Political Institutions and Foreign Direct Investment Flows into Developing Countries

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by

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ABSRACT

The major focus of this paper is on the relationship between political,
social and economic institutions and Foreign Direct Investment in
developing economies.

For a decade, the relationship between institutions and Foreign Direct
Investment has been receiving growing attention. The link between the
quality of institutions and FDI in developing countries, especially in
transition economies, has led scholars to focus on the quality of
institutions as determinants of FDI in developing countries.

This paper explores how social economic and political institutions help
explain cross-country variations in Foreign Direct Investment flows by
applying Panel data regressions including 67 developing countries for the
period 1984-2005.

The findings suggest that better perceptions of the quality of institutions
have overall a positive and economically significant effect on FDI.
Especially, the unpredictability of laws, political and economic
instabilities, government instability and high level of corruption play a
major role in deterring FDI.

Introduction

Since the late 1990s, in the international literature, studies on the
impacts of institutions have been pioneered by economic historians studying
the differences in the economic growth performance of the countries in the
world. A number of scholars such as Knack and Keefer (1995), Mauro (1995),
Hall and Jones (1999), Acemoğlu, Johnson and Robinson (2002, 2005) have
emphasized that political, institutional and legal environment of a

country, to a great extent, determine the economic performance.

These scholars emphasize that the institutional structure of a country is a key explanation of cross-country differences in both growth rates and income per capita. The low level of economic, financial and political risks, efficient protection of civil and property rights, the functioning of law and judicial systems, the enforcement of laws and contracts and low level of corruption have been related to higher prosperity of a country.

At the same time, as mentioned, there has been a growing interest in the determinants of foreign direct investment (FDI) in developing countries. Since 1980, with the liberalization of developing economies, the volume of FDI flows into these countries has grown significantly. Plus, the recent experience of a number of countries – especially in Central Europe and East Asia – has shown that FDI can play a crucial and catalytic role in the development process (FIAS, 2001). Hence, FDI is perceived by many governments of developing countries as one of the most stable components of capital flows and an important factor for economic growth. As the FDI-promoting effect of good institutions may be an important channel of their overall effect on growth and development, to study the links between FDI and institutions has become relevant.

However, not all developing countries attract the equal amount of FDI; rather, the distribution of FDI flows is unequal in developing economies. Therefore in this paper, I intend to build a theoretical framework focusing on the questions of why developing countries differ vastly in their success in attracting FDI.

Patterns of Foreign Direct Investment

One of the most notable features of economic globalization has been the increased importance of foreign direct investment around the world. With the trends of globalization, liberalization in foreign currency and trade regimes, the volume of trade and FDI increased throughout the world. Since the early 1980s, Foreign Direct Investment stock has grown rapidly - faster than world trade (UNCTAD, 2006). The dramatic rise in FDI flows in recent years stands out as one of the most decisive factors in globalization of economic activity and FDI is viewed as a measure of the extent to which a country or a region is integrating into the world economy.

As seen in figure 1, since 1980, the FDI inflows to developing countries have been substantially increasing and compared to other capital flows, has remained the largest component of net resource flows to developing countries.

Fig. 1 Total net resource flows to developing countries, by type of flow, 1990-2005 (Billions of dollars)
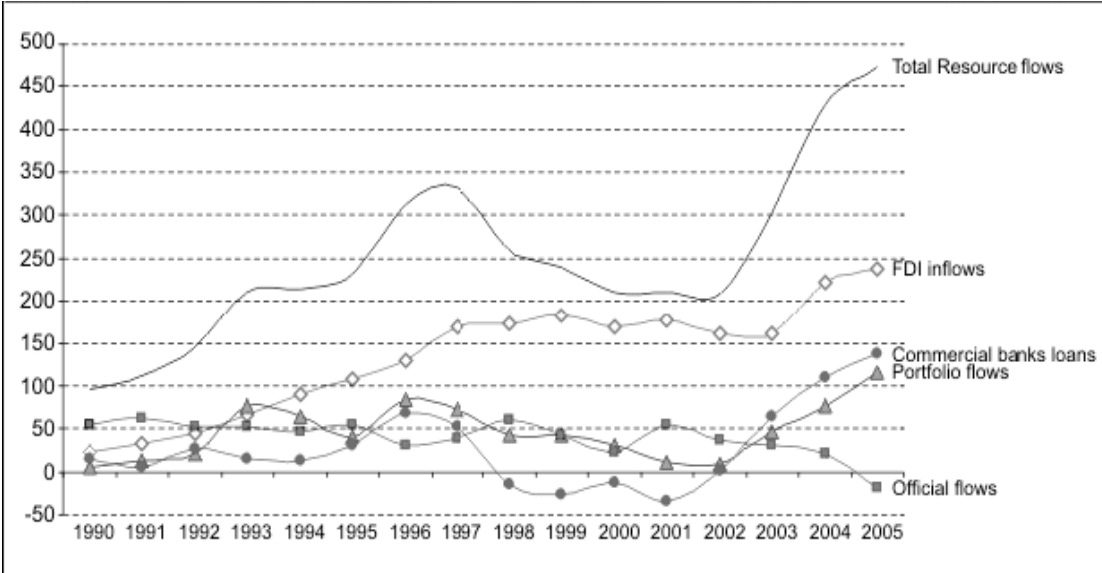
Although the share of FDI increases in both developed and developing countries, there is a massive variation in FDI performance across countries. In other words, not all regions receive the same amount of FDI. FDI inflows are dominated by the developed countries and also there is a massive variation in FDI performance across developing countries.[1]

As seen in Figure 2, FDI flows are unevenly distributed among countries in the world. The share of developed countries has remained between 60 and 75 percent, in general, while the share of developing countries has remained between 15 and 35 percent for more than 30 years. In addition, the share of top five economies in the world FDI inflows was 70 percent in 1980 and it was 50 percent in 2005 and five developing economies attracted nearly 20 percent of FDI flows in 2005. Therefore asking the question, "Why do developing economies attract FDI unevenly?" seems reasonable.

