Governance Institutions and FDI: An empirical study of top 30 FDI recipient countries

Bhavna Seth
Assistant Professor in Economics
Dyal Singh College, New Delhi
E-mail: bhavna.seth255@gmail.com
Mobile: 9654002569
India

ABSTRACT

The rise in the world FDI inflows 1980 onwards has led to numerous research studies evaluating the factors that make a country an attractive FDI destination for investors. Although there is a lot of research work looking into the factors that affect FDI inflows, still very few studies have looked into the institutional environment of a country affecting FDI. Filling this research gap, this study aims to study the impact of World governance indicators on the FDI inflows of the country. The analysis leads us to conclude that out of six governance institutional indicators of WGI, only 'better control of corruption' and 'better regulatory quality' of a country leads to higher FDI inflows to the country.

Keywords: FDI, Governance, Institutions.

Introduction

Globalisation has led to increasing the foreign direct investment flows over time. Global FDI flows jumped 36% in 2015 to an estimated US$1.7 trillion, their highest level since the global economic and financial crisis of 2008-2009. Countries are competing amongst themselves to attract more and more FDI flows. Given its numerous advantages such greater investment funds and inflow of foreign managerial and technical know how's, countries are adopting policies which encourage FDI inflows. With the increase in FDI flows, research studying the factors behind the attractiveness of the country to have greater FDI inflows has also increased. Although there are studies establishing the economic factors such as market Size, openness, labor costs, infrastructure etc, there are relatively fewer studies on governance institutional factors that affect FDI inflows of an economy.

In wake of this research gap, this study aims at evaluating the impact of country's governance institutional environment on its FDI inflows. In order to see this relationship, 30 top FDI recipient countries are taken for the period of 12 years. These countries are: United States, China, United Kingdom, Germany,Belgium, Switzerland, France, Canada, Singapore, Ireland, Brazil, Spain, Australia, Netherlands, Italy, Sweden, Mexico, Russia, Austria, India, Norway, Poland, Indonesia, Saudi Arabia, Thailand, Japan, Chile, South Korea, Turkey, and Portugal. The stock of FDI inflows to these countries as on March 2015 is depicted in the below graph.

The study used the World Bank's World Governance indicators as proxies for the governance environment prevailing in each of the countries. These Hudicators are namely Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These indicators lie between -2.5 and 2.5. Greater the indicator better is the governance environment in the country.

This paper first looks into the literature on the importance of institutions, particularly governance institutions which affect the FDI inflows of the country. Then it goes on to describe the data and methodology used for the

purpose of the study, which leads to the empirical results that we get. And finally, it makes concluding remarks as to how governance institutions are affecting the FDI inflows of the countries.

FDI stock (in million USD)
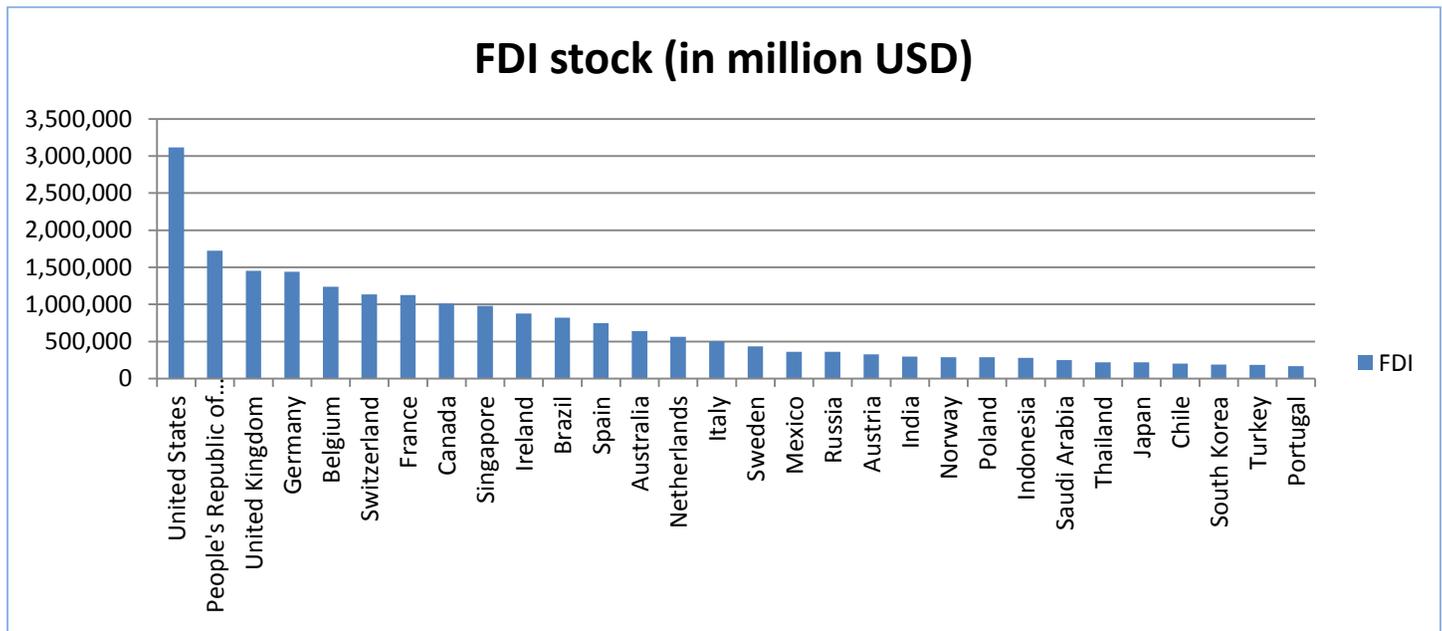
Literature Review

