substitute FDI for exports since FDI activity reduces the exposure of its profits to exchange rate risk.

To have additional insights through the individual effect of each of the institutional quality measures, we proceed by re-estimating the above regressions. The results are shown in Table 2. As the measures of institutional quality are available only every alternate year for the period 1996–2004 and for the year 2005, the average figure for each of the indices has been computed over this interval of time. The use of this average figure as a proxy for the institutional quality indices is warranted as the pace of evolution of these indices is very sluggish from one year to the next, which is the reason why the indices have not been compiled more frequently. Here again, regional dummies had been added into the different equations but were significant in neither and provided no further insight to the analysis. Hence, they were excluded for the sake of parsimony.

Table 2

**Impact of control variables and economic and political stability
and governance indicators on cross- country differences
of FDI inflows over the period 1996–2005**

Independent variables	Dependent Variable: Average FDI Inflows 1996–2005				
Intercept	-1727.8 (-0.59589)	-1000.3 (-0.52313)	40.0251 (0.013319)	121.8029 (0.091991)	-195.8142 (-0.065266)
Average Real GDP 1996–2005	0.020940 (6.7553)***	0.021295 (3.8568)***	0.020845 (6.9012)***	0.021351 (3.7766)***	0.020226 (6.6154)***
Average Openness 1996–2005	0.024615 (3.6458)***	0.023513 (2.7672)***	0.027783 (4.0682)***	0.024652 (2.5553)***	0.030098 (4.2386)***
Average Infrastructure 1996–2005	22.3254 (3.2977)***	17.1307 (2.9255)**	18.5955 (2.6791)***	12.4682 (2.0598)**	16.7822 (2.3653)**
Education	947.3326 (1.3972)*	935.2495 (2.1259)**	1038.1 (1.5665)**	924.8737 (1.9232)*	747.3786 (1.0557)#
Average Government Expenditure 1996–2005	145.1434 (1.6089)#	128.6906 (2.0139)**	109.5424 (1.2133)	99.7539 (1.4262)#	78.2961 (0.83260)
Inflation Volatility 1996–2005	-54.1212 (-0.89310)#	-29.1899 (-0.65618)	-62.3722 (-1.0530)**	-19.1640 (-0.37632)	-60.1191 (-1.0184)#
Real Exchange rate Volatility 1996–2005	0.17560 (0.51790)	0.16320 (0.44994)	0.13424 (0.40528)	0.084002 (0.40528)	0.063730 (0.18891)
Average Regulatory Quality 1996–2005	2082.5 (2.1258)**	…	4520.6 (2.6514)***	…	4840.5 (2.8120)***
Average Control of Corruption 1996–2005	…	726.0820 (0.97701)	2358.9 (1.7258)**	…	2659.0 (1.5148)#
Average Political Stability 1996–2005	…	…	…	123.9497 (0.23015)	829.1725 (1.1355)#
R-Bar-Squared	**0.93174**	**0.92223**	**0.93520**	**0.92118**	**0.93542**

Source: Author's computation

The coefficients of the governance variables are all positive in the sense that an improvement in the governance indices whether in the regulatory quality, control of corruption or political stability will denote an increase in FDI inflows. Furthermore, the regression results tend to confirm the initial impression generated by the scatter plot regarding the relationship between the level of FDI inflows in a country and the quality of governance[5].In addition, the governance indicators which were previously insignificant on their own, turn statistically significant at varying levels with the insertion of each additional institutional quality in-

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[5] Refer to Appendix.

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dices and this also enhances the explanatory power of the model as revealed by an augmented R-Bar-Squared value from 0.93174 to 0.93542. Furthermore, the estimated coefficients of the governance indicators suggest an important economic relationship between the quality of governance and the FDI inflows. It should be noted that with the subsequent inclusion of the other quality of governance indicators namely the control of corruption and political stability indices, the regulatory quality index's economic significance increases, hence highlighting the complementary nature of the different aspects of good governance which mutually reinforce each other. This is confirmed by the rise in the magnitude of the control of corruption index coefficient after adding the political stability index in the model as well. The institutional indicator that performs the best for attracting foreign direct investment seems to be the regulatory quality. Furthermore, the cumulative impact of the governance indicators for this sample of countries is quite considerable. All the coefficient estimates of the control variables have the positive expected signs and the majority is statistically significant at either one of the customary significance levels. It is noteworthy that the level of real GDP and the degree of openness are always very highly significant at the 1% significance level. As depicted in the last column of Table 2, a unit rise in the real GDP level, here the real average level over the period 1996–2005 denoted by US $1 is associated with a rise of US $ 0.02 in the FDI inflows. The level of statistical significance of the other control variables namely the level of infrastructure represented by the average number of phones per 1000 inhabitants, the level of education denoted by the gross secondary enrolment rate and the average level of government expenditure, vary according to the inclusion of the governance variables. The fact that the addition of the governance indicators increase the explanatory power of the regressions but decrease the significance level of the control variables in certain cases may be due to the presence of correlation between the variables. The exchange rate volatility coefficient is still insignificant at the 15 percent level but its insertion into the model is justified on the grounds that it enhances the explanatory power of the model[1].

5. Conclusion and Policy Implications

The results show that the level of FDI inflows is significantly related to the quality of institutions. This relationship is robust to the use of control variables and alternative indicators of governance as well as an aggregate governance index. Furthermore, the impact of an improvement in the overall institutional situation on the level FDI is more sizeable than progress made in individual institutional indicators due to the complementary nature of the different aspects of governance. More specifically, the results show that macroeconomic stability in

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[1] The Knack and Keefer (2005) methodology was also applied in testing further robustness of the quality of institutions variables. Owing to high multicollinearity all the aggregates were lumped into an aggregate measure that was found to be insignificant...

terms of a less volatile inflation rate, efficient and less corrupt institutions, a good regulatory framework and political stability would have a positive impact on the FDI inflows of the countries in this sample.

