# Foreign Direct Investment, Economic Freedom and Economic Growth: Evidence from Developing Countries

Md. Shakib Hossain<sup>1</sup>

<sup>1</sup> East West University, Bangladesh

Correspondence: Md. Shakib Hossain, Senior Lecturer, East West University, Bangladesh. E-mail: shakibbhossain@gmail.com

Received: May 19, 2016	Accepted: July 18, 2016	Online Published: October 25, 2016
doi:10.5539/ijef.v8n11p200	URL: http://dx.doi.org/10.5539/ijef.v	/8n11p200

# Abstract

This paper has explores the interplay between economic freedom, foreign direct investment and economic growth using panel data analysis for a sample of 79 developing countries from 1998 to 2014 by considering the level of economic freedom, as provided by the "Heritage Foundation". Panel unit root, pedroni residual co-integration test, generalized least square (GLS), feasible GLS (FGLS), pooled OLS, random effect, fixed effect, poisson regression, prais-winsten, generalized method of movement (GMM) and generalized estimating equation (GEE) methods have used to estimates the relationship. According to the OLS and generalized method of movement the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom, monetary freedom increases FDI by 21.4%, 15.6%, 21.6%, 17.5%, 11.55, 9.1%, 6.9%, 8.5%, 7.4%, 10.3% and 56.1%, 45.3%, 58.3%, 51.6%, 33.7%, 39.2%, 47.4%, 41.6%, 32.5%, 38.5% points respectively and for the economic variable, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 24.1%, 17.4% and 30.2%, 33.4% points respectively. By using the other method like random effect, fixed effect, poisson regression, prais-winsten and generalized estimating equation (GEE) method explores that economic freedom in the host country is a positive determinants of FDI inflows in developing countries and also the result suggests that foreign direct investment is positively correlated with the economic growth in the host countries.

**Keywords:** economic freedom, foreign direct investment, generalized least square, poisson regression, generalized estimating equation

# 1. Introduction

Various literature have agreed that multinational corporations (MNCs) invest in a specific locations mainly because of the host countries' strong economic fundamentals, such as a large market size, stable macroeconomic environment, availability of skilled labor and infrastructure, that influence the attractiveness of the country to FDI inflows (e.g., Dunning, 1993; Globerman et al., 2003). Because of the transition of the economic phenomena less conventional determinants factors like economic freedom pay close attention for the business and economic researcher. It has been widely acknowledged among growth analysts that a country, which enjoys more economic freedom, tends to attract more FDI inflows and growth faster than country that is being denied enjoying same freedom (e.g., Ayal & Karras, 1998; Cebula & Mixon, 2012; Ajide, 2013). Considering the importance of these factors the Heritage Foundation has developed the Economic Freedom Index (EFI) based on these policy parameters. They have included business freedom, investment climate, trade openness, monetary and fiscal environment in the index. Heritage Foundation is defines the Economic Freedom as -aspect of human liberty that is concerned with the material independence of the individual in relation to the state and other prearranged groups. The highest form of economic freedom provides an absolute right of property ownership, fully realized freedoms of movement for labor, capital, and goods, and an absolute absence of coercion or constraint of economic liberty beyond the extent necessary for citizens to protect and maintain liberty itself. The basic purpose of ensuring economic freedom is to promote entrepreneurship and decentralizes and liberalized economic functions and business environment by decelerating government interferences. According to the Adkins et al. (2002) find that the level of economic freedom at the beginning of the growth period does not contribute significantly to explaining growth, but that positive changes in economic freedom do so. Economic

freedom is a significant positive determinant of FDI. Economic freedom always stimulates foreign direct investment and because of unremitting flow of FDI escalates the economic competitiveness in a developing country. The nature of relationship between FDI and economic growth has been a vast discussed matter in the various amount of economic literature. Different literatures have highlights that there are positive and significant relationship between FDI and growth. Chakrabarti (2001), Asiedu (2002) and Zhao (2013) has pointed out that higher economic growth results in greater FDI inflows as it is a measure of the attractiveness of the host countries. There are still debates on this topic especially for the developing countries. According to Hansen and Rand (2006), the consensus seems to be that of a affirmative relationship between FDI inflows and economic growth in host countries provided the receiving countries have achieved a minimum level of educational, technological, and/or infrastructural development.FDI and economic freedom both are significantly correlated with the economic growth but it is also observed among the different developing countries that the host country requires adequate human capital, economic stability and liberalized markets to benefits from long-term capital flows. In this paper, the basic consideration factor is to observe the relationship among economic freedom, economic growth and FDI in the developing countries by using the Heritage Foundation economic index without considering the conventional factors. The paper has incorporated with the various sections; section 2 literature review, section 3 model specification, section 4 empirical evidence and section 5 conclusion.

# 2. Literature Review

Because of the radical transition of the business and its relevant fields, traditional determinants (wage costs, infrastructure or macroeconomic policy) of FDI is no longer hold rather less traditional determinants have become more important, like institutions or economic freedom. 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, & Meyer, 2001; Ghura & Goodwin, 2000; Heckelman, 2000).

Bengoa, Marta, and Sanchez-Robles (2003) have 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 has illustrated that economic freedom facilitated FDI inflow and the economic growth has also found definitely related with FDI.

Many empirical studies have also found that economic freedom exert a major effect on cross-country differences in both per capita income and economic growth (e.g., De Haan et al., 2006; Azman-Saini et al., 2010; Compton et al., 2011).

By using both fixed effects and first -difference GMM estimation, Levina (2011) has investigated the relationship between foreign direct investment, economic freedom and economic growth. According to the GMM estimation of dynamic model has explored that both of the variables foreign direct investment and economic freedom are positively influence on the economic growth.

