

Does Institutional Quality and Economic Freedom Impact on Foreign Direct Investment? Evidence From Developing Countries

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Abstract

Using panel data analysis, it is an attempt to estimate the significance of institutional quality and economic freedom on foreign direct investment for a sample of 79 developing countries from 1998 to 2014. Panel unit root, Pedroni residual cointegration test, vector error correction model, generalized least square (GLS), feasible GLS (FGLS), pooled OLS, random effect, fixed effect, Poisson regression, Prais-Winsten, generalized method of moments (GMM) and generalized estimating equation (GEE) method are utilized for estimating the importance of institutional qualities and economic freedom for facilitating foreign direct investment. VECM confirms that there is a long run relationship among the tested variables means that commensurate institutional quality and substantive economic freedom stimulates foreign direct investment. According to the OLS method, for the institutional quality the coefficient implies that a one standard deviation improvement in political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption increases FDI by 24.6%, 31.6%, 12.8%, 23.9% and 37.7% and on the other hand for the economic freedom, the coefficient implies that a one standard deviation improvement

in business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom increases FDI by 28.4%, 32.7%, 29.5%, 22.8%, 29.0%, 36.4%, 29.3%, 37.5%, 46.1% and 38.2% respectively. By using the other methods like random effect, fixed effect, poisson regression, prais-winsten and generalized estimating equation (GEE) method explores that both the institutional quality and economic freedom are influencing on FDI in the developing countries.

Keywords: Institutional quality, Economic freedom, Foreign direct investment, Generalized least square, Poisson regression, Generalized estimating equation

1. Introduction

Capital flows, especially foreign direct investment (FDI) is one of the key components of globalization which brings integration of the different developed economic with the developing countries. International trade has doubled because of trade liberalization; flows of foreign direct investment have increased tremendously by a factor of 10 around the world. Overall, the developing world has seen its share of FDI in aggregate net resource flows increase from a paltry 5.3% in 1980 to more than 60% in 2000 (Yeyati et al, 2007).

Especially economic competitiveness is accelerates and economic structures is transforming very rapidly because of FDI in many developing countries. Li and Liu (2005) examine a panel of 84 countries over the period 1970 - 1999 to understand whether FDI triggers economic growth. Their result reveals that FDI not only promotes growth directly, but also increases growth with its interaction term. They further test their hypothesis in two sub-sample; developed and developing countries by dividing the whole sample (84 countries). Again the result confirms that in both developed and developing countries, FDI promotes economic growth. They find that a 10 percent increase in FDI (as a percentage of GDP) leads to a 4.1 percentage-point increase in the rate of economic growth. Li and Liu elucidation may be not universe; different factors are associated for ensuring the economic advancement. Considering the importance of macroeconomic factors in attracting FDI inflows, recent expertise consider that institutional quality and economic freedom is ineluctable ingredients for ensuring uninterrupted flow of investment. Recent studies have highlighted the essential role played by institutional factors in creating a more attractive investment climate (Nasir and Hassan, 2011) and different studies reveals that economic freedom not just ensure the FDI but also ensure the economic growth in a developing country (Azman-Sainiet et al. (2010).

Now inevitable question have raised do institutional quality and economic freedom really facilitated FDI? It is completely argumentative and a debatable issue in today's phenomenon depends on the manifold factors like market size and economic stability. To explore this work the paper has used the Kaufmann et al. (2007) work that identified the six elements as a institutional quality that comprised with voice and accountability, political stability, government effectiveness, regulation, law, corruption and aggregate governance and considering the importance of economic freedom, Heritage Foundation developed the Economic Freedom Index (EFI) based on these policy parameters and that comprised with the business freedom, investment climate, trade openness, monetary and fiscal environment

in the index. Each and every factor separately and independently influences the foreign direct investment.

According to the Jude and Leveigue (2013) have used a sample of 94 developing countries over the period 1994-2009 and a panel smooth transition regression (PSTR) to identify the threshold of institutional quality that influence the FDI growth effect. They discover that the advancement of the institutional framework should precede FDI attraction policies to benefits from FDI-led growth and that. Zafar Mueen Nasir and Arshad Hassan (2011) conducted a research work among South Asian countries 1995-2008 by using panel data analysis and fixed effects model and explores that there is a significant positive relationship between economic freedom score and FDI inflows.

This view, however, is disputed by the different authors like Habib and Zurawicky (2002), Li and Filer (2004), Li (2005), Henisz (2000), Moskalev (2007) and Zhu (2007). Li (2005) have argued that poor institutional quality does not necessarily mean the lack of protection. In an environment of poor institutional arrangement, MNCs strategically adjust to the local business climate and pay bribes in order to obtain business contracts (Zhu, 2007). Poor institutional arrangement may also offer enhanced investment opportunities for MNCs. In an environment of poor institutional arrangement, rent-seeking activities are pursued not only by politicians and policy makers but also by large MNCs. Relation-based systems are often controlled by powerful rulers who tend to favor big business (Li, 2005).

Yassaman Saadatmand and Jeremy Choquette (2012) accomplishing a research work among 51 African countries from 1998 to 2009 by applying panel data regression method and discover that economic freedom discourages FDI inflows to the selected African countries.

To explore the effects of institutional quality and economic freedom on FDI, the paper is incorporated with the, literature review, model specification, empirical evidence and conclusion.

2. Literature Review

Because of the radical transition of the business and its relevant functions, traditional determinants (wage costs, infrastructure or macroeconomic policy) of FDI is no longer hold rather less traditional determinants has become more important, like institutions or economic freedom.

Unremitting transmutation of the economy and business function, the common factors like Market size (Asiedu (2006); Mlambo (2006) and Zhang (2008), Human Capital (Noorbakhsh et al. (2001), Dutta and Osei-Yeboah (2010), Infrastructure (Kok and Ersoy (2009) ,Macroeconomic stability (Chakrabarti 2001; Onyeiwu and Shrestha 2004), Financial Development (Alfara et al., 2004 and Durham, 2004) facilitated Foreign Direct Investment(FDI) but not substantial and meaningful way.

According to Busse and Hefeker (2007) and Ali *et al.* (2010), interprets that institutions can increase and optimize not only the FDI quantity, but also their quality. Institutional quality along with the economic freedom is a significant determinant of foreign direct investment as

well as a noteworthy factor in economic growth (e.g., Barro, 1997; Dawson, 1998; Estrin, Bevan and Meyer, 2001; Ghura and Goodwin, 2000; Heckelman, 2000).

Different studies have argued that there is a robust relationship between non-economic factors, such as institutional quality and FDI (Busse and Hefeker 2005; Daude and Stein 2007). According to these global studies, a government's political stability, regulatory quality, rule of law, and level of corruption have a statistically significant effect on foreign investment. On the other hand, Gwartney (2009) penetratingly determined that countries with having enormous amount of economic freedom leads higher shares of private investment in GDP, higher productivity of private investment, grow more rapidly and achieve higher levels of per capita income than countries with lower levels of economic freedom.

According to Daude and Stein (2007) demonstrates that inward FDI is deeply influenced by the quality of institutions. Through a contemplative and vigorous research work accomplish by Rodrik and Subramanian (2002) emphasized on the supremacy of institutions over other determinants of FDI which is supported by Wernick, Haar and Singh (2009) arguing that "good" political and governance institutions reduce economic and political uncertainties and promote efficiency as effective governing institutions provide the necessary legal framework for economic growth and socio-economic development. Concentrate on the Marta Bengoa, Blanca Sanchez-Robles (2003) empirical work among 18 different Latin-American countries base on panel data analysis from 1970 to 1999, find out that the host country's economic freedom is found to be a positive and statistically significant determinant of FDI inflows.