An important policy implication of this result is that governments in these regions can play an important role in promoting FDI. Thus, countries which were previously disadvantaged have a possibility to catch up with the others if they implement the appropriate institutional reforms. Moreover, as the quality of governance has a significant and positive impact on the determination of the income level, hence, an improvement in institutional quality would boost the country's income level which in turn indirectly has a major positive effect on the level of FDI inflows of the country. As for the regulatory quality, incentives can be given to promote FDI. Building sound financial and legal institutions that would facilitate procedures for investors and protecting the property rights is also important as well as other aspects such as the repatriation of profits. To attract more FDI in the interest of advancing the region's economic development, pro-active policies must be pursued. In particular learning from successful Asian countries, investment promotion matters a great deal. Direct and aggressive campaigning for investment projects is needed. The specific promotional tools depend, among other things, on a country's stage of development, its physical geography and the sectors targeted. Tools to be considered include special economic zones, export processing zones, industrial zones and favourable incentive schemes. As corruption is a symptom of fundamental economic, political, and institutional scourges, addressing corruption effectively means tackling these underlying problems. The major emphasis must be put on prevention–that is, on reforming economic policies, institutions, and incentives, otherwise efforts to improve enforcement of anti-corruption legislation using the police, ethics offices or special watchdog agencies within government will not bear fruit. While emphasizing first and foremost the domestic causes of corruption, bribery by foreign firms also plays a significant role especially in developing countries. International institutions should enforce anti-bribery legislation abroad and make curbing corruption a priority when providing assistance to their member countries.

The World Bank's Doing Business survey also highlights especially in the African continent and in Latin America, the high costs of excessive bureaucratic procedures. A strong commitment from the highest levels of governments will be essential, including the mobilisation of adequate financial support for priority infrastructure projects and the effective implementation of measures to fight corruption. In addition, a number of surveys confirm that the lack of availability of skills and physical infrastructure are amongst the major impediments to investing in African countries (UNCTAD (2000) and Businessmap (2000)).

Political institutions that can make credible commitments to some level of policy stability and retain the necessary policy flexibility will foster an environment multinational corporations desire. Hence, political institutions must provide commitments to market-friendly policies both today and in the future. Those countries that can make this intertemporal commitment to multinational corporations will attract higher levels of FDI.

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Appendix

Relationship between FDI Inflows and Aggregate Governance Index
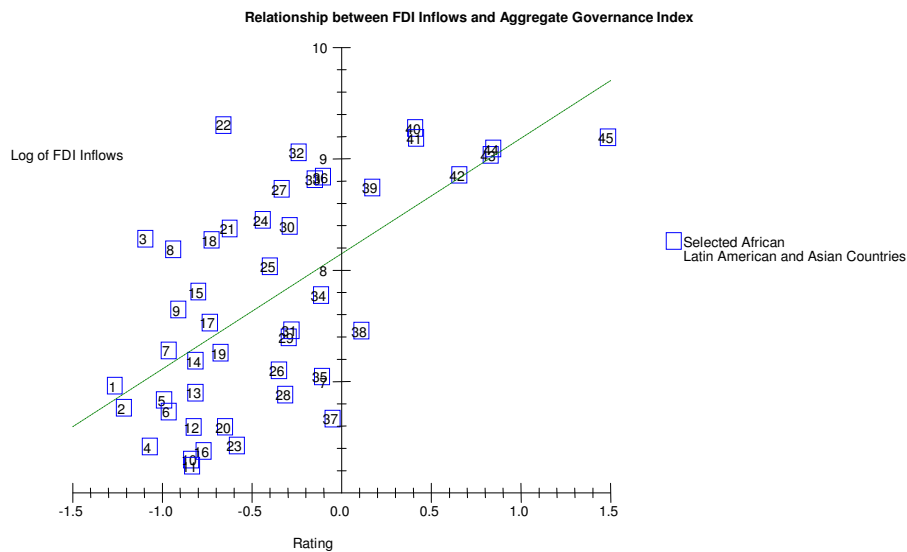
A first indication of the correlation between the different measures of governance and the FDI inflows to a country is provided by the scatter plot. The horizontal axis represents the scores obtained by country for the aggregate governance indicators for the year 2005 and the vertical axis indicates the log of FDI

inflows. The log form of the real GDP per capita is used in order to compress the magnitude of the FDI level for the sake of displaying the relationship between the two variables.

The scatter plot illustrates a positive association between the FDI inflows level and the quality of governance. The countries with higher FDI inflows tend to have relatively strong institutions, whatever measure is used while conversely, institutions tend to be consistently weaker in countries getting lower FDI inflows. However, the scatter plots do not provide any insight about the direction of the causality.

List of Countries

1. Argentina
2. Bangladesh
3. Benin
4. Bolivia
5. Botswana
6. Brazil
7. Cambodia
8. Cameroon
9. Chile
10. China
11. Colombia
12. Costa Rica
13. Ecuador
14. Egypt
15. El Salvador
16. Gambia
17. Guatemala
18. Hong Kong
19. India
20. Indonesia
21. Kenya
22. Madagascar
23. Malaysia

24. Mali
25. Mauritius
26. Mexico
27. Mozambique
28. Namibia
29. Nepal
30. Nicaragua
31. Nigeria
32. Pakistan
33. Panama
34. Paraguay
35. Peru
36. Philippines
37. Senegal
38. Singapore
39. Sri Lanka
40. Thailand
41. Tanzania
42. Uruguay
43. Venezuela
44. Viet Nam
45. Zambia