Gwartney (2009) has penetratingly determined that countries with having enormous amount of economic freedom leads to 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.

Different factors under the economic freedom index have made a significant consequence on unremitting flow of foreign direct investment. Barro (2000) has indentified that protected and secure property rights accelerate the growth performance not only by stimulating investments, but also by increasing the productivity of investments. Demetriades and Law (2006) have found that inadequate sound financial institutions may not succeed in delivering long-run economic growth in low-income countries.

There are also mixed opinion regarding the relationship among economic freedom, foreign direct investment and economic growth. Using generalized method-of-moment system estimator in 85 different countries Azman-Saini, Baharumshah, and Law (2010) has explored that FDI by itself has no direct (positive) effect on output growth. Instead, the effect of FDI is contingent on the level of economic freedom in the host countries. This means the countries promote greater freedom of economic activities gain significantly from the presence of multinational corporations.

Excluding the economic freedom, there are major considerable elements that make rigorous effects on FDI like, market size (Asiedu, 2006), Mlambo (2006) and Zhang (2013), macroeconomic stability (Onyeiwu & Shrestha, 2004) and capital stock (Dutta & Osei-Yeboah, 2010) are the major determinants factors for stimulating FDI in developing countries.

Concentrates on Bengoa and Sanchez-Robles (2003) empirical work that FDI is positively and significantly correlated with economic growth, but host countries should accumulated human capital, economic stability, and

liberalized markets in order to attain the benefit from long term inflows. 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 interplay between economic freedom, foreign direct investment (FDI) and economic growth 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:

 $FDI = \alpha_0 + \alpha_1 GDPPC + \alpha_2 GDPG + \alpha_3 Businesss Freedom + \alpha_4 Trade Freedom + \alpha_5 Government Size + \alpha_6 Investment$  $Freedom + \alpha_7 Property Rights + \alpha_8 Freedom from Corruption + \alpha_9 Labor Freedom + \alpha_{10} Financiaal Freedom + \alpha_{11} Monetory Freedom + \alpha_{12} Democracy + \alpha_{13} Political Stability + e_t$ (1)

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

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

For measuring the relationship among economic freedom, foreign direct investment and economic growth different methods have used.

At first panel unit root test have accomplished for estimating whether the data are stationary or not.

# Panel Unit Root Test: Levin, Lin and Chu

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

$$DY_{it} = \alpha Y_{it-1} + \sum_{j=1}^{P_i} \beta_{it} DY_{it-j} + X_{it}^* \delta + \mathcal{E}_{it}$$

$$\tag{2}$$

Where,  $DY_{it}$  = difference term of  $Y_{it}$ ;

 $Y_{itl}$  = panel data;

 $\alpha = \rho - 1;$ 

p<sub>i</sub> = the number of lag order for difference terms;

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

 $\mathcal{E}_{it}$  = 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<sub>0</sub>: null hypothesis as panel data has unit root (assumes common unit root process).

H<sub>1</sub>: panel data has not unit root.

#### 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).

$$W_{t^*NT} = \sqrt{n} \left[ \left( t_{NT} - N^{T\sum_{i=1}^{n}} E(t_{i} T(p_i)) \right) \right] / \sqrt{(N^T \sum_{i=1}^{n} var(t_{i} T(p_i)))}$$
(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<sub>0</sub>: null hypothesis as panel data has unit root (assumes individual unit root process).

H<sub>1</sub>: panel data has not unit root.

# Fisher-Type Test using ADF and PP-Test (Maddala and Wu and Choi )

Madala and Wu proposed the use of the Fisher (P $\lambda$ ) 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 -2log<sub>e</sub> $p_i$  has a  $\chi^2$  distribution with 2N degree of freedom and can be written in equation 4.

$$P\lambda = -2 \sum_{i=1}^{N} \log_e p_i \tag{4}$$

Where,  $P_{\lambda}$ = Fisher ( $P_{\lambda}$ ) panel unit root test

N = all N cross-section

 $-2\sum_{i=1}^{N} \log_{e} p_{i} = it$  has a  $\chi^{2}$  distribution with 2N degree of freedom

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

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

Where, Z = Z-statistic panel data unit root test;

N = all N cross-section in panel data;

 $\Theta_i^{-1}$  = the inverse of the standard normal cumulative distribution function;

 $p_i = it$  is the P-value from the i<sup>th</sup> 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<sub>0</sub>: null hypothesis as panel data has unit root (assumes individual unit root process);

H<sub>1</sub>: panel data has not unit root.

## 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<sub>0</sub>: null hypothesis as panel data has not unit root (assumes common unit root process);

H<sub>1</sub>: panel data has unit root.

#### **Panel Cointegration Test**

In order to solve the spurious regression problem and violation of the assumptions of the classical regr ession 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 economic freedom, FD I and economic growth.

$$Y_{i,t} = \alpha_1 + \beta_{1i} x_{1i,t} + \beta_{2i} x_{2i,t} + \dots + \beta_{Mi} x_{Mi,t} + e_{i,t}, \ t = 1, \dots, T; \ i = 1, \dots, N$$
(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.

$$Y_{it} = X_{it}\beta_{it} + Z_{it}\gamma_0 + \mathcal{E}_{it}$$
(7)

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

$$\hat{e}_{i\,t} = \rho \, \hat{e}_{i\,t} + V_{i\,t} \tag{8}$$

where  $e_{it} = (Y_{it} - X_{it} \beta_{it} - Z_{ity})$  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.,  $H_1$ :  $\rho < 1$ ).

Considering the demand of the paper when  $\Omega$  is known,  $\beta$  is efficiently estimated with generalized least squares (GLS).

$$\hat{\beta}_{GLS} = (X'\hat{\Omega}^{-1}X)^{-1} X'\hat{\Omega}^{-1} y$$
(9)

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  $\Omega$ .