The relationship between investment climate and private investment decisions has shown that "better political and governance institutions improve the investment climate by enhancing bureaucratic performances and predictability" (Aysan and Veganzones-Varoudakis, 2007) which reduces companies' costs of performing their business activities and economic freedom has expand the confidence level of the entrepreneur who enormously concentrate on accomplishing his business function and help to expand the economic growth and per capital income (e.g., De Haan et al., 2006; Azman-Saini et al., 2010; Compton et al., 2011). Institutional quality assists to increase the entrepreneur capacity of the local producer. Huang (2003) notes that poor institutions reduce the supply of local entrepreneurship; high quality institutions increase local entrepreneurship.

Several studies such as Bénassy-Qué et al. (2007) and Busse and Groizard (2008) have stressed the potential positive role of good institutional quality in economic development, in particular as an attraction to further persuade inflows of FDI. Bengoa, Marta, and Sanchez-Robles (2003) investigated the relationship between economic freedom and foreign direct investment by using panel data of 18 different Latin American countries from the period 1970 to 1999. Empirical results illustrated that economic freedom facilitated FDI inflow and the economic growth was also found definitely related with FDI.

Institutional quality and economic freedom may not always a considering factor for FDI especially in developing countries. Sometime weak institutional quality facilitates foreign direct investment. Hausmann and Fernández- Arias (2000) claim that developing countries with weak institutions can actually attract more FDI because investors sometimes prefer to

operate directly in unregulated environments, as the cost of engaging in more developed markets can be high.

Absorbing capacity of the host country is inevitable factors rather than the economic freedom in many developing countries. Multinational firms not just seeking the exploring resources rather also consider the availability of the human capacity that encourages them to make rigorous investment.

Using data on 80 countries for the period 1979–98 Durham (2004), have failed to identify a positive relationship among FDI, economic freedom and economic growth, based on his empirical work he advocated that the effects of are contingent on the “absorptive capability” of host countries.

3. Model Specification

This paper is mainly explores the consequence of institutional quality and economic freedom on stimulating FDI by using panel data analysis for a sample of 79 different developing countries from 1998–2014. As part of the methodological design, the basic equation is illustrated below:

$$\begin{aligned}
 FDI = & \alpha_0 + \alpha_1 \text{Political Stability} + \alpha_2 \text{Government effectiveness} + \alpha_3 \text{Regulatory Quality} \\
 & + \alpha_4 \text{Rules of Law} + \alpha_5 \text{Control of Corruption} + \alpha_6 \text{Businesss Freedom} \\
 & + \alpha_7 \text{Trade Freedom} + \alpha_8 \text{Government Size} + \alpha_9 \text{Investment Freedom} \\
 & + \alpha_{10} \text{Property Rights} + \alpha_{11} \text{Freedom from Corruption} + \alpha_{12} \text{Labor Freedom} \\
 & + \alpha_{13} \text{Financiaal Freedom} + \alpha_{14} \text{Monetary Freedom} + \alpha_{15} \text{Democracy} + e_t \quad (1)
 \end{aligned}$$

Where $\alpha_0, \alpha_1 - \alpha_{13}$ are parameters to be estimated.

e_t is stochastic error terms assumed to be independently and identically distributed.

For measuring the significance of institutional quality and economic freedom on the incessant flow of foreign direct investment different methods have used.

At first for indentifying whether data are stationary or not for measuring it panel unit root test is being accomplished.

3.1 Panel Unit Root Test: Levin, Lin and Chu

Levin, Lin and Chu start panel unit root test by consider the following basic ADF specification.

$$DY_{it} = \alpha Y_{i,t-1} + \sum_{j=1}^{Pi} \beta_j DY_{i,t-j} + X_{i,t}^* \delta + \epsilon_{i,t} \quad (2)$$

Where,

DY_{it} = difference term of Y_{it}

Y_{it1} = panel data

$\alpha = \rho - 1$

p_i = the number of lag order for difference terms

X_{it}^* = exogenous variable in model such as country fixed effects and individual time trend

ε_{it} = the error term of equation 2

LLC panel unit root test has null hypothesis as panel data has unit root as well as can present below that:

H_0 : null hypothesis as panel data has unit root (assumes common unit root process)

H_1 : panel data has not unit root

3.2 Im, Pesaran and Shin

The properly standardized t_{NT}^* has an asymptotic standard normal distribution and also it was rewritten to be new t-statistics as well as can show below that: (see equation 3).

$$W_{t^*NT} = \sqrt{n} [(t_{NT} - N^{-1} \sum_{t=1}^n E(t_{it}(p_i)))] / \sqrt{(N^{-1} \sum_{i=1}^n \text{var}(t_{ix}(p_i)))} \quad (3)$$

Where, W_{t^*NT} is W-statistics has been used to test panel data based on Im, Pesaran and Shin techniques. Also this technique has non-stationary as null hypothesis as well as to show below that:

H_0 : null hypothesis as panel data has unit root (assumes individual unit root process)

H_1 : panel data has not unit root

3.3 Fisher-Type Test Using ADF and PP-Test (Maddala and Wu and Choi)

Maddala and Wu proposed the use of the Fisher (P_λ) test which is based on combining the P-values of the test-statistics for unit root in each cross-sectional unit. Let p_i are $U[0, 1]$ and independent, and $-2 \log_e p_i$ has a χ^2 distribution with $2N$ degree of freedom and can be written in equation 4.

$$P_\lambda = -2 \sum_{i=1}^N \log_e p_i \quad (4)$$

Where,

P_λ = Fisher (P_λ) panel unit root test

N = all N cross-section

$-2 \sum_{i=1}^N \log_e p_i$ = it has a χ^2 distribution with $2N$ degree of freedom

In addition, Choi demonstrates that :(see more detail of Choi demonstrates that in equation 5).

$$Z = (1 / \sqrt{N_{i=1}}) [\sum_{i=1}^N \Theta_i^{-1}(p_i)] \rightarrow N(0, 1) \quad (5)$$

Where,

Z = Z-statistic panel data unit root test

N = all N cross-section in panel data

Θ_i^{-1} = the inverse of the standard normal cumulative distribution function

p_i = it is the P-value from the i^{th} test

Both Fisher (P) Chi-square panel unit root test and Choi Z-statistics panel data unit root test have non-stationary as null hypothesis as well as to show below that:

H_0 : null hypothesis as panel data has unit root (assumes individual unit root process)

H_1 : panel data has not unit root.

3.4 Hadri

The Hadri test for panel data has the hypothesis to be tested is H_0 is null hypothesis and H_1 is against null hypothesis and can show below that:

H_0 : null hypothesis as panel data has not unit root (assumes common unit root process)

H_1 : panel data has unit root

3.5 Panel Cointegration Test

In order to solve the spurious regression problem and violation of the assumptions of the classical regression model, cointegration analysis is used to examine the long run relationship between the variables. This test is mainly accomplished for identifying the long run relationship among institutional quality, economic freedom and FDI.

$$Y_{i,t} = \alpha_1 + \beta_{1i}X_{1,i,t} + \beta_{2i}X_{2,i,t} + \dots + \beta_{Mi}X_{M,i,t} + e_{i,t}, \quad t=1, \dots, T; \quad i=1, \dots, N \quad (6)$$

Here, Y indicates the dependent variable like FDI and X_1 to X_m indicates the different independent variables. (See in details Table 2)

Another method have used that is known as a Kao for estimating the long run relationship between the variables. Kao have used both DF and ADF to test for co-integration in panel as well as this test similar to the standard approach adopted in the EG-step procedures. Also this test start with the panel regression model as set out in equation 7.

$$Y_{i,t} = X_{i,t} \beta_{i,t} + Z_{i,t} \gamma_0 + \epsilon_{i,t} \quad (7)$$

Where Y and X are presumed to be non-stationary and ϵ (see equation 8)

$$\hat{e}_{i,t} = \rho \hat{e}_{i,t} + V_{i,t} \quad (8)$$

where $\hat{e}_{i,t} = (Y_{i,t} - X_{i,t} \hat{\beta}_{i,t} - Z_{i,t} \hat{\gamma})$ are the residuals from estimating equation 8. To test the null hypothesis of no co-integration amounts to test $H_0: \rho = 1$ in equation 8 against the alternative that Y and X are co-integrated (i, e., $H_1: \rho < 1$).