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[1] South, East and South-East Asia are the main magnets for inflows to developing countries. FDI inflows into these regions reached $165 billion in 2005, corresponding to 18 percent of world inflows.

Fig. 2 Concentration of FDI inflows: the share of the top 5 FDI recipients in the world total, 1980-2005 (Per cent).
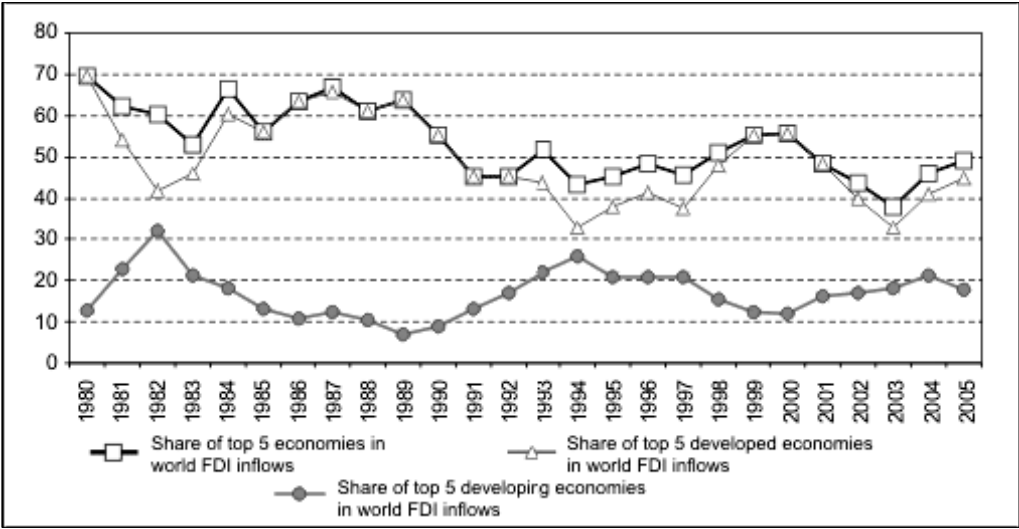

Source: UNCTAD, World Development Report, 2006, p.4.

Comprising more than half of the world's population, many developing economies are often featured with strong market demand and high growth rates. The recent progress they have made in economic liberalization, especially after 1980 is noteworthy. In many of these countries the entry of MNCs is welcome as it represents an inflow of foreign savings into the country, supplementing domestic savings and directly increasing the level of investment.

However, the FDI performances of these countries vary. Figure 3 shows the FDI stock as percentage of GDP in some of the developing economies. Czech Republic, Hungary and Chile are the most successful countries receiving FDI stock over 50 percent of their GDP. On the other hand, Philippines, Turkey, Korea and India receive low level of FDI stock when compared to their market sizes.

Fig. 3 FDI stock as percentage of GDP in selected developing economies – 2005.
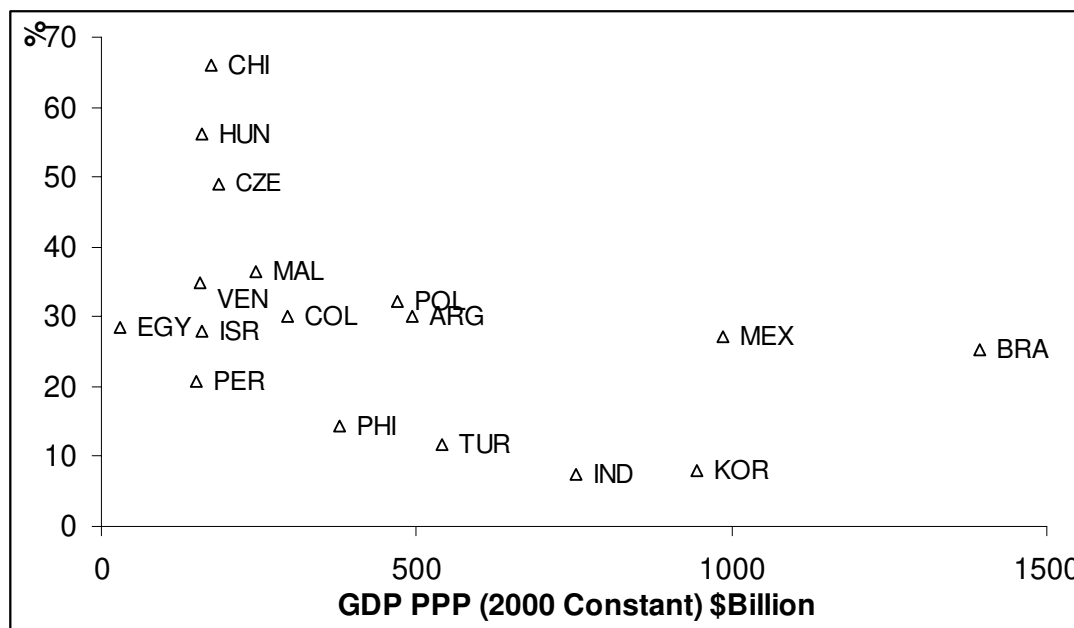
Source: UNCTAD (2006), WDI (2006).

The uneven distribution of FDI stock in these countries can be analyzed by taking into consideration that these economies are not homogeneous. The size of markets, economic growth rates and economic development stages vary among countries. Further, the stage of economic development, political, regulatory and legal regimes differ across emerging markets.