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

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

$$\beta_{i, OLS}^{\wedge} = \left[\sum_{i=1}^{N} \sum_{t=1}^{T} (X_{i,t} - X_{i}^{*})^{2}\right]^{-1} \sum_{i=1}^{N} \sum_{t=1}^{T} (X_{i,t} - X_{i}^{*}) (Y_{i,t} - Y_{i}^{*})$$
(11)

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;

 $\beta_{iOLS} = a$  standard panel OLS estimator;

 $X_{it}$  = exogenous variable in model;

 $X_{i}^{*}$  = average of  $X_{I}^{*}$ ;

 $Y_{it}$  = 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:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \gamma_2 E_2 + \dots + \gamma_n E_n + u_{it}$$
(12)

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).

 $\beta_k$  = is the coefficient for the IVs.

 $u_{it} = is$  the error term.

 $E_n = is$  the entity n.

 $\gamma_2$  = is the coefficient for the binary repressors (entities).

The random effects model is:

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it} \tag{13}$$

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

$$\boldsymbol{\mu} = t \, \exp(\beta_1 X_1 + \beta_2 X_2 + \dots + \beta_K X_K) \tag{14}$$

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

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

$$P_{r}(Y_{i}=y_{i} | \boldsymbol{\mu}_{i}, t_{i}) = \frac{e^{-\boldsymbol{\mu}_{1}^{T}} (\boldsymbol{\mu}_{i} t_{i})^{y_{1}}}{Y_{i}!}$$
(15)

Where,  $\boldsymbol{\mu}_i = t_i \boldsymbol{\mu} (\dot{X}_i \beta) = t_i \exp (\beta_1 X_{1i} + \beta_2 X_{2i} + \dots + \beta_K X_{Ki})$ 

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:

$$Y_t = \alpha + X_t \beta + \varepsilon_t \tag{16}$$

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

$$Q_{n}(\theta) = \{ n^{-l} \sum_{t=1}^{n} f(v_{b} \ \theta)' \} W_{n} \{ n^{-l} \sum_{t=1}^{n} f(v_{b} \ \theta) \}$$
(17)

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

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

$$\sum_{i=1}^{N} D'_{i} V_{i}^{-1} (Y_{i} - \mu_{i}) = 0$$
(18)

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  $R(\alpha)$ :  $V_i = A_i^{\frac{1}{2}} R(\alpha) A_i^{\frac{1}{2}}$  where  $A_i$  is a diagonal matrix with elements var  $(Y_{it}) = V(\mu_{it})$ , specified as functions of the means  $\mu_{it}$ ,  $\alpha$  is some unknown parameter.

# 3.1 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). 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 is that OECD and EUROSTAT 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 from 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.

Here in this study the paper has applied the Index of Economic Freedom provided by Heritage Foundation, for measuring economic freedom that included 50 independent variables which 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. For the economic growth the proxy variables are GDPPG and GDPG, the data are accumulated from the World Development Indicators, 2014. The other control variable democracy, the data are accumulated from the Quality of Government Institute, 204, here the index value range from 0 (0= represent no democracy) to 100 (100 represent full democracy). Another control variable is political stability; the data are aggregating from the worldwide governance indicators. For the political stability the data collection method and research methodology all the things can be access in that particular website: www.govindicators.org.

Variables		Description	Source	Expected Sign
Dependent	Foreign Direct	Total FDI inflows a host country receives at time $t$ divided by	UNCTAD,2014	(+)
Variables	Investment	the host country's total population (i.e., FDI per capita)		
	Political Stability	Perception of likelihood that the government in power will be	Worlds governance	(+)
	(PS) and absence of	destabilized or overthrown by possibly unconstitutional	Indicator, 2014	
	violence	and/or violent means, including domestic violence and		
		terrorism.		
	Government	The quality of public services, the quality of the civil service	Worlds governance	(+)
	Effectiveness	and the degree of its independence from political pressures,	Indicator, 2014	
		the quality of policy formulation and implementation, and the		
		credibility of the government's commitment to such policies.		
	Regulatory Quality	The ability of the government to formulate and implement	Worlds governance	(+)
		sound policies and regulations that permits and promotes	Indicator, 2014	
		private sector development.		
	Rule of Law (RL)	The extent to which agents have confidence in and abide by	Worlds governance	(+)
		the rules of society, and in particular the quality of contract	Indicator, 2014	
		enforcement, the police, and the courts, as well as the		
		likelihood of crime and violence.		
Independent	Control of	The extent to which public power is exercised for private	Worlds governance	(+)
Variables	Corruption	gain, including both petty and grand forms of corruption, as	Indicator, 2014	
		well as "capture" of the state by elites and private interests.		

Table 2. Description of the variables

Business Freedom	The ability to generate, operates, and closes up an enterprise	Heritage Foundation,	(+)
	quickly and easily.	2014	
Trade Freedom	Trade freedom is measuring in the absence of tariff and	Heritage Foundation,	(+)
	non-tariff barriers that influence on imports and exports of	2014	
	goods and services.		
Government Size	All government expenditures, including consumption and	Heritage Foundation,	(+)
	transfers.	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	Heritage Foundation,	(+)
	private property, protected by clear laws that are fully	2014	
	compulsory by the state.		
Freedom from	Quantitative data that evaluate the perception of corruption in	Heritage Foundation,	(+)
Corruption	the business environment, including levels of governmental	2014	
	legal, judicial, and administrative corruption.		
Labour Freedom	It is a composite measure of the aptitude of workers and	Heritage Foundation,	(+)
	businesses to interact without restriction by the state.	2014	
Financial Freedom	Financial freedom that measure of banking security as well as	Heritage Foundation,	(+)
	independence from government control; state ownership of	2014	
	banks and other financial institutions.		
Fiscal Freedom	Fiscal freedom is a measure of the burden of government	Heritage Foundation,	(+)
	from the revenue side and it includes both the tax burden in	2014	
	terms of the top tax rate on income and the overall amount of		
	tax revenue as a portion of GDP.		
Monetary Freedom	Monetary freedom combines a measure of price stability with	Heritage Foundation,	(+)
	an assessment of price controls.	2014	
Democracy	Index of Democratization. Index that could vary from 0 (no	Quality of	(+)
	democracy) to 100 (full democracy).	Government Institute	

# 4. Empirical Evidence

Concentrates 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, & Chu; Breitung, Im, Pesaran, & Shin), Fisher-Type test using ADF and PP-test (Maddala, Wu, & Choi) and Hadri.