3.6 Vector Error Correction Model

The purpose of VECM model is to indicate the speed of adjustment from the short run equilibrium to the long run equilibrium state between the variables from welfare to country

risk. The greater the coefficient of the parameter the higher the speed of adjustment of the model from short runs to long run. Considering the basic equation (1), the VECM model is specified as follows:

$$\begin{aligned}
 \Delta FDI = & \alpha_0 + \alpha_1 \sum_{t=1}^K \Delta \text{Political Stability}_{t-1} + \alpha_2 \sum_{t=1}^K \Delta \text{Government effectiveness}_{t-1} \\
 & + \alpha_3 \sum_{t=1}^K \Delta \text{regulatory quality}_{t-1} + \alpha_4 \sum_{t=1}^K \Delta \text{Rules of law}_{t-1} \\
 & + \alpha_5 \sum_{t=1}^K \Delta \text{Control of corruption}_{t-1} + \alpha_6 \sum_{t=1}^K \Delta \text{Business freedom}_{t-1} \\
 & + \alpha_7 \sum_{t=1}^K \Delta \text{Trade Freedom}_{t-1} + \alpha_8 \sum_{t=1}^K \Delta \text{Government Size}_{t-1} \\
 & + \alpha_9 \sum_{t=1}^K \Delta \text{Investment Freedom}_{t-1} + \alpha_{10} \sum_{t=1}^K \Delta \text{D Property Rights}_{t-1} \\
 & + \alpha_{11} \sum_{t=1}^K \Delta \text{D Freedom from corruption}_{t-1} + \alpha_{12} \sum_{t=1}^K \Delta \text{D Labor Freedom}_{t-1} \\
 & + \alpha_{13} \sum_{t=1}^K \Delta \text{Financial Freedom}_{t-1} + \alpha_{14} \sum_{t=1}^K \Delta \text{D Monetary Freedom}_{t-1} \\
 & + \alpha_{15} \sum_{t=1}^K \Delta \text{D Democracy}_{t-1} + \epsilon_t \tag{9}
 \end{aligned}$$

Where the ϵ_t is the error term, ECM (-1) is the error correction term, β_i captures the long run impact. The short run effects are captured through the individual coefficients of the differenced terms (α) while the coefficient of the ECM variable contains information about whether the past values of variables affect the current values. The size and statistical significance of the coefficient of the ECM measures the tendency of each variable to return to the equilibrium. A significant coefficient implies that past equilibrium errors play a role in determining the current outcomes.

Considering the demand of the paper when Ω is known, β is efficiently estimated with generalized least squares (GLS).

$$\hat{\beta}_{GLS} = (X'\hat{\Omega}^{-1}X)^{-1} X'\hat{\Omega}^{-1} y \tag{10}$$

Instead of assuming the structure of heteroskedasticity, the work may estimate the structure of heteroskedasticity from OLS. First, estimate $\hat{\Omega}$ from OLS and, second, use $\hat{\Omega}$ instead of Ω .

$$\hat{\beta}_{FGLS} = (X'\hat{\Omega}^{-1}X)^{-1} X'\hat{\Omega}^{-1} y \tag{11}$$

After GLS and FGLS the paper has also tested OLS. A standard panel OLS estimator for the coefficient β given by:

$$\hat{\beta}_{i,OLS} = [\sum_{i=1}^N \sum_{t=1}^T (X_{i,t} - X_i^*)^2]^{-1} \sum_{i=1}^N \sum_{t=1}^T (X_{i,t} - X_i^*) (Y_{i,t} - Y_i^*) \quad (12)$$

Where

i = cross-section data and N is the number of cross-section

t = time series data and T is the number of time series data

$\hat{\beta}_{i,OLS}$ = a standard panel OLS estimator

$X_{i,t}$ = exogenous variable in model

X_i^* = average of X_i

$Y_{i,t}$ = endogenous variable in model

Y_i^* = average of Y_i

The most commonly used models in panel data analysis are fixed effects (FE) and random effects (RE) regressors in linear regression using ordinary least squares (OLS).

Here in this paper the fixed effects model is used binary variables. So the equation for the fixed effects model becomes:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \gamma_2 E_2 + \dots + \gamma_n E_n + u_{it} \quad (13)$$

Where,

Y_{it} = is the dependent variable (DV) is FDI where i = entity and t = time.

$X_{k,it}$ = represents independent variables (See in details in table 2)

β_k = is the coefficient for the IVs

u_{it} = is the error term

E_n = is the entity n .

γ_2 = is the coefficient for the binary repressors (entities)

The random effects model is:

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it} \quad (14)$$

In Poisson regression, the paper supposes that the Poisson incidence rate μ is determined by a set of k regressor variables (the X 's). The expression relating these quantities is μ .

$$\mu = t \exp (\beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k) \quad (15)$$

$X_1=1$ and β_1 is called the intercept. The regression coefficients $\beta_1, \beta_2, \dots, \beta_k$ are unknown parameters that are estimated from a set of data. Their estimates are labeled b_1, b_2, \dots, b_k .

Using this notation, the fundamental Poisson regression model for an observation i is written as

$$P_r (Y_i=y_i | \mu_i, t_i) = \frac{e^{-\mu_i} (\mu_i)^{y_i}}{Y_i!} \quad (16)$$

Where,

$$\mu_i = t_i \mu (X_i; \beta) = t_i \exp (\beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_K X_{Ki})$$

That is, for a given set of values of the regressor variables, the outcome follows the Poisson distribution.

In the Prais-Winsten the equation is

$$Y_t = \alpha + X_t \beta + \varepsilon_t \quad (17)$$

Where Y_t is the time series of interest at time, β is a vector of coefficients, X_t is a matrix of explanatory variables and ε_t error terms. The error terms can be serially correlated over time $\varepsilon_t = \rho \varepsilon_{t-1} + e_t$, $|\rho| < 1$ and e_t is a white noise.

In the Generalized Method of Moments estimator based on these population moments conditions is the value of θ that minimizes.

$$Q_n(\theta) = \left\{ n^{-1} \sum_{t=1}^n f(v_t, \theta) \right\}' W_n \left\{ n^{-1} \sum_{t=1}^n f(v_t, \theta) \right\} \quad (18)$$

Where W_n is a non-negative definite matrix that usually depends on the data but converges to a constant positive definite matrix as $n \rightarrow \infty$.