Before answering the question by giving details about the empiric results of econometric model to propose a theoretical framework is essential.

Concepts, Definitions

This paper focuses on one of the most stable of the international capital flows, Foreign Direct Investment (FDI). According to one of the oldest definitions of Foreign Direct Investment, by Kindleberger, FDI is referred to as long-term capital flow and differs from portfolio investment by taking place in kind, through the exchange of property (patents, technology or machinery) and by acquiring control of a company Kindleberger, 1969:2). It also differs from other kinds of international capital movements in that direct investment proceeds by the reinvestment of profits and accompanied by varying degrees of control, plus technology and management.[2]

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[2] However, some definitions put more emphasis on the "control" factor. OECD recommends that a direct investment enterprise be defined as an incorporated or unincorporated enterprise in which a foreign investor owns 10 per cent or more of the ordinary shares or voting power of an incorporated enterprise or the equivalent of an unincorporated enterprise....An effective voice in the management, as evidenced

Investing abroad by MNCs constructing subsidiaries called "Greenfield Investment", whereas, these firms may also invest abroad, a common form in developed countries, by investing in established firms, through mergers and acquisitions, or through privatization programs (called as Brownfield Investment). Several developing economies have received this form of FDI due to the privatization programs took place especially after 1980.

The motives for investing abroad either by establishing a new corporation or investing in established firms have received remarkable attention from scholars. Their main concern is answering the question: What explains patterns of FDI flows across the globe?

Determinants of Foreign Direct Investment

There is a vast literature on the determinants of FDI. Especially, the empirical studies vary in terms of the variables, methodologies, the characteristics of FDI and the countries. The main studies on the determinants of the FDI flows can be classified into two categories, firm-level centered and studies including non-economic factors.

The early writings on FDI go back only to the 1950s. In the literature, Stephen Herbert Hymer made the first theoretical approach asserting that FDI took place because the corporation making the investment possessed some special skill or techniques not available to local entrepreneurs that it could exploit only through direct ownership (Hymer, 1976:34-38).

Through 1960 and 1970 new theories of FDI were introduced. Vernon (1966) used the product life cycle approach, which is based on the existence of market imperfections across nations, to develop a theory of foreign direct investment. Later, Caves (1971) argued that monopolistic advantages, which are created by both advertising and research and development investments, characterize not just specific firms but rather firms within oligopolistic industries. Knickerbocker (1973) showed evidence that the timing of U.S.

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by an ownership of at least 10 percent, implies that the direct investor is able to influence, or participate in the management of an enterprise; it does not require absolute control by the foreign investor" (OECD, (Organization for Economic Cooperation and Development); *OECD Benchmark Definition of Foreign Direct Investment*, 3d Edition (Paris: OECD, 1996), p.8. For a detail study about definitions of FDI, see R. E. Lipsey, "Foreign Direct Investment and the Operations of Multinational Firms: Concepts, History and Data. *Working Paper 8665 National Bureau of Economic Research* 1050 Massachusetts Avenue Cambridge:NBER, MA 02138 (December 2001).

MNCs' FDI is largely determined by their oligopolistic reaction "follow the leader" theory to competitors' investment. While industrial organization models were the dominant line in studying FDI until the 1970s, a new theory, called "internationalization theory," was proposed to explain how firms are involved in international operations and make resource commitments to foreign markets.

In the 1970s, Dunning's (1970) eclectic paradigm dominated the literature and has remained the center of FDI theory and other scholars have expanded on this framework. Dunning introduced the concept of "OLI" as a theoretical framework to analyze the determinants of FDI. This framework considers FDI as determined by Ownership, Location and Internalization advantages of firms investing abroad (Dunning, 1981). The ownership advantage refers to a product or a production process to which local firms do not have access. It could refer to a patent or an intangible advantage like a reputation for quality. The location advantage comes directly from the foreign market, such as low factor prices or consumer access, along with trade barriers or transport costs, which makes FDI more profitable than exporting. Finally, the internalization advantage is a concept that explains why a firm prefers investing rather than licensing. The internalization advantage implies that since markets for intermediate products are difficult to organize, these transactions can be handled more efficiently within the firm by an internal hierarchy rather than by the external market (Buckley and Casson, 1976).

More recently, the motives of FDI have been examined in two categories. In this view a firm realizes the investment to better serve the local market or to get lower-cost inputs, or both. In other words, FDI can be divided into "horizontal" or "market-seeking" FDI, and "vertical" or "efficiency seeking" FDI (Michalet, 1997:12-15). The first involves building plants in a host country to supply the local market. This approach is done to reduce the costs that arise from supplying the market through exporting, in which case, market size and high tariffs play a large role in determining profitability. The latter category of vertical FDI is production cost-minimizing, where firms seek to produce in lower cost locations or seek inexpensive inputs in order to export their product. Inexpensive inputs include natural resources, raw materials, or low-cost inputs such as labor. Finally, Asset Seeking FDI is the most recent motive for FDI to be identified. It refers to a strategy that aims to access and exploit technological assets in overseas countries. Developed countries are the main recipients for R&D investment, but countries such as Hungary, Czech Republic, India and Brazil are also attracting more and more Research and

Development projects. Asset seeking MNCs focus on the skilled labor availability, research institutes, large supply of graduate labor, created assets including innovative capacity, technological adoption, and technical skills when choosing an investing location.

These approaches are firm-level centered, yet, in these studies the role of social, political and economic institutions has rarely been treated. These studies emphasize that firms as profit maximizing agents are motivated by exploiting their own advantages abroad, such as access to patented technology, specific management or marketing skills or ownership of brand names.