	Levin Lin and Chu-t	Im, Pesaran and Shin W-stat	ADF-Fisher Chi-square	PP-Fisher Chi-square	Hadri
Variables	test Values** and prob	test Values** and Prob	Test Values** and Prob	Test Values**and Prob	
Foreign Direct	-2.94310	-5.68401	15.29884	26.32540	2.38723
Investment	P=0.2905	P=0.1726	P=0.0894	P=0.1421	P=0.0000
Business Freedom	-5.43193	-3.29851	21.14332	15.16883	4.27094
	P=0.0711	P=-3.29851	P=21.14332	P=15.16883	P=0.0000
Trade Freedom	-5.42163	-8.13416	34.28928	14.72116	3.29842
	P=0.0429	P=0.2805	P=0.0549	P=0.1304	P=0.0000
Government Size	-4.92163	-8.24631	23.15993	37.12046	2.34173
	P=0.0672	P=0.2137	P=0.0942	P=0.1786	P=0.0000
Investment Freedom	-7.29884	-19.76118	22.14729	15.27661	2.18992
	P=0.0672	P=0.1763	P=0.0549	P=0.1115	P=0.0000
Property Rights	-4.94116	-16.29474	29.18034	17.72383	5.46882
	P=0.0728	P=0.0672	P=0.1529	P=0.2783	P=0.0000
Freedom From	-7.34731	-5.63189	27.16720	17.17883	4.18441
Corruption	P=0.0722	P=0.2673	P=0.1549	P=0.2618	P=0.0000
Labor Freedom	-3.29551	-24.16726	28.94825	34.12772	4.77009
	P=0.0826	P= 0.3981	P=0.1642	P=0.0549	P=0.0000
Financial Freedom	-6.15484	-12.63180	22.15827	32.25331	3.68294
	P=0.0621	P= 0.2198	P=0.1219	P=0.0622	P=0.0000

Table 3. Panel unit root test

Fiscal Freedom	-7.24409	-18.54220	34.65319	21.18742	3.68294
	P=0.0754	P=0.2093	P=0.1732	P=0.1218	P=0.0000
Monetary Freedom	-4.21774	-10.56821	27.92454	31.66734	4.6073
	P=0.0421	P=0.1204	P=0.1572	P=0.1925	P=0.0000
GDPG	-4.36893	-9.14553	32.40931	22.15864	2.94182
	P=0.0544	P=0.1120	P=0.1721	P=0.2892	P=0.0000
GDPPC	-8.42996	-10.43194	27.00781	36.42157	4.86198
	P=0.0490	P=0.2792	P=0.1128	P=0.2459	P=0.0000
Democracy	-5.54289	-11.29095	31.43461	45.29661	4.25186
	P=0.0572	P=0.0729	P=0.1928	P=0.2463	P=0.0000
Political Stability	-6.22498	-16.85721	26.93173	41.47842	3.48325
	P=0.0386	P=0.0389	P=0.2519	P=0.3146	P=0.0000

Source: Own Calculation ..

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, Wu, & Choi, 2001) and Hadri methods the variables are not stationary at a level. Now let's see at first difference the data are stationary or not.

From the Table 4 concentrates 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, Wu, & Choi) and Hadri methods the variables are stationary at a first differences.

# Table 4. Panel unit root test

	Levin Lin and Chu-t	Im, Pesaran and Shin	ADF-Fisher	PP-Fisher Chi-square	Hadri
	test Values** and	W-stat test Values**	Chi-square Test	Test Values**and	
Variables	prob	and Prob	Values** and Prob	Prob	
Foreign Direct	-8.32117	-4.27992	21.45184	31.68214	0.73119
Investment	P=0.0000	P=0.0001	P=0.0000	P=0.0007	P=0.2984
Business Freedom	-5.46109	-6.75941	34.18094	37.65902	0.82532
	p=0.0003	P=0.0005	P=0.0019	P=0.0054	P=0.2137
Trade Freedom	-3.11729	-5.16193	32.29031	41.11294	0.79091
	P=0.0004	P=0.0003	P=0.0011	P=0.0018	P=0.1984
Government Size	-2.90318	-8.22249	16.27831	24.27943	0.68836
	P=0.0002	P=0.0009	P=0.0034	P=0.0057	P=0.3106
Investment Freedom	-3.44841	-6.74209	21.0915	31.67093	0.74167
	P=0.0003	P=0.0009	P=0.0041	P=0.0069	P=0.2492
Property Rights	-4.19631	-8.46318	24.29086	31.52981	0.81670
	P=0.0002	P=0.0011	P=0.0029	P=0.0045	P=0.2781
Freedom From	-8.17031	-11.78109	36.42156	41.26193	0.54193
Corruption	P=0.0006	P=0.0018	P=0.0059	P=0.0077	P=0.2094
Labor Freedom	-7.21093	-11.54194	25.60912	37.55190	0.51861
	P= 0.0007	P=0.0013	P=0.0061	P=0.0082	P=0.2894
Financial Freedom	-5.42885	-9.39081	21.44093	38.54817	0.61204
	P=0.0006	P=0.0011	P=0.0062	P=0.0081	P=0.1834
Fiscal Freedom	-3.40092	-7.22807	18.41063	25.49860	0.63428
	P=0.0004	P=0.0017	P=0.0061	P=0.0079	P=0.2317
Monetary Freedom	-6.16425	-9.21094	19.54831	36.48093	0.67041
	P=0.0004	P=0.0009	P=0.0025	P=0.0063	P=0.3572
GDPG	-6.79162	-5.42174	22.72941	34.16809	0.72194
	P=0.0017	P=0.0011	P=0.0025	P=0.0036	P=0.1572
GDPPC	-5.29842	-3.19842	24.36119	38.18442	0.86519
	P=0.0006	P=0.0029	P=0.0005	P=0.0011	P=0.2285
Democracy	-5.28462	-8.34992	22.49821	34.15382	0.54926
-	P=0.0003	P=0.0007	P=0.0021	P=0.0054	P=0.1492
Political Stability	-3.65182	-6.75672	27.29841	32.15909	0.72194
	P=0.0003	P=0.0008	P=0.0035	P=0.0068	P=0.2908