The GEE approach estimates β by solving the estimating equations (Liang and Zeger), and (Prentice):

$$\sum_{i=1}^N D_i' V_i^{-1} (Y_i - \mu_i) = 0 \quad (19)$$

Where $D_i = D_i(\beta) = \partial \mu_i(\beta) / \partial \beta'$, and V_i is the working covariance matrix of Y_i . V_i can be expressed in terms of a correlation matrix $R(\alpha)$: $V_i = A_i^{1/2} R(\alpha) A_i^{1/2}$ where A_i is a diagonal matrix with elements $\text{var}(Y_{it}) = V(\mu_{it})$, specified as functions of the means μ_{it} , α is some unknown parameter.

3.7 Data Sources

This article has employed panel data for 79 countries over the period from 1998 to 2014 among different developing countries (See in Table 1). Here the FDI which is noted as an dependent variable is measured in current U.S. dollars divided by the host country's total population as the dependent variable, and data come from UNCTAD. Data on FDI are provided by several sources, such as Balance of Payments Statistics Yearbook and

International Finance Statistics by the International Monetary Fund (IMF), European Union Direct Investment Yearbook by EUROSTAT, World Investment Report by UNCTAD, World Development Indicators by the World Bank, and International Direct Investment Statistics Yearbook by OECD. Only the UNCTAD, OECD, and EUROSTAT offer a sectoral breakdown of FDI flows and stocks. The drawback of using the data from OECD and EUROSTAT is only cover a very limited number of world countries and thus the total direct investment received by any given country cannot be completely assessed. Moreover, the paper is more interested in FDI inflows than FDI stocks because policy recommendations are usually formulated to boost FDI inflows rather than to accumulate FDI stocks for a given period. However, only UNCTAD provides a break down into two different categories: FDI figures for developed and for developing countries that really serve our purpose. Because of making contemplative judgment FDI related data are accumulated from the UNCTAD.

Table 1. List of the countries

Afghanistan, Albania, Algeria, Angola, Argentina, Armenia, Azerbaijan, Bangladesh, Belarus, Benin, Bhutan, Bolivia, Botswana, Bulgaria, Burundi, Cambodia, Chad, Colombia, Comoros, Cuba, Dominica, Ecuador, El Salvador, Ethiopia, Figgie, Gambia, Georgia, Ghana, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Iran, Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kosovo, Lebanon, Liberia, Libya, Madagascar, Maldives, Mali, Moldova, Mongolia, Morocco, Mozambique, Myanmar, Namibia, Nepal, Nicaragua, Nigeria, Pakistan, Papua New Guinea, Peru, Senegal, Serbia, Sierra Leone, Somalia, South Sudan, Sri Lanka, Sudan, Suriname, Tajikistan, Timor-Leste, Togo, Tonga, Tunisia, Uganda, Ukraine, Venezuela, Vietnam, Yemen, Zambia and Zimbabwe.

Source: Own Calculation

For the independent variable like institutional quality that is including the six different factors, voice and accountability, political stability and violence, government effectiveness, regulation quality, rules of law and control of corruption. Data are aggregating from the worldwide governance indicators. Here the voice and accountability is not considered for our purpose. Data collection method and research methodology all the things can be access in that particular website: www.govindicators.org.

Here in this study the paper has applied the Index of Economic Freedom provided by Heritage Foundation, for measuring economic freedom that is another independent variable which is included 50 independent variables fall into 10 categories of economic freedom. Each country receives its overall economic freedom score based on the simple average of the 10 individual factor score. Each factor has a unique scale that runs from 1 to 5, where a score of 1 indicates an economic environment that are most conducive to economic freedom and a score of 5 indicates the opposite.

Table 2. Description of the variable

Variables	Description	Source	Expected Sign	
Dependent Variables	Foreign Direct Investment	Total FDI inflows a host country receives at time t divided by the host country's total population (i.e., FDI per capita)	UNCTAD, 2014	(+)
	Political Stability (PS) and absence of violence	Perception of likelihood that the government in power will be destabilized or overthrown by possibly unconstitutional and/or violent means, including domestic violence and terrorism.	Worlds governance Indicator, 2014	(+)
	Government Effectiveness	The quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	Worlds governance Indicator, 2014	(+)
	Regulatory Quality	The ability of the government to formulate and implement sound policies and regulations that permits and promotes private sector development.	Worlds governance Indicator, 2014	(+)
	Rule of Law (RL)	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, as well as the likelihood of crime and violence.	Worlds governance Indicator, 2014	(+)
	Control of Corruption	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.	Worlds governance Indicator, 2014	(+)
Independent Variables	Business Freedom	The ability to generate, operates, and closes up an enterprise quickly and easily.	Heritage Foundation, 2014	(+)
	Trade Freedom	Trade freedom is measuring in the absence of tariff and non-tariff barriers that influence on imports and exports of goods and services.	Heritage Foundation, 2014	(+)
	Government Size	All government expenditures, including consumption and transfers.	Heritage Foundation, 2014	(+)
	Investment Freedom	An assessment of the free flow of capital.	Heritage Foundation, 2014	(+)
	Property Rights	An assessment of the aptitude of individuals to accumulate private property, protected by clear laws that are fully compulsory by the state.	Heritage Foundation, 2014	(+)
	Freedom from Corruption	Quantitative data that evaluate the perception of corruption in the business environment, including levels of governmental legal, judicial, and administrative corruption.	Heritage Foundation, 2014	(+)
	Labour Freedom	It is a composite measure of the aptitude of workers and businesses to interact without restriction by the state.	Heritage Foundation, 2014	(+)
	Financial Freedom	Financial freedom that measure of banking security as well as independence from government control; state ownership of banks and other financial institutions.	Heritage Foundation, 2014	(+)
	Fiscal Freedom	Fiscal freedom is a measure of the burden of government from the revenue side and it includes both the tax burden in terms of the top tax rate on income and the overall amount of tax revenue as a portion of GDP.	Heritage Foundation, 2014	(+)
	Monetary Freedom	Monetary freedom combines a measure of price stability with an assessment of price controls.	Heritage Foundation, 2014	(+)
Democracy	Index of Democratization. Index that could vary from 0 (no democracy) to 100 (full democracy).	Quality of Government Institute	(+)	

4. Empirical Evidence

Concentrate on the model specification the following table interprets whether the panel data are stationary or not. For identifying this, five different panel unit test is being accomplished (Levin, Lin and Chu, Breitung, Im, Pesaran and Shin, Fisher-Type test using ADF and PP-test (Maddala and Wu and Choi) and Hadri. Base on the five different type of panel unit root test such as Levin, Lin and Chu, Im, Pesaran and Shin, Fisher-Type test using ADF and PP-test (Maddala and Wu and Choi 2001) and Hadri method the variables are not stationary at a level.