On the other hand, since the 1990s, the number of studies examining the role of institutions as determinants of foreign direct investment has been increasing. In this paper, my aim is not to provide a comprehensive list of studies in the New Institutionalist Economics literature. The focus is, rather, on identifying a set of key institutional variables that has an impact on Foreign Direct Investment.

Institutions

In the literature there are several empirical studies using institutional variables. In most of these studies, it is argued that lack of political and economic stability, unclear regulatory frameworks, an inexperienced bureaucracy, an underdeveloped court system, and corruption deter more FDI flows into host economies.

The New Institutionalist Approach regards a nation's institutional framework as the most important factor determining its economic performance over time and introduced the role of institutions by focusing on the quality of domestic institutions as a key explanation of cross-country differences in growth rates and income per capita.

The word "institution" has a variety of meanings in the institutional economics literature. In this paper "institutions" are accepted as "the rules of the game" in a society which is defined by North (1991:97): "Institutions are the rules, the regulations, (humanly devised constraints) that structure political, economic and social interaction. They consist of both informal constraints (sanctions, taboos, customs, traditions and codes of conduct), and formal rules (constitutions, laws, property rights)". They reduce the uncertainty involved in human interaction by giving us patterns

for our behavior. In addition, institutions lead to a fall in both transaction and information costs by reducing uncertainty and establishing a therefore stable structure to facilitate interactions (North, 1990:3).

The role of Institutional Variables – Literature Review

Empirical research on the impact of host country institutions on FDI has demonstrated that the general institutional, social and legal framework influences FDI. An efficient legal infrastructure reduces institutional uncertainties for foreign investors, facilitates establishment and enforcement of contracts and in various other ways reduces the transaction costs in an economy.

There is a vast literature on the effects on political, economic and social institutional variables on FDI flows. The governance indicators developed by Kaufmann, Kraay and Zoido-Lobatón (1999) were used to explore the role of institutional variables as determinants of the location of FDI. These indicators are constructed on the basis of information gathered through a wide variety of cross-country surveys as well as polls of experts, and are available for a large cross-section of countries. Each indicator represents a different dimension of governance: political voice and accountability, political instability, government effectiveness, regulatory burden, rule of law.

Busse and Carsten (2005) explore the linkages between political risk, institutions and foreign direct investment inflows by using different econometric techniques for a data sample of 83 developing countries and the period 1984 to 2003. They employed 12 different indicators for political risk and institutions in the empirical analysis. They found that the investment profile, internal and external conflict, ethnic tensions and democratic accountability are important determinants of FDI flows. Wheeler and Mody (1992) examine American firms investing abroad and write that political risk factors, the functioning of the bureaucracy, corruption and judicial system have strong impact on these firms. Using a time series analysis, Jun and Singh (1996) found that when political risk is high FDI affected negatively. Gastanga, Nugent and Pashamova (1998) examine the relationship between political variables and found that high enforcement mechanisms, low corruption levels affect FDI positively.

Although several studies put emphasis on the positive role of increasing quality of political institutions on FDI flows, in the international literature there is a debate on the impacts of some institutional variables on FDI. One of these variables is corruption. Due to the lack of reliable data on corruption, testing the theories becomes difficult, though; the number of studies dealing with the issue by using various comparative methods has been increasing. In order to measure the level of corruption in a country, various international organizations such as the Political Risk Service (PRS), Transparency International (TI), the World Business Environment Survey (WBES) of the World Bank, the Global Competitiveness Report, and the Freedom House apply questionnaire surveys or other methods to a number of MNCs operating in host economies. Using these data scholars examine the relationship among corruption and economic growth and FDI.

Foreign investors perceive corruption as an impediment to invest in the host country. Corruption is seen as an extra cost for operations and it can affect FDI directly by tarnishing the perception of the stability and quality of an investment potential.

However, the effect of corruption on economic growth, in specific, on FDI, has been subject to debate. Some argued that, bribes act as speed money and help avoid bureaucratic inefficiencies, plus, corruption is claimed to have a beneficial face which is known as the "greasing the wheel" (Leff, 1964).[3] According to this view, corruption has harmful long-term effects, but it can "grease the wheels" of the economy in the short-term. Also, in cases of developing countries, where the government is inefficient, corruption may be the only way to encourage investment by offering alternative ways to conduct business.

However, over time, the empirical evidence of the negative effects of corruption on economic growth and FDI flows has steadily increased. For instance, Paulo Mauro (1997) uses the Business International (BI) indices to argue that corruption does in fact hurt growth and investment. In his study on 67 countries, Mauro argued corruption can affect FDI directly by ruining the perception of stability and quality of an investment potential, therefore investors may not prefer to invest because of extra costs. Mauro found that if a country could heighten the efficiency of its administration and improve its corruption score from four out of ten to six out ten, the

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[3] Huntington argued that a "rigid, over centralized dishonest bureaucracy" is better than a "rigid, over centralized, honest bureaucracy".See S. Huntington Political *Order in Changing Societies* (New Haven: Yale University Press, 1968).

rate of investment would increase by three percent and the growth rate would increase by 0.5 percent.

The findings of several studies on relationship between corruption and FDI support the corruption-growth argument above. Smarynzka and Wei (2000) argue that host country corruption induces foreign investors to favor joint ventures over wholly owned firms. Habib and Zurawicki (2002) examine the impact of corruption on FDI and the results of their study suggest that foreign investors generally avoid corruption because it is considered wrong and it can create operational inefficiencies. Wei (1997) also found a result that corruption has a negative effect on FDI. In addition, he mentions the weak enforcement mechanisms and political instability mean uncertainty for FDI and affects investment decision negatively. Larrain and Tavares (2004) analyzed the effect of openness to foreign direct investment on corruption. They found that foreign direct investment is a robust determinant of corruption. Larger FDI inflows decrease national corruption.