Good governance' institutions is said to promote investment environment in a country. Literature suggests that Good governance and institutions are needed to secure three essential prerequisites of market economies: security of property rights, enforcement of contracts, and to facilitate collective action. Therefore, institutions are required in a country in order to make market operate efficiently. This leads to an interesting question whether governance institutions indeed lead to better economic outcomes. Since this paper deals with a country's attractiveness to FDI and institutional factors, empirical studies on the similar lines are reviewed in this section, dealing with different institutional factors and different regions of the world.

The empirical study by Saidi, Ochi, and Ghadri in 2013 evaluates the impact of governance indicators and macroeconomic variables on the attractiveness of foreign direct investment in 20 developed and developing countries from 1998 to 2011 using fixed effects panel regressions. In their results they find out only two indicators namely, political stability and regulatory quality having a significant impact on FDI inflows.

Another study by Alemu studies the institutional impact on FDI of Asian countries only. He examines effects of host country quality of institutions as captured by six elements of 'good governance' on 15 Asian countries' FDI inflow. Their results reveal that government effectiveness, political stability, and absence of violence, rule of law, and the absence of corruption are robust factors determining FDI inflows of a country. He makes use of fixed effects, random effects and praise winstein panel estimation methodology for the purpose of this study.

A Similar study for African nations was carried out by Wernick, Haar, and Sharma in 2014 who studied the impact of governing institutions and natural resource base on the FDI inflows. They conclude by making two implications. First, countries that lack natural resources will be pressed to ensure that their formal institutions are strong and competitive. This includes administrative and legal structures, property rights regimes and tax

systems. Secondly, oil and gas-rich African countries need not have strong instituting given rich natural resource base and continued demand for oil and gas.

For OECD nations, Daude, and Stein (2001) studied the role of the quality of institutions as a determinant of the location of FDI, using bilateral FDI stocks from OECD countries around the world. They find that better institutions have overall a positive and significant effect on FDI. Especially, the unpredictability of policies, excessive regulatory burden, deficient enforcement of property rights, and lack of commitment on the part of the government plays a major role in deterring FDI flows.

When it comes to democratic institutional impact on FDI, Busse (2003) tried to examine empirically the complex relationship between democracy and FDI using cross-sectional and panel data analysis. He concludes that multinationals are significantly higher in democratic nations, although this link did not hold for the 1970s when FDI went to politically repressive nations. Another similar study by Busse and Hefeker in 2005 analyzed the linkages between political risk, institutions, and foreign direct investment flows. They worked on a sample of 83 developing nations for the period 1984 to 2003. Their results show that that government stability, the absence of internal conflict and ethnic tensions, basic democratic rights and ensuring law and order are highly significant determinants of foreign investment inflows.

Bouchoucha and Ammon (2015), aimed to specify the roles of political and institutional factors leading to FDI flows. They found out that only political factors and political risk are significant in affecting FDI flows, institutional factors an insignificant impact on the foreign flows.

Given this background, we specify the data, variables, and methodology for our study in understanding the impact of governance institutions in attracting FDI in a country.