Table 3. Panel unit root test

Variables	Levin Lin and Chu-t test Values** and prob	Im, Pesaran and Shin W-stat test Values** and Prob	ADF-Fisher Chi-square Test Values** and Prob	PP-Fisher Chi- square Test Values**and Prob	Hadri
Foreign Direct Investment	-2.94310 P=0.2905	-5.68401 P=0.1726	15.29884 P=0.0894	26.32540 P=0.1421	2.38723 P=0.0000
Political Stability	-6.22498 P=0.0386	-16.85721 P=0.0389	26.93173 P=0.2519	41.47842 P=0.3146	3.48325 P=0.0000
Government Effectiveness	-3.28891 P=0.0256	-8.95172 P=0.0178	15.05144 P=0.0234	28.92014 P=0.0331	2.86913 P=0.0000
Regulatory Qualities	-4.92176 P=0.1529	6.99341 P=0.2461	17.09531 P=0.1129	28.09974 P=0.2582	3.09984 P=0.0000
Rules of Laws	-6.97182 P=0.1027	7.25114 P=0.2654	19.26703 P=0.1908	27.18513 P=0.2163	3.09144 P=0.0000
Control of Corruption	-5.46562 P=0.1127	8.19039 P=0.2540	24.17721 P=0.1892	29.16371 P=0.2263	3.54109 P=0.0000
Business Freedom	-5.43193 P=0.0711	-3.29851 P=3.29851	21.14332 P=21.14332	15.16883 P=15.16883	4.27094 P=0.0000
Trade Freedom	-5.42163 P=0.0429	-8.13416 P=0.2805	34.28928 P=0.0549	14.72116 P=0.1304	3.29842 P=0.0000
Government Size	-4.92163 P=0.0672	-8.24631 P=0.2137	23.15993 P=0.0942	37.12046 P=0.1786	2.34173 P=0.0000
Investment Freedom	-7.29884 P=0.0672	-19.76118 P=0.1763	22.14729 P=0.0549	15.27661 P=0.1115	2.18992 P=0.0000
Property Rights	-4.94116 P=0.0728	-16.29474 P=0.0672	29.18034 P=0.1529	17.72383 P=0.2783	5.46882 P=0.0000
Freedom From Corruption	-7.34731 P=0.0722	-5.63189 P=0.2673	27.16720 P=0.1549	17.17883 P=0.2618	4.18441 P=0.0000
Labor Freedom	-3.29551 P=0.0826	-24.16726 P=0.3981	28.94825 P=0.1642	34.12772 P=0.0549	4.77009 P=0.0000
Financial Freedom	-6.15484 P=0.0621	-12.63180 P=0.2198	22.15827 P=0.1219	32.25331 P=0.0622	3.68294 P=0.0000
Fiscal Freedom	-7.24409 P=0.0754	-18.54220 P=0.2093	34.65319 P=0.1732	21.18742 P=0.1218	3.68294 P=0.0000
Monetary Freedom	-4.21774 P=0.0421	-10.56821 P=0.1204	27.92454 P=0.1572	31.66734 P=0.1925	4.6073 P=0.0000
Democracy	-5.54289 P=0.0572	-11.29095 P=0.0729	31.43461 P=0.1928	45.29661 P=0.2463	4.25186 P=0.0000

Source: Own Calculation

From the Table 4 concentrate on the five different type of panel unit root test such as Levin, Lin and Chu, Im, Pesaran and Shin, Fisher-Type test using ADF and PP-test (Maddala and Wu and Choi) and Hadri methods the variables are stationary at a first differences.

Table 4. Panel unit root test

Variables	Levin Lin and Chu-t test Values** and prob	Im, Pesaran and Shin W-stat test Values** and Prob	ADF-Fisher Chi-square Test Values** and Prob	PP-Fisher Chi- square Test Values**and Prob	Hadri
Foreign Direct Investment	-8.32117 P=0.0000	-4.27992 P=0.0001	21.45184 P=0.0000	31.68214 P=0.0007	0.73119 P=0.2984
Political Stability	-3.65182 P=0.0005	-6.75672 P=0.0008	27.29841 P=0.0035	32.15909 P=0.0068	0.72194 P=0.2908
Government Effectiveness	-4.92472 P=0.0004	-8.92167 P=0.0002	16.92413 P=0.0026	23.09883 P=0.0031	0.87122 P=0.1590
Regulatory Qualities	-5.52103 p=0.0003	-6.84398 P=0.0005	32.16755 P=0.0019	37.09092 P=0.0043	0.71453 P=0.2319
Rules of Laws	-6.75113 p=0.0004	-7.01322 P=0.0006	30.10912 P=0.0025	35.18721 P=0.0051	0.85882 P=0.2466
Control of Corruption	-8.54109 p=0.0007	-6.24772 P=0.0003	31.46172 P=0.0028	41.58781 P=0.0043	0.89711 P=0.2608
Business Freedom	-5.46109 p=0.0003	-6.75941 P=0.0005	34.18094 P=0.0019	37.65902 P=0.0054	0.82532 P=0.2137
Trade Freedom	-3.11729 P=0.0004	-5.16193 P=0.0003	32.29031 P=0.0011	41.11294 P=0.0018	0.79091 P=0.1984
Government Size	-2.90318 P=0.0002	-8.22249 P=0.0009	16.27831 P=0.0034	24.27943 P=0.0057	0.68836 P=0.3106
Investment Freedom	-3.44841 P=0.0003	-6.74209 P=0.0009	21.0915 P=0.0041	31.67093 P=0.0069	0.74167 P=0.2492
Property Rights	-4.19631 P=0.0002	-8.46318 P=0.0011	24.29086 P=0.0029	31.52981 P=0.0045	0.81670 P=0.2781
Freedom From Corruption	-8.17031 P=0.0006	-11.78109 P=0.0018	36.42156 P=0.0059	41.26193 P=0.0077	0.54193 P=0.2094
Labor Freedom	-7.21093 P=0.0007	-11.54194 P=0.0013	25.60912 P=0.0061	37.55190 P=0.0082	0.51861 P=0.2894
Financial Freedom	-5.42885 P=0.0006	-9.39081 P=0.0011	21.44093 P=0.0062	38.54817 P=0.0081	0.61204 P=0.1834
Fiscal Freedom	-3.40092 P=0.0004	-7.22807 P=0.0017	18.41063 P=0.0061	25.49860 P=0.0079	0.63428 P=0.2317
Monetary Freedom	-6.16425 P=0.0004	-9.21094 P=0.0009	19.54831 P=0.0025	36.48093 P=0.0063	0.67041 P=0.3572
Democracy	-5.28462 P=0.0003	-8.34992 P=0.0007	22.49821 P=0.0021	34.15382 P=0.0054	0.54926 P=0.1492

Source: Own Calculation

Table 5. Pedroni residual co-integration test

Pedroni Residual Co-integration Test			
Test Method	No deterministic trend		
	Deterministic intercept	Deterministic intercept and trend	No deterministic intercept or trend
Panel v-statistic	-0.058830 P=0.5904	-3.729518 P=0.2604	-0.230017 P=0.1729
Panel rho-Statistic	-2.159273 P=0.3419	7.260952 P=0.2188	-0.243681 P=0.1319
Panel PP-Statistic	-6.551803 P=0.0026	-6.771951 P=0.1329	-4.119271 P=0.0046
Panel ADF- Statistic	-4.367216 P=0.0030	-5.431183 P=0.3417	6.941803 P=0.0041
Group rho- Statistic	0.289418 P=0.2754	3.621193 P=0.3992	4.944172 P=0.3679
Group PP- Statistic	-4.941826 P=0.0009	-3.541183 P=0.0007	-4.380091 P=0.0017
Group ADF- Statistic	-4.199274 P=0.0008	-3.328841 P=0.0031	-2.411206 P=0.0021

Source: Own Calculation

The Table 5 highlights the pedroni cointegration test. From the no deterministic trends there are 7 different and separate outcomes. Out of 7 outcomes, 3 outcomes interpret that the paper has accepted the null hypothesis (H_0 = No co-integration), because the p value is > 5 . On the other hand 4 outcomes illustrates that reject the null hypothesis and accept the alternative hypothesis. Therefore it is to be noted that base on the no deterministic trend elucidates that the variables are cointegrate. On the other hand from the deterministic intercept and trends way out of 7 outcomes 5 outcomes interpret that accept the null hypothesis (H_0 = No Co-integration), because the p value is > 5 . On the other hand 2 outcomes illustrates that reject the null hypothesis, it means that accept the alternative hypothesis. Therefore it is to be noted that base on the deterministic intercept and trend elucidate that the variables are not cointegrate. From the no deterministic intercept and trends out of 7 outcomes, 4 outcomes interpret that reject the null hypothesis (H_0 = No integration), because the p value is < 5 . On the other hand 3 outcomes illustrates that accept the null hypothesis, it means that reject the alternative hypothesis Therefore it is to be noted that base on the no deterministic intercept and trend method elucidates that the variables are cointegrated. It means that two different methods out of three of the Pedroni Residual Cointegration Test the variables are cointegrate. Another lucid method (Kao Residual Cointegration) is used to estimates whether the variables are cointegrate. From the table: 6 it exhibits that the p value is less than 5%, means it reject the null hypothesis (H_0 = No co-integration).