The studies on the effects of democracy on macroeconomic performance and FDI, as in the case of corruption, are relatively divergent in the literature. Some studies question the contribution of democratic regimes on FDI. For instance, Oneal(1999) states that authoritarian regimes provide investors with higher returns in developing countries which may affect the investment decision.

According to these views, authoritarian regimes, in the bargaining process, may offer businesses the opportunity to influence policy decisions as well. In his study, Resnick (2001) analyzes how democratic transition affects FDI, and not considering the role of property rights independent of democratic institutions, he emphasizes that transition to democracy has a statistically significant negative effect on FDI. Przeworski and Limongi (1993) argue that the relationship between democracy and economic growth is more complex than once thought. In a statistical analysis Przeworski, Limongi, Alvarez and Cheibub (2000) find that there is no difference between the growth rates of democratic and authoritarian regimes.

On the other hand, several scholars mention the importance of the impact of democracy on economic growth and FDI. For instance, Olson (1991) argued that ensuring property rights is a central element of economic development and these result in the growth of democracies at faster rates than authoritarian regimes in which ensuring property rights are not credibly committed by autocrats. Oxley (1999), Smarzynska (1999) found that weak

property rights inhibit FDI inflows. In a study on democracy and FDI, Jensen (2006) states that the overall effect of democratic institutions should be positive and democracies should be associated with higher inflows of FDI. He states that information, representation, and credibility in democracies make easier things for foreign investors (Jensen, 2006:72-100). In his study, Busse (2004)examines the relationship between democratic rights and FDI and argues that a country which protects democratic rights receives more FDI than other countries. In other words, multinational firms prefer to invest in countries in which democratic rights are under protected. Maskus (2000), studying the impact of intellectual property rights on FDI, finds that a one per cent increase in degree of patent protection in host economy raises US investment stock by 0.45 per cent.

Methodology and Variables of the Econometric Model

Scholars when applying econometric models use data collected by international organizations. However, institutional variables are not readily available.

To meet the needs for an in-depth and exhaustively researched analysis of the non-economic variables such as potential risks to international business operations, several organizations created statistical models to calculate risks and backed it up with analyses that explain the numbers and examine what the numbers do not show. The result is a comprehensive system that enables various types of risk to be measured and compared between countries.

The data measuring the quality of institutional variables are produced by independent private firms who provide consulting services to international investors such as the PRS Group publishing the *International Country Risk Guide* (*ICRG*), the Freedom House (FH), or the Transparency International (TI). To a certain extent, these indices provide very similar information on various aspects of institutions. However, some should pay attention to the facts that first indices can be considered to be subjective and more important, they measure the perceptions of governance quality rather than its actual quality.

Therefore, in this paper, what I am concerned about is not the actual institutional quality, but its perceptions on the quality of institutions.[4]

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[4] For more detail about the "perception of institutions" see Ahmet Faruk Aysan, Mustapha Kamel Nablı, and Marie Ange Veganzones—Varoudakis "Governance institutions

In this paper, the effects of both macroeconomic and institutional variables on FDI inflows are analyzed in 67 developing economies. The dependent variable is the FDI inflows/Gross Domestic Product (GDP) (UNCTAD, 2006). This measure is useful to compare the relative FDI performances of the countries. As explanatory variables, macroeconomic variables are GDP growth, GDP per capita (PPP), openness (Export+Import/GDP), and GDP deflator. Political and economic institutional variables are democratic accountability, civil liberties, political rights, law and order, corruption, government stability, investment profile, and socioeconomic conditions.

Definitions of the Variables

The first category of explanatory variables includes macroeconomic variables. As stated before, market size is one of the most widely proven significant determining variables in FDI location. If foreign investors are looking to sell their product or service to the host country, the economic potential of the targeted region is of utmost importance. This will be measured by GDP per capita. Because of differences in consumer purchasing power more-developed countries often attract more FDI than less-developed ones. This measure should have a significant impact on FDI inflows because it indicates market wealth and purchasing power. The variable is converted to international dollars using purchasing power parity (PPP) rates for comparability between countries. GDP per capita as an indicator of economic development is expected to affect FDI inflows positively. Data are from the IMF (2007).

In addition to GDP per capita, I use of GDP growth. GDP growth indicates a precondition for economic expansion. Economic growth should affect FDI inflows positively; hence, I include GDP growth as independent variable. Data are from the World Development Indicators (2006). Openness indicates integration of a country into World Economy. It is estimated as exports plus imports, as a percentage of GDP and it is expected to be significant because it demonstrates the openness and trade abilities of the host country. The data are from WDI (2006). The last macroeconomic variable in the model is GDP deflator (annual percent). Many developing economies

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experienced high levels of inflation in the 1980s and 1990s. Inflation not only deters foreign investment but also investment environment in a country. Therefore, low inflation is expected to attract FDI while high inflation rates deter FDI. The data are from the WDI (2006).