Data and Variables

This paper uses sample of balanced panel dataset of 30 top FDI receiving countries (That is, United States, China, United Kingdom, Germany, Belgium, Switzerland, France, Canada, Singapore, Ireland, Brazil, Spain, Australia, Netherlands, Italy, Sweden, Mexico, Russia, Austria, India, Norway, Poland, Indonesia, Saudi Arabia, Thailand, Japan, Chile, South Korea, Turkey, and Portugal) for over 12 years from 2004 to 2015. The following variables are taken in the analysis:

1) *FDI as a % of GDP*

FDI as a % of GDP (FDI/GDP) is taken from World Bank's World Development Indicators Data source. As noted by Kamaly(2003), FDI as a percentage of the country's GDP size controls for the size differences between countries. FDI in absolute terms may lead to spurious results as it does not take into account relative size of the economy. FDI relative to economy's size renders better results.

For **Institutional variables** of Governance, World Governance Indicators (WGI) is employed. WGI is a research programme of the World Bank which captures six key dimensions of governance, namely Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. We have selected all the governance indicators for the purpose of the study. The variables are explained briefly:

2) *Voice and Accountability*

This variable looks into the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression to people and media and accountability of the government. Of the six WGIs, this variable best captures most individuals' notion of how a democratic institution fostering voice and accountability affects pluralism. This variable should be negatively related to trading and FDI as democratic institutions can lead to more power to the citizens of the country leading them to oppose FDI inflows to the country.

2.) Political Stability (PS): This variable measures perceptions of the likelihood that the government will not be destabilized or overthrown by unconstitutional or violent means. For FDI, MNEs should tend to prefer a stable to an unstable host government, due to the risk of expropriation. For trade, political stability need not be a crucial determinant because of the absence of risk of expropriation of plant and equipment.

3.) Government Effectiveness (GE): This variable measures the quality of public services, of the civil service (and its degree of independence), of policy formation process and implementation, and of the government's commitment to implementing policies. For FDI and trade, one would expect that foreign companies would prefer an effective host country government.

4.) Regulatory Quality (RQ): This variable measures the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Of the six indicators, this one should be very important for enhancing both FDI and trade.

5.) Rule of Law (RL): This variable measures the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, the police, and the courts. This should be important for both FDI and trade.

6.) Control of Corruption (CC): This variable measures the extent to which public power is not exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. This could be important both for FDI and trade.

These indices can take values between -2.5 and 2.5, and the higher the value the better the institution.

Variables	Expected Signs
Voice and Accountability	Plus /minus
Political Stability	Plus (+)
Government Effectiveness	Plus (+)
Regulatory Quality	Plus (+)
Rule of Law	Plus (+)
Control of Corruption	Plus (+)

Methodology

We employ Fixed and random effects models to estimate the impact of various governance indicators on FDI flows to a country.

FDI/GDP = f (Voice & Accountability, Political Stability and Lack of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption)

We use the following models:

1) Simple linear OLS regression
2) Fixed Effects using least square dummy variable model (LSDV)
   ▪ Country specific intercepts
   ▪ Common intercept and n minus 1 binary(dummy) repressors
3) Random Effects

Specification 1: Simple linear OLS regression: All Coefficients constant across time and countries

$$Y = \beta_0 + \beta_1\, VA + \beta_2\, PS + \beta_3\, GE + \beta_4\, RQ + \beta_5\, RL + \beta_6\, CC + U_i$$

Where, Y = FDI/GDP, VA = Voice & Accountability, PS = Political Stability and Lack of Violence, GE = Government Effectiveness, RQ = Regulatory Quality, RL = Rule of Law, CC = Control of Corruption

I unit increase in the coefficient value leads to beta times unit in FDI/GDP value.

Specification 2: Fixed Effects using least square dummy variable model (LSDV)

Specification 2.1: Specific intercept for each country

$$Y_{it} = \beta_{0i} + \beta_1\, VA_{it} + \beta_2\, PS_{it} + \beta_3\, GE_{it} + \beta_4\, RQ_{it} + \beta_5\, RL_{it} + \beta_6\, CC_{it} + U_{it}$$

Where
I = Country subscript, T= time subscript, β_{0i} = intercept varying over countries, but constant over time (time invariant) , other notations are same as mentioned above.

In this case, we assume that intercept value changes for each country but remains constant over time.