Table 6. Kao residual co-integration test

	t-Statistic	Prob.
ADF		
	-7.219945	0.0016
Residual variance	8317.903	
HAC variance	218.3199	

Source: Own Calculation

From the Table 7 illustrates that C(1) means speed of adjustment towards long run equilibrium but it must me significant and the sign must be negative. There is long run causality from the variables such as FDI, political stability, government effectiveness, regulatory qualities, rules of law, control of corruption, business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom and democracy.

Table 7. Vector error correction model using least squares method

Variable	Coefficient	Std.Error	t-statistics	Prob.
C(1)	-21.921822	4.103572	2.976324	0.0072
C(2)	51.941092	34.296092	2.434621	0.0095
C(3)	69.45514	24.321098	3.834392	0.0043
C(4)	75.830917	37.192983	1.515258	0.0061
C(5)	61.908813	41.013346	1.509479	0.0049
C(6)	72.153328	45.298416	1.592844	0.0217
C(7)	87.162652	53.154672	2.501315	0.0326
C(8)	55.602284	19.113441	2.909067	0.0562
C(9)	124.431962	42.496539	3.179654	0.0865
C(10)	112.726615	54.392092	3.380103	0.0946
C(11)	153.618214	39.311549	5.358305	0.0328
C(12)	142.869213	78.396613	1.874214	0.0463
C(13)	120.357146	95.236394	1.360480	0.0288
C(14)	52.736803	49.210993	1.164349	0.0050
C(15)	113.514662	126.254902	1.752132	0.0088
C(16)	81.730152	138.132547	1.485212	0.0031
C(17)	127.117894	134.119832	1.038022	0.0232
C(18)	145.673702	101.138546	1.010440	0.0167
C(19)	131.581337	126.102392	1.063884	0.0328
C(20)	66.289148	72.143109	1.055356	0.0263
C(21)	81.441729	34.347341	2.461939	0.0434
C(22)	108.805522	66.223091	1.711207	0.0245
C(23)	80.215801	42.198057	2.234197	0.0382
C(24)	79.254517	61.298513	1.187794	0.0015
C(25)	35.108214	29.843619	1.047421	0.0196
C(26)	31.091606	22.935147	1.360872	0.0143
C(27)	22.147318	17.295629	1.280515	0.0041
C(28)	27.894142	19.241556	1.449682	0.0035
C(29)	31.211816	25.884135	1.205828	0.0025
C(30)	24.051941	12.165294	1.977094	0.0019
C(31)	19.931725	11.628413	1.714053	0.0125
C(32)	15.843228	10.286653	1.540173	0.0071
C(33)	14.170342	12.378315	1.144771	0.0019
C(34)	15.981124	11.241702	1.421592	0.0017
C(35)	18.761280	10.856216	1.728160	0.0026

It interprets that the independent variables such as political stability, government effectiveness, regulatory qualities, rules of law, control of corruption, business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom and democracy have an influence on the dependent variable such as foreign direct investment (FDI).

The different variables like political stability, government effectiveness, regulatory qualities, rules of law, control of corruption, business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom and democracy have an influence on the dependent variable such as FDI in the short run. For measuring this Wald Statistics has used. Here, $C(4) = C(5) = 0$ meaning that there is no short run causality running from political stability to FDI. $C(6) = C(7) = 0$ meaning that there is no short run causality running from government effectiveness to FDI. $C(8) = C(9) = 0$ meaning that there is no short run causality running from regulatory qualities to FDI. $C(10) = C(11) = 0$ meaning that there is no short run causality running from rules of law to FDI. $C(12) = C(13) = 0$ meaning that there is no short run causality running from control of corruption to FDI. $C(14) = C(15) = 0$ meaning that there

is no short run causality running from business freedom to FDI. $C(16) = C(17) = 0$ meaning that there is no short run causality running from trade freedom to FDI. $C(18) = C(19) = 0$ meaning that there is no short run causality running from government size to FDI. $C(20) = C(21) = 0$ meaning that there is no short run causality running from investment freedom to FDI. $C(22) = C(23) = 0$ meaning that there is no short run causality running from property rights to FDI. $C(24) = C(25) = 0$ meaning that there is no short run causality running from freedom from corruption to FDI. $C(26) = C(27) = 0$ meaning that there is no short run causality running from labor freedom to FDI. $C(28) = C(29) = 0$ meaning that there is no short run causality running from financial freedom to FDI. $C(30) = C(31) = 0$ meaning that there is no short run causality running from fiscal freedom to FDI. $C(32) = C(33) = 0$ meaning that there is no short run causality running from monetary freedom to FDI. $C(34) = C(35) = 0$ meaning that there is no short run causality running from democracy to FDI

Table 8. Wald statistics

Independent Variable	Hypothesis	Prob
Political Stability	$C(4)=C(5)=0$	0.0005
Government effectiveness	$C(6)=C(7)=0$	0.0003
Regulatory Qualities	$C(8)=C(9)=0$	0.0003
Rules of laws	$C(10)=C(11)=0$	0.0006
Control of corruption	$C(12)=C(13)=0$	0.0004
Business Freedom	$C(14)=C(15)=0$	0.0005
Trade Freedom	$C(16)=C(17)=0$	0.0005
Government Size	$C(18)=C(19)=0$	0.0004
Investment Freedom	$C(20)=C(21)=0$	0.0006
Property Rights	$C(22)=C(23)=0$	0.0004
Freedom from Corruption	$C(24)=C(25)=0$	0.0004
Labor Freedom	$C(26)=C(27)=0$	0.0008
Financial Freedom	$C(28)=C(29)=0$	0.0007
Fiscal Freedom	$C(30)=C(31)=0$	0.0004
Monetary Freedom	$C(32)=C(33)=0$	0.0005
Democracy	$C(34)=C(35)=0$	0.0005

Source: Own Calculation

From the table it is explore that the P values of each of the independent variables are less than 5%. It means that there is a short run causality running from the variables like political stability, government effectiveness, regulatory qualities, rules of law, control of corruption, business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom and democracy to FDI.

From the Pooled OLS method, the impacts of all the variables under the institutional quality are explored to be positive and significant. In the case of political stability and absence of violence the coefficient implies that a one standard deviation improvement in political stability increases FDI by 24.6 %. The coefficient of government effectiveness implies that a one standard deviation improvement in government effectiveness increases FDI by 31.6 %. Another variable under the institutional quality, of course the regulatory quality, the coefficient of implies that a one standard deviation improvement in regulatory quality increases FDI by 12.8 %. In the case of rules of law the coefficient implies that a one standard deviation improvement in rules of law increases FDI by 23.9 %. The coefficient of control of corruption implies that a one standard deviation improvement in control of corruption increases FDI by 28.4 %.