To solve the spurious regression problem and violation of the assumptions of the classical regression model, cointegration analysis has used to examine the long run relationship between the variables.

Pedroni Residual Co-integration Test								
Test Method	No deterministic trend	Deterministic intercept and trend	No deterministic intercept or trend					
Panel v-statistic	-0.046175	-1.941032	-0.158296					
	P=0.3894	P=0.3017	P=0.2984					
Panel rho-Statistic	-1.371829	2.821081	-0.290844					
	P=0.2112	P=0.2219	P=0.1542					
Panel PP-Statistic	-3.541982	-1.251103	-2.158239					
	P=0.0019	P=0.1427	P=0.0053					
Panel ADF-Statistic	-2.331904	-0.541027	4.360874					
	P=0.0011	P=0.2304	P=0.0049					
Group rho-Statistic	0.251882	2.019973	2.360952					
	P=0.5417	P=0.3109	P=0.2984					
Group PP-Statistic	-3.114562	-3.560319	-4.501804					
	P=0.0003	P=0.0004	P=0.0007					
Group ADF-Statistic	-4.031802	-2.221066	-2.411206					
	P=0.0004	P= 0.0037	P=0.0033					

Table 5. Pedroni residual co-integration test

Source: Own Calculation.

From the no deterministic trends there are 7 different and separate outcomes. Out of 7 outcomes, 3 outcomes interprets that accept the null hypothesis ( $H_0$ = No cointegration), 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 elucidate that the variables are cointegrate. On the other hand from the deterministic intercept and trends have 7 outcomes, out of 7 outcomes 5 outcomes interprets that accept the null hypothesis ( $H_0$ = No cointegration), 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 elucidates that the variables are not cointegrate. According to the no deterministic intercept and trends, out of 7 outcomes 4 outcomes interprets that reject the null hypothesis ( $H_0$ = No cointegration), because the p value is < 5. On the other hand 3 outcomes illustrates that no deterministic intercept and trends, out of 7 outcomes 4 outcomes interprets that reject the null hypothesis ( $H_0$ = No cointegration), 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 trends elucidates that the variables are cointegrate. According to the no deterministic intercept and trend method elucidates that the variables are cointegrated. Two trends out of three trends of the Pedroni Residual Cointegration test the variables are cointegrate. Another lucid method (Kao Residual Cointegration) has used to find out the cointegration regarding the variables. From the Table 6 it exhibits that the p value is less than 5%, means that reject the null hypothesis ( $H_0$ = No cointegration).

Table 6. Kao residual co-integration test

ADF	t-Statistic	Prob.
	-3.291844	0.0028
Residual variance	2193.654	
HAC variance	725.8439	

So from the two methods of co-integration (Pedroni Residual Co-integration Test, Kao Residual Co-integration Test) reveals that the variables are cointegrate.

In the first column of the Table 7 here presented the GLS estimates. The impacts of all the variables under the economic freedom are positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 8.36 %.

Independent Variables	GLS	FGLS
	0.1034**	0.1237**
GDPPC	(0.205)	(0.235)
	0.1092**	0.1436**
GDPG	(0.209)	(0.325)
	0.0836*	0.1209*
Business Freedom	(0.189)	(0.317)
	0.0658*	0.1027*
Trade Freedom	(0.151)	(0.213)
	0.0895*	0.1094*
Government Size	(0.192)	(0.272)
	0.0943**	0.1242**
Investment Freedom	(0.241)	(0.369)
	0.0928**	0.1345**
Property Rights	(0.293)	(0.389)
	0.0562*	0.1022*
Freedom From Corruption	(0.135)	(0.238)
	0.0594*	0.0861*
Labor Freedom	(0.143)	(0.186)
	0.0425*	0.0733
Financial Freedom	(0.127)	(0.182)
	0.0537*	0.0844*
Fiscal Freedom	(0.158)	(0.183)
	0.0433*	0.0815*
Monetary Freedom	(0.163)	(0.193)
	0.0229**	0.564**
DEMOC	(0.104)	(0.165)
	0.0205**	0.0674**
Political Stability	(0.168)	(0.236)
	0.8654	0.1439
Constant	(0.542)	(0.982)
Number of Observation	768	768
Wald chi 2 (8)	107.69	217.34
Prob > chi 2	0.0000	0.0000

Table 7. Generalized least square and feasible generalized least square method

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 8.95%, 9.43%, 9.28%, 5.62%, 5.94%, 4.25%, 5.37% and 4.33% respectively. For the economic variable, GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 10.92% and 10.34% respectively.