Specification 2.2: Common intercept and 29 dummies (30 countries)

$$Y_{it} = c_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \ldots\ldots + \alpha_{29} D_{4i} + \beta_1\, VA_{it} + \beta_2\, PS_{it} + \beta_3\, GE_{it} + \beta_4\, RQ_{it} + \beta_5\, RL_{it} + \beta_6\, CC_{it} + U_{it}$$

Where
I = Country subscript, T= time subscript, α = constant intercept, D = dummies for each country , other notations are same as mentioned above.

Specification 3: Random Effects

$$Y_{it} = \beta_{0i} + \beta_1\,VA_{it} + \beta_2\,PS_{it} + \beta_3\,GE_{it} + \beta_4\,RQ_{it} + \beta_5\,RL_{it} + \beta_6\,CC_{it} + U_{it}$$

Where

I = Country subscript, T= time subscript, $\beta_{0i} = \beta_0 + ei$ (intercept is a random variable with mean value β_0), other notations are same as mentioned above.

Empirical Results

To estimate the models, we used the econometric technique for estimating panel data using statistical software for data analysis (STATA 13). In this context, the following table reports the descriptive statistics that characterize the series of all the variables retained on the sample period from 2004 to 2015:

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI/GDP	360	5.359216	9.435114	-6.869414	87.4426
CC	360	1.398236	1.995895	-3.6352	18.0092
GE	360	1.052874	.7954772	-.45926	2.431312
PS	360	.3248562	.8151009	-1.869046	1.398399
RQ	360	.9849772	.7373318	-.6658263	2.262884
RL	360	.9503682	.8988145	-.9518586	2.045412
VA	360	.7239879	.9302184	-1.862976	1.77128

As the table 1 shows, the FDI as a percentage of GDP varies between -6.869414(Outflows) to 87.4426(inflows with mean 5.36 and standard deviation 9.43. This shows the volatility of FDI flows over countries and time periods. Other governance institutional variables have low variability as they vary within a certain limit. The means of all the governance indicators are between 0.32 to 1.39, indicating governance institutions are pretty good in all the top 30 FDI countries

Table 2: Regression results

As table 2 shows that the results of all four model that we have estimated. In all the models, control of corruption and regulatory quality are the significant governance institutional indicators which FDI flows to a country in a positive way. This is consistent with our expected signs. Table is given on the next page.

Table 2: Empirical results of all the regression models

Variable	OLS	Dummy	Fixed	Random
CC	.40669691	1.0416975***	1.0416975***	.95663154***
GE	-.15550687	-1.5799439	-1.5799439	-.5509632
PS	.83783224	-2.0181761	-2.0181761	-.79961209
RQ	8.3977904***	7.1228222	7.1228222	7.7416553*
RL	-2.9128772	-2.7666497	-2.7666497	-1.6316782
VA	-2.503601**	-4.4990136	-4.4990136	-2.5652273
Dummy1		4.0050306		
Dummy2		10.961638**		
Dummy3		-1.0989728		
Dummy4		1.1149851		
Dummy5		2.2931357		
Dummy6		-8.4530427		
Dummy7		.07561285		
Dummy8		-1.1181183		
Dummy9		-.48141952		
Dummy10		-4.0778174		
Dummy11		19.071787***		
Dummy12		-3.0974341		
Dummy13		-1.6516803		
Dummy14		-6.5241893		
Dummy15		27.891202***		
Dummy16		3.5359633		
Dummy17		.15475152		
Dummy18		2.7632984		
Dummy19		-7.5149034		
Dummy20		-9.7795234		
Dummy21		8.7296103		
Dummy22		-2.7348674		
Dummy23		-3.2078107		
Dummy24		.81768106		
Dummy25		1.291924		
Dummy26		-11.021881		
Dummy27		-9.2139276		
Dummy28		-3.2910606		
Dummy29		-2.4275723		
constant	.99136289	4.8587798	5.0925264	.64400811
N	360	360	360	360
r2	.12895905	.54538745	.06270545	
r2_a	.11415382	.49627807	-.03854551	

* p<0.05; ** p<0.01; *** p<0.001

Specification 1:

As it can be seen from the above regression results, control of corruption, rule of law, regulatory quality and voice and accountability are affecting FDI/GDP ratio significantly. Control of corruption and regulatory quality are positively affecting FDI/GDP ratio, as expected. But voice and accountability, a democratic indicator, is affecting the depended variable negatively, which is consistent with the literature on negative effects of democratic institutions on FDI flows. Also, rule of law is also affecting FDI/GDP ratio negatively which is opposite to our expectation. Government effectiveness also has the negative impact on the FDI/GDP, although the impact is insignificant. Political stability shows a positive effect but the magnitude is insignificant.