The impact of all the variables under the economic freedom is also explored to be positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 28.4 %. The coefficient of trade freedom implies that a one standard deviation improvement in business freedom increases FDI by 32.7 %. Another variable under the economic freedom the coefficient of government size implies that a one standard deviation improvement in government size increases FDI by 29.5 %. In the case of investment freedom the coefficient implies that a one standard deviation improvement in investment freedom increases FDI by 22.8 %. On the concentration of the property rights the coefficient implies that a one standard deviation improvement in property rights increases FDI by 29.0 %. The coefficient of freedom from corruption implies that a one standard deviation improvement in freedom from corruption increases FDI by 36.4 %. In the case of labor freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 29.3%. In the case of financial freedom the coefficient implies that a one standard deviation improvement in financial freedom increases FDI by 37.5 %. The coefficient of fiscal freedom implies that a one standard deviation improvement in fiscal freedom increases FDI by 46.1 %. In the case of monetary freedom the coefficient implies that a one standard deviation improvement in monetary freedom increases FDI by 38.2 %.

Table 9. Pooled OLS

Estimation Method	POOLED OLS														
Independent Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Political Stability	0.246 (2.924)**														
Government effective		0.316 (2.471)**													
Regulatory Quality			0.128 (2.251)**												
Rules of Law				0.239 (2.628)**											
Control of Corruption					0.377 (2.892)***										
Business Freedom						0.284 (2.116)*									
Trade Freedom							0.327 (2.693)**								
Government Size								0.295 (2.195)**							
Investment Freedom									0.228 (2.115)**						
Property Rights										0.290 (2.021)**					
Freedom From corruption											0.364 (2.503)***				
Labor Freedom												0.293 (2.150)***			
Financial Freedom													0.375 (3.021)**		
Fiscal Freedom														0.461 (2.298)**	
Monetary Freedom															0.382 (2.694)**
DEMOC	0.633 (1.269)**	0.581 (1.542)**	0.477 (1.529)**	0.325 (1.650)**	0.441 (1.638)**	0.528 (1.725)**	0.639 (1.604)**	0.593 (1.663)**	0.527 (1.526)**	0.613 (1.829)**	0.662 (1.559)**	0.725 (1.628)**	0.549 (1.714)**	0.416 (1.558)**	0.447 (1.673)**

Source: Own Calculation

In the first column of the table: 10 here presented the GLS estimates. The impacts of all the variables under the institutional qualities are positive and significant. In the case of political stability, government effectiveness, regulatory qualities, rules of law and control of corruption the coefficient implies that a one standard deviation improvement in the political stability, government effectiveness, regulatory qualities, rules of law and control of corruption increases FDI by 24.19%, 15.92%, 12.86%, 19.25% and 21.73% respectively and on the other hand the impact of all the variables under the economic freedom is positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 7.29%. Other different variables like trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 5.83%, 7.21%, 8.22%, 7.05%, 6.82%, 5.84%, 6.92%, 5.21% and 5.32% respectively.

Table 10. Generalized least square and feasible generalized least square method

Independent Variables	GLS	FGLS
Political Stability	0.2419** (0.137)	0.1952** (0.182)
Government effective	0.1592** (0.184)	0.1784** (0.217)
Regulatory Quality	0.1286** (0.160)	0.1528** (0.174)
Rules of Law	0.1925** (0.207)	0.2361** (0.256)
Control of Corruption	0.2173** (0.194)	0.2489** (0.248)
Business Freedom	0.0729* (0.116)	0.0952* (0.194)
Trade Freedom	0.0583* (0.138)	0.0961* (0.175)
Government Size	0.0721* (0.161)	0.1021* (0.207)
Investment Freedom	0.0822** (0.184)	0.0981** (0.252)
Property Rights	0.0705** (0.164)	0.0937** (0.214)
Freedom From Corruption	0.0682* (0.195)	0.1294* (0.267)
Labor Freedom	0.0584* (0.168)	0.0926* (0.193)
Financial Freedom	0.0692** (0.127)	0.0944** (0.182)
Fiscal Freedom	0.0521* (0.139)	0.0837* (0.182)
Monetary Freedom	0.0532* (0.173)	0.0826* (0.248)
DEMOC	0.0281** (0.132)	0.0325** (0.195)
Constant	0.2394 (0.341)	0.3214 (0.430)
Number of Observation	768	768
Wald chi 2 (8)	107.69	217.34
Prob > chi 2	0.0000	0.0000

Source: Own Calculation

In the Second column of the Table 10 presented the FGLS estimates. The impacts of all the variables under the institutional qualities are positive and significant. The coefficient of the political stability implies that a one standard deviation improvement in the political stability increases FDI by 19.52% and the value is slightly lower from the GLS and the rest of the variables are higher from the GLS. The impact of all the variables under the economic freedom is positive and significant. Here all the variables under the economic freedom like business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 9.52%, 9.61%, 10.21%, 9.81%, 9.37%, 12.94%, 9.26%, 9.44%, 8.37% and 8.26% respectively, it means that the value is higher from the GLS.

According to the OLS estimates from the Table 11, the impact of all the variables under the institutional quality is positive and significant. In the case of political stability the coefficient

implies that a one standard deviation improvement in political stability increases FDI by 18.7%. On the concentration of the government effectiveness, the coefficient implies that a one standard deviation improvement in government effectiveness increases FDI by 22.1%. Other different variables like regulatory quality, rules of law and control of corruption the coefficient implies that a one standard deviation improvement in regulatory quality, rules of law and control of corruption increases FDI by 14.3%, 14.8% and 21.6% respectively.

The impact of all the variables under the economic freedom is positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 22.6%. On the concentration of the trade freedom, the coefficient implies that a one standard deviation improvement in trade freedom increases FDI by 18.4%. Other different variables like government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 17.2%, 19.1%, 18.5%, 18.4%, 6.4%, 7.9%, 7.3% and 11.3% respectively.

From the second column of the table: 11 the paper present the random effect estimates. In the case of institutional quality all the variables are positive and significant impact on FDI. In the case of political stability, regulatory quality, rules of law and control of corruption the coefficient implies that a one standard deviation improvement in political stability, regulatory quality, rules of law and control of corruption increases FDI by 24.7%, 19.3%, 17.4% and 35.3% which is slightly higher from than in the case of OLS and the other variable noted as government effectiveness the coefficient value is slightly lower from the OLS. The impact of all the variables under the economic freedom is also found positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 29.4% which is slightly higher from than in the case of OLS. On the other hand in the case of the trade freedom, the coefficient implies that a one standard deviation improvement in trade freedom increased FDI by 15.8%. Other different variables like government size, investment freedom, property rights, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in government size, investment freedom, property rights, financial freedom, fiscal freedom and monetary freedom increases FDI by 15.4%, 7.5%, 16.4%, 6.3%, 7.1% and 8.9% which is slightly lower from than in the case of OLS. On the other hand freedom from corruption and labor freedom, the coefficient implies that a one standard deviation improvement in freedom from corruption and labor freedom increases FDI by 27.4% and 7.5% which is slightly higher from than in the case of OLS.

The third column which represents fixed effect model .Under the fixed effect model in the case of political stability, regulatory quality, rules of law and control of corruption the coefficient implies that a one standard deviation improvement in political stability, government effectiveness, regulatory quality, rules of law and control of corruption increases FDI by 19.2%, 29.3%, 23.6%, 21.5% and 45.2% which is slightly higher from than in the case of OLS. According to the fixed effect estimates here are also the impact of all the

variables under the economic freedom is also explored to be positive and significant. In the case of business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 35.8%, 19.2%, 29.5%, 29.4%, 25.3%, 30.7%, 27.3%, 19.2%, 29.3% and 21.0% respectively which is higher from than in the case of OLS and Random Effect Model.