In the Second column of the table presented the FGLS estimates. The impacts of all the variables under the economic freedom are 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, financial freedom, fiscal freedom, financial freedom, fiscal freedom, financial freedom, fiscal freedom, financial freedom, government size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 12.09%, 10.27%, 10.94%, 12.42%, 13.45%, 10.22%, 8.61%, 7.33%, 8.44% and 8.25% respectively, it means that the value is slightly higher from the GLS. Economic variable, GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 14.36% and 12.37% respectively.

# Table 8. Pooled OLS

Estimation Me	thod						POOLE	D OLS				
Independent												
Variable		1	2 3	4	5	6		7 8	3 9	10	11	12
	0.291											
GDPPC	(2.101)*											
		0.378										
GDPG		(1.051)**	:									
Business			0.245									
Freedom			(0.005)*									
Trade				0.373								
Freedom				(2.184)**								
Government					0.263							
Size					(0.542)**							
Investment						0.145						
Freedom						(1.183)**						
Property							0.229					
Rights							(1.026)**					
Freedom From								0.115				
Corruption								(1.174)***				
Labor									0.319			
Freedom									(1.178)***			
Financial										0.327		
Freedom										(1.025)**		
Fiscal											0.329	
Freedom											(1.275)***	
Monetary												0.245
Freedom												(2.153)***
	0.943	0.846	0.925	0.739	0.833	0.916	0.963	0.910	0.817	0.859	0.960	0.883
DEMOC	(2.049)**	(1.916)**	(1.531)**	(1.148)**	(1.138)**	(2.163)**	(2.293)**	(1.573)**	(1.119)**	(1.726)**	(2.575)**	(1.945)**
Political	1.131	1.161	1.121	1.312	1.211	1.113	1.143	1.192	1.123	1.132	1.134	1.336
Stability	(0.101)*	(0.100)*	(0.101)*	(0.101)*	(0.103)*	(0.104)*	(0.103)*	(0.111)*	(0.119)*	(0.109)*	(0.119)*	(0.124)*

From the Pooled OLS method, the impact of all the variables under the economic freedom has 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 24.5%. The coefficient of trade freedom implies that a one standard deviation improvement in business freedom increase FDI by 37.3%. Another variable under the economic freedom the coefficient of government size implies that a one standard deviation improvement in government size increase FDI by 26.3%. In the case of investment freedom the coefficient implies that a one standard deviation improvement in investment freedom increases FDI by 14.5%. On the concentration of the property rights the coefficient implies that a one standard deviation improvement in property rights increases FDI by 22.4%. The coefficient of freedom from corruption implies that a one standard deviation improvement in freedom from corruption increases FDI by 11.5%. In the case of labor freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 31.9%. In the case of financial freedom the coefficient implies that a one standard deviation improvement in financial freedom increases FDI by 32.7%. The coefficient of fiscal freedom implies that a one standard deviation improvement in fiscal freedom increases FDI by 32.4%. In the case of monetary freedom the coefficient implies that a one standard deviation improvement in monetary freedom increases FDI by 24.5%. Economic variable like GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 37.8% and 29.1% respectively.

According to the OLS estimates from the Table 9, the impact of all the variables under the economic freedom are positive and significant. In the case of business freedom the coefficient implies that a one standard deviation improvement in business freedom increases FDI by 21.4%. On the concentration of the trade freedom, the coefficient implies that a one standard deviation improvement in trade freedom increases FDI by 15.6%. 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 21.6%, 17.5%, 11.5%, 9.1%, 6.9%, 8.5%, 7.4% and 10.3% respectively. For the economic variable, GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 24.1% and 17.4% respectively.

From the second column of the table 9 the paper present the random effect estimates. The impacts of all the variables under the economic freedom are 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 37.3% 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 increases FDI by 12.9 %. Other different variables like government size, investment freedom, property rights, freedom from corruption, financial freedom and monetary freedom the coefficient implies that a one standard deviation from corruption, financial freedom and monetary freedom the coefficient implies that a one standard deviation improvement in slightly lower from than in the case of OLS. On the other hand labor Freedom and Fiscal Freedom the coefficient implies that a one standard deviation improvement in labor freedom and fiscal freedom increases FDI by 7.2% and 8.5% which is slightly higher than OLS. Economic variable like GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 25.3% and 35.9% respectively.