Specification 2.1:

As it can be seen from the above regression results, control of corruption, regulatory quality is affecting FDI/GDP ratio significantly. Control of corruption and regulatory quality are positively affecting FDI/GDP ratio, as expected. But voice and accountability, a democratic indicator, is affecting the depended variable negatively, which is consistent with the literature on negative effects of democratic institutions on FDI flows. Also, rule of law is also affecting FDI/GDP ratio negatively which is opposite to our expectation. Government effectiveness also has a negative impact on the FDI/GDP, although the impact is insignificant. Political stability shows a positive effect but the magnitude is insignificant.

Specification 2.2:

As it can be seen from the above regression results, only control of corruption is affecting FDI/GDP ratio significantly. Control of corruption is positively affecting FDI/GDP ratio, as expected. All other variables have an insignificant impact on FDI/GDP ratio. Impact of regulatory quality, though insignificant, but is positive in nature. Remaining variables are affecting FDI/GDP negatively and insignificantly. Dummies for country 3, 12 and 16 are significant that is, their effect will be added to the intercept.

Specification 3:

Random effects model shows us the similar results with control of corruption and regulatory quality as significant variables. Both these variables have the positive impact on FDI/GDP, as expected. Voice and accountability, Rule of law, political stability and government effectiveness have an insignificant impact on the FDI/GDP ratio.

Therefore, out of all six governance indicators, only control of corruption and regulatory quality are affecting FDI/GDP significantly. Also, their positive impact implies that as corruption in a country is controlled significantly, it leads to higher FDI inflows relative to the GDP of the country. Similarly, better regulatory quality leads to greater FDI flows. This shows institutional framework is needed which takes care of these governance factors if a country wants to attract higher FDI flows.

Table 3: Summary of results

Model Specification / Variable	Control of Corruption	Government Effectiveness	Political Stability	Regulatory Quality	Rule of Law	Voice and Accountability
1. OLS	Insignificant	Insignificant	Insignificant	Significant	Insignificant	Significant
2.1 Fixed	Significant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
2.2 Fixed Dummy	Significant	Insignificant	Insignificant	Insignificant	Insignificant	Insignificant
3 Random	Significant	Insignificant	Insignificant	Significant	Insignificant	Insignificant

Now, the question arises as to which model out of all the four models is provides better estimation results. For this, we carry out Hausman model specification test for all four econometric models. The results of the test are shown as follows:

As the hausman test shows, p value is 0.648 which is greater than chi2 value. Therefore, we can infer from this that the random effects model specification is more appropriate for the analysis of impact of governance indicators on the FDI/GDP ratio.

Conclusion

From this study, we can conclude that institutions do matter. Governance institutions relating to controlling corruption and regulatory quality prevailing in the 30 countries with highest levels of FDI stocks, lead to investors investing in these countries. Therefore, policymakers should aim at creating an environment where corruption levels are low and regulatory framework is effective. This study included top 30 FDI stock counties which included both developing and developed countries.

References :

Saidi, Y. A. Ochi and H. Ghadri, 2013, Governance and FDI Attractiveness : Some Evidence from Developing and Developed Countries, *Global Journal of Management and Business Research Finance,* 13(6)

Alemu, A. M., Quality of Institutions and FDI inflow : Evidence from Asian Economies, *Korean Review of International Studies,* 35-57

Wernick D. A., J. Haar, L. Sharma, (2014) The Impact of governing Instituions on Foreign Direct Investment Flows: Evidence from Asian Nations, *International Journal of Business administration,* 5(2), 1-12

Busse, M., (2003), Democracy and FDI, *Hamburgisches Welt Wirtschafts Archiv (HWWA), Discussion Paper 220*

Busse, M., C. Hafeker (2005), Political Risk, Institutions and Foreign Direct Investment, *Hamburgisches Welt Wirtschafts Archiv (HWWA), Discussion Paper 315*

E. Shimma, H. Ingham and R. Read (2015), Economic, Institutional and Political Determinats of FDI growth Effects in Emerging and Developing Countries, *Lancaster University Management School Economics Working Paper Series 2015/024*

Bouchoucha N., S. B. Ammou (2015), Political and Institutional Determinants of Foreign Direct Investment: An application for MENA Region Countries, *International Journal of Science and Research,* 4(8)

Walsh, J. P. and J. Yu (2010), Determinants of Foreign Direct Investment: A sectoral and Institutional Approach, *IMF Working Paper WP/10/187*