The second category of explanatory variables includes political institutions:

Government Stability (GS) is a measure of the government's ability to stay in office and carry out its declared program(s), depending upon such factors as the type of governance, cohesion of the government and governing parties, approach of an election, and command of the legislature. Corruption (C)within the political system that is a threat, especially in the long-run, to foreign investment by distorting the economic and financial environment, reducing the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability, and introducing inherent instability into the political process. Investment Profile (IP) is an assessment of factors affecting the risk to investment that are not covered by other political, economic and financial risk components. The risk rating assigned is the sum of three subcomponents: Contract Viability/Expropriation, Profits Repatriation and Payment Delays. Socioeconomic conditions (SC) indicator is an assessment of the socioeconomic pressures at work in society that could constrain government action or fuel social dissatisfaction. The risk rating assigned is the sum of three subcomponents; unemployment, consumer confidence and poverty. Law and Order (LA) are assessed separately, with each sub-component comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system, while the Order sub-component is an assessment of popular observance of the law. Thus, a country can enjoy a high rating – 3 – in terms of its judicial system, but a low rating - 1 – if it suffers from a very high crime rate of if the law is routinely ignored without effective sanction (for example, widespread illegal strikes). The institutional strength and quality of the bureaucracy (BQ) is another shock absorber that tends to minimize revisions of policy when governments change. Therefore, high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends

to be traumatic in terms of policy formulation and day-to-day administrative functions. Political rights (PR) enable people to participate freely in the political process, including the right to vote freely for distinct alternatives in legitimate elections, compete for public office, join political parties and organizations, and elect representatives who have a decisive impact on public policies and are accountable to the electorate. Civil liberties (CL) allow for the freedoms of expression and belief, associational and organizational rights, rule of law, and personal autonomy without interference from the state.

Methodology

Before introducing the model, the methodology should be initiated. In this paper, the econometric model includes two approaches; factor analysis and principal component analysis. This is because of there is high correlation between variables.

Table 1 shows that there are high correlations between the institutional variables. Using factor analysis these institutional variables can be explained in terms of a much smaller number of variables called factors. The purpose of factor analysis is to discover simple patterns between the variables and reduction of number of variables, combining two or more variables into a single factor. In order to test if I could use factor analysis for this variable group I use Kaiser-Meyer-Olkin criterion (for detailed information see appendix). Computed Kaiser's MSA is bigger than 0,5. It indicates that factor analysis could be used. I use maximum likelihood method for factor analyzing.

Using Minimum average partial method I found 2 factors. The first group DEMOC includes Civil Liberties (CL), Political Rights (PR) and Democratic Accountability (DA). The second group POL includes Government Stability (GS), Investment Profile (IP), Bureaucratic Quality (BQ), Law and Order (LO), Corruption and Socioeconomic Conditions (SC). Their factor loadings can be seen in the appendix.

Table 1. Correlation for institutional variables

	BQ	DA	GS	IP	LO	N_CL	N_PR	SC
BQ	1.000000	0.406254	0.223212	0.344010	0.437876	0.212655	0.246968	0.412445
DA	0.406254	1.000000	0.168704	0.367918	0.302073	0.531678	0.595366	0.086496
GS	0.223212	0.168704	1.000000	0.598368	0.343915	0.090128	0.065509	0.038455
IP	0.344010	0.367918	0.598368	1.000000	0.331729	0.332767	0.300780	0.332150
LO	0.437876	0.302073	0.343915	0.331729	1.000000	0.174831	0.173786	0.351615
CL	0.212655	0.531678	0.090128	0.332767	0.174831	1.000000	0.868202	0.090053
PR	0.246968	0.595366	0.065509	0.300780	0.173786	0.868202	1.000000	0.101990
SC	0.412445	0.086496	0.038455	0.332150	0.351615	0.090053	0.101990	1.000000

The first equation (eq1) includes only macroeconomic variables:

$$FDI\_inflows\_Gdp = \text{-}2.818641 + 0.000173 * Gdp\_pc\_ppp + 0.078 * Gdp\_growth$$
$$+ 0.052689 * Openness - 3.82\text{E-}06 * Gdp\_def$$

The second equation (eq4) includes both macroeconomic and institutional variables:

$$Fdi\_inflows\_Gdp = -\text{-}2.177220 + 0.000109 * Gdp\_pc\_ppp$$
$$+ 0.062488 * Gdp\_growth + 0.049188 * Openness - 4.95\text{E-}06 * Gdp\_def$$
$$+ 0.666885 * DA + 0.536699 * POL$$

Estimation Results

Equations (1) and (4) have been estimated on an unbalanced panel of 67 developing countries over 1984–2005 using the OLS estimations technique. Four sets of regressions have been conducted, each one with a different institutional indicator.

Table 2 indicates the estimation results with Panel Fixed effects for the equation 1 Table 1 presents the estimation's results of equations (1) and (2) when "macroeconomic conditions", "democratic accountability" and "political stability" are taken into consideration respectively.

Table 2. Determinants of FDI, the role of macroeconomic and institutional variables for 67 developing economies 1984-2005

	Eq1	Eq2	Eq3	Eq4
C	-2.818641 (0.284220)***	-2.524737 (0.288135)***	-2.546381 (0.293447)***	-2.17722 (0.297557)***
GDP_PC_PPP	0.000173 (3.95E-059)***	0.000151 (3.94E-05)***	0.000141 (4.04E-05)***	0.000109 (4.04E-05)***
GDP_GROWTH	0.078413 (0.016547)***	0.073894 (0.016480)***	0.068999 (0.016733)***	0.062488 (0.016591)***
OPENNESS	0.052689 (0.004295)***	0.050499 (0.004286)***	0.051619 (0.004295)***	0.049188 (0.004271)***
GDP_DEF	-3.82E-06 (2.15E-06)*	-5.12E-06 (2.14E-06)**	-3.57E-06 (2.14E-06)*	-4.95E-06 (2.13E-06)**
DEMOC		0.606131 (0.118154)***		0.666885 (0.118271)***
POL			0.452479 (0.125385)***	0.536699 (0.124922)***

Sources: The macroeconomic series are from WDI and IMF. The institutional variables have been processed from various international sources. The "democratic accountability" DEMOC and "political stability" POL indexes are from PRS (2006) and Freedom House (2006) data.
***, **, and * indicates significance at 1%, 5%, and 10% level, respectively. For the country sample see appendix.