Estimation	1	2	3	4	5	6	7
Method	OLS	Random Effect	Fixed effect	Poisson Regression	Prais-Winsten	GMM	GEE
Log Dependent V	/ariables						
	0.174	0.359	0.182	0.112	0.215	0.261	0.339
GDPPC	(21.453)***	(17.091)***	(25.291)***	(23.194)***	(19.052)***	(28.959)***	(29.816)***
	0.241	0.253	0.356	0.417	0.267	0.358	0.302
GDPG	(13.396)**	(15.854)**	(23.182)***	(19.904)***	(17.239)***	(23.941)***	(26.032)***
Business	0.214	0.373	0.454	0.414	0.368	0.547	0.561
Freedom	(1.673)**	(1.845)**	(2.166)**	(2.031)**	(1.828)**	(2.161)**	(3.102)**
	0.156	0.129	0.378	0.283	0.237	0.348	0.453
Trade Freedom	(1.241)**	(1.041)**	(2.158)**	(2.025)**	(2.144)**	(2.612)**	(2.947)**
Government	0.216	0.163	0.406	0.352	0.368	0.451	0.583
Size	(1.153)**	(1.117)**	(2.946)**	(2.146)**	(2.379)**	(3.348)**	(3.472)**
Investment	0.175	0.122	0.364	0.233	0.326	0.293	0.516
Freedom	(1.063)**	(1.114)**	(2.351)**	(2.151)**	(2.316)**	(2.346)**	(3.463)**
Property	0.115	0.105	0.269	0.176	0.228	0.284	0.337
Rights	(1.091)**	(1.120)	(2.465)**	(1.672)**	(1.859)**	(2.152)**	(2.859)**
Freedom From	0.091	0.075	0.294	0.157	0.215	0.314	0.392
Corruption	(0.762)**	(0.631)**	(2.653)**	(1.459)**	(1.941)**	(2.964)**	(3.288)**
	0.069	0.072	0.184	0.259	0.229	0.352	0.474
Labor Freedom	(0.529)**	(0.458)**	(1.157)**	(2.117)**	(2.021)**	(3.157)**	(4.571)**
Financial	0.085	0.054	0.174	0.214	0.317	0.259	0.416
Freedom	(0.624)**	(0.439)	(1.260)**	(2.014)**	(2.962)**	(2.273)**	(4.293)**
	0.074	0.085	0.218	0.236	0.219	0.284	0.325
Fiscal Freedom	(0.593)**	(0.715)**	(2.127)**	(2.194)**	(2.128)**	(2.393)**	(3.102)**
Monetary	0.103	0.093	0.182	0.282	0.211	0.313	0.385
Freedom	(0.815)**	(0.742)**	(1.528)**	(2.417)**	(2.146)**	(0.283)**	(0.337)**
	0.091	0.074	0.058	0.841	0.942	0.108	0.138
DEMOC	(0.642)**	(0.592)**	(0.448)**	(0.758)**	(0.836)**	(1.038)**	(1.295)**
Political	0.294	0.366	0.682	0.793	0.851	0.106	0.148
Stability	(0.172)*	(0.194)*	(0.394)*	(0.671)*	(0.705)*	(1.025)*	(1.295)*

Table 9. Panel data estimates

According to the fixed effect estimates here are also the impact of all the variables under the economic freedom has 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 45.4%, 37.8%, 40.6%, 36.4%, 26.9%, 29.4%, 18.9%, 17.4%, 21.8% and 18.2% respectively which is higher than OLS and Random Effect Model. For the economic variable, GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 35.6% and 18.2% respectively.

From the fourth column of the table presented the Poisson Regression estimates. Here also the impacts of all the variables under the economic freedom are explored to be positive and significant. In the case of business freedom, trade freedom, government size, investment freedom, property rights, freedom from corruption the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government size, investment freedom from corruption increases FDI by 41.4%, 28.3%, 35.2%, 23.3%, 17.6%, 15.7% respectively which is slightly lower than in the case of OLS, Random Effect Model and Fixed Effect Model. On the other hand the other variables like labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 25.9%, 21.4%, 23.6% and 28.2% respectively and which is slightly higher than Fixed Effect Model. For the economic variable, GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 41.7% and 11.2% respectively.

From the fifth column according to the Prais-Winsten estimates, here all the variables under the economic freedom are explored to be positive and significant. In the case of business freedom, trade freedom, labor Freedom, fiscal Freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, labor Freedom, fiscal freedom and monetary freedom increases FDI by 36.8%, 23.7%, 22.9%, 21.9% and 21.1% respectively and that is lower value from the Poisson Regression. On the other hand government size, investment freedom, property rights, freedom from corruption and fiscal freedom the coefficient implies that a one standard deviation improvement in government size, investment freedom, property rights, freedom from corruption and fiscal freedom, property rights, freedom from corruption and fiscal freedom increases FDI by 36.8%, 22.6%, 22.8%, 21.5% and 31.7% respectively which is higher value from the Poisson Regression. Economic variable like GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 26.7% and 21.5% respectively.

From the sixth column of the table concentrates on the GMM estimates, here noted that all the variables under the economic freedom are also explored to be positive and significant. In the case of business freedom, trade freedom, government Size, property rights, freedom from corruption, labor freedom, fiscal freedom and monetary freedom the coefficient implies that a one standard deviation improvement in business freedom, trade freedom, government Size, property rights, freedom from corruption, labor freedom, fiscal freedom and monetary freedom increases FDI by 54.7%, 34.8%, 45.1%, 28.4%, 31.4%, 35.2%, 28.4% and 31.3% respectively which implies that is slightly higher from the Prais-Winsten estimates. On the other hand the other variables from the economic freedom like investment freedom and financial freedom increases FDI by 29.3% and 25.4% respectively and that is slightly lower from the previous estimates. Economic variable like GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 35.8% and 26.1% respectively.

From the seven column of the table has presented the GEE estimates. All the variables under the economic freedom 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, financial freedom, fiscal freedom, form corruption, labor freedom, financial freedom, government Size, investment freedom, property rights, freedom from corruption, labor freedom, financial freedom, fiscal freedom and monetary freedom increases FDI by 56.1%, 45.3%, 58.3%, 51.6%, 33.7%, 39.2%, 47.4%, 41.6%, 32.5% and 38.5% respectively. Economic variable like GDPG and GDPPC, the coefficient implies that a one standard deviation improvement in GDPG and GDPPC increases FDI by 30.2% and 33.4% respectively.

# 5. Conclusion

This paper has examined the relations among economic freedom, FDI and economic growth in the developing country. It finds that there are positive relations among economic freedom, FDI and economic growth. Economic freedom is a significant determinants of foreign direct investment because of unremitting flow of investment it helps to enhance the competitiveness of the economic outlooks. Due to the economic freedom, the foreign

entrepreneurs are accumulates substantial amount of confidence to make investment in the host countries and that consequence on enhancing the economic growth. It is true that not always economic freedom stimulates FDI; there are also some inevitable factors that may consider the different MNC's to make investment in the host countries especially in developing countries. Investment in the host countries may depends on the market size, economic growth, financial development, macroeconomic stability, geographical distance and many more. Above all host countries governments 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.