The fourth column presented the Poisson Regression estimates. Under the institutional quality all the variables are positive and significant influence on FDI. The coefficient implies that a one standard deviation improvement in political stability, government effectiveness, regulatory quality, rules of law and control of corruption increased FDI by 15.9 %, 34.8%, 29.5%, 20.8% and 42.4%. In the case of business freedom, trade freedom, government size, financial freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government size, financial freedom and monetary freedom increases FDI by 36.3%, 24.7%, 31.3%, 25.1% and 27.3% respectively which is slightly higher than in the case of OLS, Random Effect Model and Fixed Effect Model. On the other hand the other variables like investment freedom, property rights, freedom from corruption, labor freedom and fiscal freedom the coefficient implies that a one standard deviation improvement in investment freedom, property rights, freedom from corruption, labor freedom and fiscal freedom increases FDI by 15.7%, 19.4%, 29.5%, 23.6% and 27.3% respectively and which is slightly lower from the fixed effect model.

Table 11. Panel regression

Estimation	1	2	3	4	5	6	7
Method	OLS	Random Effect	Fixed effect	Poisson Regression	Prais-Winst en	GMM	GEE
Log Dependent Variables							
Political Stability and absence of violence	0.187 (2.129)***	0.247 (1.241)***	0.192 (2.684)***	0.159 (2.431)***	0.229 (1.195)***	0.242 (2.362)***	0.317 (2.144)***
Government Effectiveness	0.221 (1.292)**	0.203 (1.484)**	0.293 (2.355)***	0.348 (1.926)***	0.219 (1.229)***	0.362 (2.625)***	0.316 (3.418)***
Regulatory quality	0.143	0.193	0.236	0.295	0.244	0.285	0.324

	(1.652)**	(2.428)**	(1.903)**	(2.844)**	(2.916)**	(2.726)**	(3.832)**
	0.148	0.174	0.215	0.208	0.226	0.263	0.285
Rules of Law	(1.437)**	(2.518)**	(1.258)**	(2.705)**	(2.065)**	(2.843)**	(4.647)**
Control of	0.214	0.353	0.452	0.424	0.366	0.576	0.584
Corruption	(1.563)**	(1.763)**	(2.326)**	(2.572)**	(2.853)**	(2.965)**	(3.225)**
Business	0.226	0.290	0.358	0.363	0.349	0.295	0.318
Freedom	(1.548)**	(1.826)**	(2.441)**	(2.195)**	(2.948)**	(2.784)**	(2.185)**
Trade	0.184	0.158	0.192	0.247	0.283	0.316	0.382
Freedom	(1.418)**	(1.161)**	(1.372)**	(1.804)**	(1.972)**	(2.166)**	(2.870)**
Government	0.172	0.154	0.295	0.313	0.337	0.398	0.417
Size	(1.283)**	(1.317)**	(2.392)**	(2.573)**	(2.793)**	(3.741)**	(3.894)**
Investment	0.191	0.175	0.294	0.157	0.215	0.314	0.392
Freedom	(0.862)**	(0.531)**	(2.653)**	(1.459)**	(1.941)**	(2.964)**	(3.288)**
Property	0.185	0.164	0.253	0.194	0.238	0.296	0.317
Rights	(1.091)**	(1.120)	(2.465)**	(1.672)**	(1.859)**	(2.152)**	(2.859)**
Freedom	0.184	0.274	0.307	0.295	0.305	0.272	0.462
From	(1.063)**	(1.114)**	(2.351)**	(2.151)**	(2.316)**	(2.346)**	(3.463)**
Corruption							
Labor	0.064	0.075	0.273	0.236	0.219	0.284	0.325
Freedom	(0.593)**	(0.715)**	(2.127)**	(2.194)**	(2.128)**	(2.393)**	(3.102)**
Financial	0.079	0.063	0.192	0.251	0.326	0.263	0.352
Freedom	(0.624)**	(0.439)	(1.260)**	(2.014)**	(2.962)**	(2.273)**	(4.293)**
Fiscal	0.073	0.071	0.293	0.252	0.284	0.317	0.414
Freedom	(0.529)**	(0.458)**	(1.157)**	(2.117)**	(2.021)**	(3.157)**	(4.571)**
Monetary	0.113	0.089	0.210	0.273	0.216	0.294	0.316
Freedom	(0.815)**	(0.742)**	(1.528)**	(2.417)**	(2.146)**	(0.283)**	(0.337)**
	0.096	0.073	0.105	0.604	0.917	0.806	0.688
DEMOC	(0.642)**	(0.592)**	(0.448)**	(0.758)**	(0.836)**	(1.038)**	(1.295)**

Source: Own Calculation

From the fifth column according to the Prais-Winsten estimates, here all the variables under the institutional qualities are positive and significant. Here the coefficient of the political stability and rules of law are slightly higher from the poisson regression estimates. On the other hand the coefficient of government effectiveness, regulatory qualities and control of corruption implies that a one standard deviation improvement in government effectiveness, regulatory qualities and control of corruption increases FDI by 21.9%, 24.4% and 36.6% respectively which are slightly lower from the poisson regression estimates. In the case of business freedom, labor Freedom, and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, labor freedom and monetary freedom increases FDI by 34.9%, 21.9% and 21.6% respectively which is lower from the poisson regression estimates. On the other hand the other variables under the economic freedom like trade freedom, government sizes, investment freedom, property rights, freedom from corruption, financial freedom and fiscal freedom the coefficient implies that a one standard deviation improvement in trade freedom, government sizes, investment freedom, property rights, freedom from corruption, financial freedom and fiscal freedom increases FDI by 28.3%, 33.7%, 21.5%, 23.8%, 30.5%, 32.6% and 28.4% respectively which is slightly lower from the poisson regression estimates.

From the sixth column of the table concentrates on the GMM estimates, here noted that all the variables under the institutional qualities are positive and significant. The coefficient values of the political stability, government effectiveness, regulatory qualities, rules of law and control of corruption implies that a one standard deviation improvement in political stability, government effectiveness, regulatory qualities, rules of law and control of corruption increases FDI by 24.2%, 36.2%, 28.5%, 26.3% and 57.6% respectively. On the other hand the economic freedoms are also explored to be positive and significant. In the case of business freedom, trade freedom, government Size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 29.5%, 31.6%, 39.8%, 31.4%, 29.6%, 27.2%, 28.4%, 26.3%, 31.7% and 29.4% respectively.

From the seven column of the table according to the GEE estimates, all the variables under the institutional quality and economic freedom are also explored to be positive and significant. The coefficient values of the political stability, government effectiveness, regulatory qualities, rules of law and control of corruption implies that a one standard deviation improvement in political stability, government effectiveness, regulatory qualities, rules of law and control of corruption increases FDI by 31.7%, 31.6%, 32.4%, 28.5% and 58.4 % respectively. In the case of business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government Size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary

freedom increases FDI by 31.8%, 38.2%, 41.7%, 39.2%, 31.7%, 46.2%, 32.5%, 35.2%, 41.4% and 31.6% respectively.

5. Conclusion

In the light of the results obtained from this study, it can be concluded that institutional quality and economic freedom encourages the FDI in the developing countries. It is true that government should ensure to achieve a sound degree of political and economic stability, along with a market-oriented environment that really assists for proliferating economic growth in the developing countries. It is important that alleviate government intervention and escalate the economic freedom that accelerates the business productivity and profitability along with the formulating sustainable environment where the firms are integrated and interrelated with the world market for encouraging uninterrupted innovation and competition.

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