A significant conclusion of the model consists in validating the mainstream theory of the firm in the case of developing countries. The macroeconomic variables have the expected signs, which imply that anticipations of economic growth, GDP per capita and openness of the economy induce more FDI. In addition, the inflation appears to exert a negative and significant effect on FDI.

Both variables are highly significant, indicating that market related factors constitute major factors for the entrepreneurs to establish operations abroad.

In the following equations I add institutional variables one by one. The equation 4 includes the all macroeconomic and institutional variables. One of the most interesting outcomes concerns the quality of democratic accountability and political stability indices, which both give positive and

significant coefficients at the 1 percent level in the equation (4). This result confirm that a low level of corruption, a good quality of bureaucracy, protected political rights and civil liberties, a reasonable investment environment, a better law and order, and government stability are of first importance for the foreign investors' decisions to invest. In other words, the increase in perception of the quality of institutions affects FDI inflows positively.

The coefficients of all macroeconomic and institutional variables are statistically significant. Again all signs are as expected.
A significant conclusion of the model consists in validating the mainstream theory of the firm in the case of developing countries. The macroeconomic variables have the expected signs, which imply that anticipations of economic growth, GDP per capita and openness of the economy induce more FDI. In addition, the inflation appears to exert a negative and significant effect on FDI.

In conclusion, an important result from empirical analysis is that macroeconomic variables have a strong impact on FDI inflows. In addition, institutional variables used in the equations also have important effect on FDI flows.

Principal Components Analysis

In order to confirm the results of factor analysis, principal components analysis is introduced to the dissertation.
The methodology is the same with the factor analysis. I divide institutional variables into two groups with the same names; DEMOC and POL. DEMOC includes CL, PR and DA. POL includes IP, GS, Corruption, LO, BQ and SC. The equations, principal components and loadings are at the below.

Eq1;
$$Fdi\_inflows\_Gdp = -1.807502 + 6.66\text{E}-05 * Gdp\_pc\_ppp$$
$$+0.057561 * Gdp\_growth + 0.047372 * Openness - 5.03\text{E}-06 * Gdp\_def$$
$$+0.244721 * DA + 0.687027 * POL$$

Eq4;

$$Fdi\_inflows\_Gdp = -2.326162 + 0.000115 * Gdp\_pc\_ppp$$
$$+0.063071 * Gdp\_growth + 0.050718 * Openness - 4.01\mathrm{E} - 06 * Gdp\_def$$
$$+0.524903 * GOV$$

Table 3. The DEMOC Indicator

Component	Eigen Value	Cumulative Proportion
PC1	2.343134	0.7810
PC2	0.528918	0.9574
PC3	0.127948	1.0000

Table 4. Loadings

Variable	PC 1	PC 2	PC 3
N_CL	0.600483	-0.427562	0.675730
N_PR	0.614894	-0.293333	-0.732025
DA	0.511200	0.855071	0.086764

DEMOC = pc1 * (0.7810/0.9574) + pc2 * (0.1763/0.9574)

Table 5. The POL Indicator

Number	Eigen Value	Cumulative Proportion
PC1	2.577193	0.4295
PC2	1.314895	0.6487
PC3	0.806480	0.7831
PC4	0.547529	0.8743
PC5	0.441562	0.9479
PC6	0.312341	1.0000

Table 6. Loadings

Variable	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	
BQ	0.466171	-0.208069	-0.043562	-0.726545	-0.456950	0.028681	POL =
CORRUPTION	0.339637	-0.526170	0.437696	-0.061226	0.642188	0.007749	pc1 *
GS	0.343980	0.609048	0.306733	-0.009470	0.099438	0.637711	
IP	0.422484	0.490487	-0.228931	-0.090684	0.333537	-0.639570	(0.4295/
SC	0.382274	-0.239725	-0.748922	0.288428	0.134931	0.366220	0.7831)
LO	0.473690	-0.104245	0.314875	0.613905	-0.489336	-0.221981	+ pc2 *

(0.2191/0.7831) + pc3 * (0.1344/0.7831)

Table 7. The GOV indicator

Number	Eigen Value	Cumulative Proportion
PC1	3.204928	0.4006
PC2	1.602346	0.6009
PC3	1.093847	0.7376
PC4	0.715638	0.8271
PC5	0.574502	0.8989
PC6	0.418182	0.9512
PC7	0.265867	0.9844
PC8	0.124689	1.0000

```
Table 8. Eigenvectors (loadings)
```

Variable	PC 1	PC 2	PC 3	PC 4	PC 5	PC 6	PC 7	PC 8
BQ	0.355449	0.248195	0.346719	-0.334617	-0.536186	0.524221	-0.132283	0.008445
DA	0.410244	-0.236257	-0.000361	-0.384031	-0.316569	-0.675044	0.244748	0.112257
GS	0.257546	0.371123	-0.647204	-0.007104	0.016960	0.233199	0.567103	0.027192
IP	0.393533	0.250910	-0.347936	0.412291	-0.184246	-0.237828	-0.627587	-0.082208
LO	0.326915	0.342151	0.141125	-0.444777	0.713727	-0.081655	-0.203169	-0.031069
N_CL	0.398155	-0.464411	-0.020705	0.197721	0.214205	0.284437	-0.053822	0.675713
N_PR	0.405262	-0.477945	0.026620	0.126194	0.139349	0.196438	0.110339	-0.721468
SC	0.233495	0.347443	0.564624	0.563624	0.057850	-0.180013	0.388303	0.041955

```
GOV= (0.4006/0.7376*PC1 + 0.2003/0.7376*PC2 + 0.1367/0.7376*PC3)
```