## References

- Adkins, L. C., Ronald, L. M., & Andreas, S. (2002). Institutions, freedom, and technical efficiency. Southern Economic Journal, 69(7), 92-108. http://dx.doi.org/10.2307/1061558
- Ajide, K. B. (2013). Economic freedom, foreign direct investment and growth: Empirical evidence from Nigeria. *International Journal of Economic*, 6(2), 143-58.
- Asiedu, E. (2002). On the determinants of foreign direct investment to developing Countries: Is Africa different? *World Development*, *30*(1), 107-119. http://dx.doi.org/10.1016/S0305-750X(01)00100-0
- Asiedu, E. (2006). Foreign direct investment in Africa: The role of government policy, institutions and political instability. *World Economy*, 29(1), 63-77. http://dx.doi.org/10.1111/j.1467-9701.2006.00758.x
- Ayal, B. E., & Karras, G. (1998). Components of economic freedom and growth: An Empirical Study. *Journal of Developing Areas*, 32(3), 327-38.
- Azman-Saini, W. N., Baharumshah, A. Z., & Law, S. H. (2010). Foreign direct investment, economic freedom and economic growth: International Evidence. *Economic Modelling*, 27(5), 1079-89. http://dx.doi.org/10.1016/j.econmod.2010.04.001
- Barro, R. J. (1997). *Determinants of economic growth: A cross country empirical study*. Cambridge: The MIT Press.
- Barro, R. J. (2000). Rules of law, democracy, and economic performance. In G. P. O' Driscoll, K. R. Holmes, and M. Krikapatrick (Eds.), 2000 Index of Economic Freedom. Heritage Foundation and the Wall Street Journal, Washington DC and New York.
- Bengoa, M., & Sanchez-Robles. (2003). FDI, economic freedom, and growth: New evidence from Latin America. European Journal of Political Economy, 19, 529-545. http://dx.doi.org/10.1016/S0176-2680(03)00011-9
- Cebula, R., & Mixon, F. (2012). The Impact of fiscal and other economic freedoms on economic growth: An Empirical Analysis. *International Advances in Economic Research*, 18(2), 139-50. http://dx.doi.org/10.1007/s11294-012-9348-1
- Chakrabarti, A. (2001). The determinants of foreign direct investment: Sensitivity analyses of cross-country regressions. *Kyklos*, *54*, 89-113. http://dx.doi.org/10.1111/1467-6435.00142
- Compton, R. A., Giedeman, D. C., & Hoover, G. A. (2011). Panel evidence on economic freedom and growth in the United States. *European Journal of Political Economy*, 27, 423-435. http://dx.doi.org/10.1016/j.ejpoleco.2011.01.001
- Dawson, J. W. (1998). Institutions, investment, and growth: New cross-country and panel data evidence. *Economic Inquiry*, *36*(4), 603-620. http://dx.doi.org/10.1111/j.1465-7295.1998.tb01739.x
- De Hann, J., Lundstrom, S., & Sturm, J. (2006). Market-oriented institutions and policies and economic growth: A Critical Survey. *Journal of Economic Surveys*, 20, 157-91. http://dx.doi.org/10.1111/j.0950-0804.2006.00278.x
- Dunning, J. H. (1993). Multinational enterprises and the global economy. Wokingham: Addision-Wesley.
- Durham, J. B. (2004). Absorptive capacity and the effects of foreign direct investment and equity foreign portfolio investment on economic growth. *European Economic Review*, 48, 285-306. http://dx.doi.org/10.1016/S0014-2921(02)00264-7
- Dutta, N., & Osei-Yeboah, K. (2010). Foreign direct investment and human capital: The role of political and civil rights. *Journal of International Development*, Forthcoming. Retrieved from http://ssrn.com/abstract=1263038
- Estrin, S., Bevan, A., & Meyer, K. (2001). Institution building and the integration of Eastern Europe in

international production. Working Paper 16/01, Centre for New & Emerging Markets.

- Ghura, D., & Goodwin, B. (2000). Determinants of private investment: A cross-regional empirical investigation. *Applied Economics*, 32(14), 1819-1835. http://dx.doi.org/10.1080/000368400425044
- Globerman, S., & Daniel, S. (2003). Governance infrastructure and US foreign direct investment. *Journal of International Business Studies*, 34, 19-39. http://dx.doi.org/10.1057/palgrave.jibs.8400001
- Gwartney, J. (2009). Institutions, economic Freedom and cross-country differences in performance. *Southern Economic Journal*, 75(4), 937-956.
- Hansen, H., & Rand, J. (2006). On the causal links between FDI and growth in developing countries. *The World Economy*, 29(1), 21-41. http://dx.doi.org/10.1111/j.1467-9701.2006.00756.x
- Heckelman, J. C. (2000). Economic freedom and economic growth: A short-run causal investigation. *Journal of Applied Economics*, 3(1), 71-91.
- Levina, O. (2011). *FDI, economic freedom and growth. Are they related?* Being an unpublished MA, Department of Economics, Central European University.
- Mlambo, K. (2006). Reviving foreign direct investments in Southern Africa: Constraints and Policies. *African Development Review*, 17(3), 552-579. http://dx.doi.org/10.1111/j.1017-6772.2006.00128.x
- Onyeiwu, S., & Shrestha, H. (2004). Determinants of foreign direct investment in Africa. *Journal of Developing Societies, 20, 89-106. http://dx.doi.org/10.1177/0169796X04048305*
- Zhao, H. (2013). Technology imports and their impacts on the enhancement of China's indigenous technological capability. *Journal of Development Studies*, 31(4), 585-602. http://dx.doi.org/10.1080/00220389508422379

# Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).