Table 9. Determinants of FDI in developing economies 1984-2005 (Principal Components Analysis)

	Eq1	Eq2	Eq3	Eq4
C	-2.447698	-1.895822	-1.807502	-2.326162
	(0.291598)***	(0.301764)***	(0.303315)***	(0.299567)***
GDP_PC_PPP	0.000134	7.63E-05	6.66E-05	0.000115
	(3.99E-05)***	(4.06E-05)*	(4.07E-05)*	(4.10E-05)***
GDP_GROWTH	0.070019	0.059649	0.057561	0.063071
	(0.016496)***	(0.016412)***	(0.016404)***	(0.016754)***
OPENNESS	0.050867	0.047766	0.047372	0.050718
	(0.004275)***	(0.004255)***	(0.004250)***	(0.004287)***
GDP_DEF	-5.04E-06	-4.47E-06	-5.03E-06	-4.01E-06
	(2.14E-06)**	(2.10E-06)**	(2.11E-06)**	(2.13E-06)*
DEMOC	0.466172		0.244721	
	(0.093943)***		(0.098804)**	
POL		0.775276	0.687027	
		(0.097728)***	(0.103852)***	
GOV				0.524903
				(0.106365)***

In addition to the DEMOC and POL variables, in order to complete the analysis, I have substituted in this system of equation including the aggregate indicator of governance (*GOV*), which is calculated as the principal component analysis of all the initial indicators. GOV provides a summary of the two measures of institutional variable.

Results of the regressions are reported in Table 9.
This last set of estimations confirms most of the results obtained in the factor analysis. The aggregate indicator of governance appears to have a positive and significant coefficient, which validates the importance of this factor for the foreign firm's decisions to invest.

My results point out that the effect of macroeconomic indicators such as market size, growth rate, GDP per capita on FDI is positive. In addition, institutional variables such as; low level of corruption, government stability, enforcement of contract law, functioning of judicial system, transparent, legal and regulatory framework political and economic stability, intellectual property rights, efficiency of justice and prudential standards have also significant impact on FDI in developing countries.

Conclusion

An important result from empirical analysis is that in addition to macroeconomic variables, institutional variables used in the equations also have important effect on FDI flows.

Anti-competitive practices by the government, consistency and unpredictability of officials' interpretations of regulations, unstable and unreliable, non-transparent legal and regulatory framework, problems with recognition of patent rights and corruption are significant facts hindering the higher level of FDI inflows for foreign investors.

The findings presented in this paper, when incorporated with the existing works on FDI, provide an explanation of the distribution of foreign direct investment across countries. The empirical results point to the importance of political and economic institutions for foreign direct investment.

The theoretical framework and the empirical study in this paper reveal that the nature of the interaction between MNCs and each country is the result of a more complex set of factors than only market size or market related variables orientation. It takes place within the host country's unique economic, social, and legal structures; it involves institutions.

Generally, legal infrastructures, including legal system development and enforcement, are generally weak in most developing countries. Bribery and corruption are obviously more invasive in emerging markets than advanced economies. It is generally less difficult to enact and develop various laws, but political, social, historical or cultural factors often impede the implementation and enforcement of these laws. The roles of law and judicial systems differ among countries. The gap between the law on the books and the law in practice can be vast. Legal standards tend to be ideals, not necessarily achievable.

A stable, reliable, business climate will lower costs, thereby encouraging FDI. Avoiding problems with regulatory, bureaucratic and judicial hurdles, property rights, enforceable contracts, performance and content requirements, or bribe payments will be seen as positive because they reduce risk and uncertainty. Basically, the more obstacles that companies perceive they will have to face in a host country, the less attractive it becomes. The ability to communicate, to access information and to transport internally is useful to investors because they can reduce costs of

developing the infrastructure necessary to them.

Then the key to economic growth, to attract higher levels of FDI is finding the right institutional framework that will unlock a nation's wealth potential.

Appendix

Table 1. Kaiser's Measure of Sampling Adequacy Factor

	MSA
BQ	0.812422
-CL	0.648760
CORRUPTION	0.722596
DA	0.817637
GS	0.521575
IP	0.648647
LO	0.779073
-PR	0.641195
SC	0.562240
Kaiser's MSA	0.682332

Table 2. Loadings

	F1	F2	Communality	Uniqueness
BQ	0.252434	0.576206	0.395737	0.849397
-CL	0.872058	0.027706	0.761253	0.236223
CORRUPTION	0.172899	0.408804	0.197015	0.975294
DA	0.600097	0.311355	0.457058	0.604062
GS	0.070363	0.431288	0.190960	0.989448
IP	0.307158	0.484339	0.328930	0.884439
LO	0.179625	0.602603	0.395396	0.812053
-PR	0.995968	-0.008292	0.992021	0.007977
SC	0.105272	0.442236	0.206655	0.973236

Factor	Variance	Cumulative	Difference	Proportion
F1	2.348815	2.348815	0.772606	0.598421
F2	1.576209	3.925024	---	0.401579
Total	3.925024	6.273840		1.000000

Table 3. Ordinary correlations

	N_CL	N_PR	DA
N_CL	1.000000		
N_PR	0.868210	1.000000	
DA	0.533396	0.595737	1.000000

Table 4. Ordinary correlations

	BQ	CORRUPTION	GS	IP	SC	LO
BQ	1.000000					
CORRUPTION	0.431472	1.000000				
GS	0.225273	0.018046	1.000000			
IP	0.344476	0.045719	0.598424	1.000000		
SC	0.412484	0.265579	0.039017	0.332288	1.000000	
LO	0.439087	0.438021	0.345452	0.332192	0.351758	1.000000

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