

Does Good Governance Matter for FDI Inflows? Evidence from Bangladesh

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Abstract

FDI is considered as an essential factor of economic growth of a country. But, as the global FDI increases over time, competition intensifies among developing countries for attracting FDI. However, FDI of Bangladesh is very insignificant (0.913%) against its GDP during the last 22 years. So, the main purpose of the study is to find out the factors liable for our poor FDI inflow in Bangladesh. Both governance and macroeconomic variables from 2001 to 2022 were taken in the study. The study has employed an OLS method to evaluate the parameters of the model. The results found that three governance variable--control of corruption, rule of law and voice and accountability were negative on FDI inflow in Bangladesh. Among the macroeconomic variables, corporate tax rate, exchange rate and investment level of our country were found negative against FDI. In contrast, the study found wage rate, interest rate and inflation were positively related with the FDI in most models. The findings of the study thus creates a wake-up call for policy makers to give due attention to enhancing good governance environments and macroeconomic stability in Bangladesh.

1. Introduction

The importance of foreign direct investment (FDI) has increased worldwide by globalization. According to the endogenous growth theories, FDI is an important determinant of economic growth of a country. It helps to transfer technology from developed countries to developing countries (Chenaf-Nicet and Rougier 2016). A developing country is featured by low per capita income, poverty, unemployment, high population growth and low savings rates. Moreover, savings-investment gaps of these countries impact negatively on economic growth and development (Solow 1956; Koopmans 1965). FDI can come forward to fill the gap of these countries (Sabir and Khan 2018). By developing the expertise and skill of labors, the host country can also decrease unemployment and increases productivity with the help of FDI (Lipsey 2001). These countries are benefitting improved management skills and enhanced capital accumulation, exports, and thereby economic growth from FDI inflows. Therefore, the developing world has been experiencing increased amount of FDI inflow since 1990 especially in SAARC, ASEAN, Central Asian and Sub-Saharan African countries.

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However, as the global FDI increases over time, competition intensifies among developing countries for attracting FDI. Consequently, these countries are looking for diverse approaches to attract FDI inflows. They constantly try to improve their legal and policy supports to hold comprehensive FDI for long-term development (World Investment Record, 2015). As said by Asamoah et al. (2016), developing countries accepted different programs and economic partnership agreements to assist FDI inflows and keep an eye on FDI operations. However, not all of them have been performing well in attracting FDI.

1.2. Literature on the Role of Governance Institutions on FDI Inflows

A section of scholarly studies, recently, pays attention on the effect of governance factors on FDI inflows (Ali et al. 2010; Buchanan et al. 2012; Wei et al. 2000). These literatures can be divided into three segments.

1.2.1 Literature on the Impacts of Specific Governance Factors on FDI Inflows

One aspect of literature concentrates principally the impacts of a specific governance element on FDI. According to Wei (2000), corruption has negative effect on FDI. It increases the cost of doing business and uncertainty of MNCs. On the other hand, Pinto and Zhu (2013) pointed out that developed countries get more FDI because of its low levels of corruption. In contrast, high level of corruption discourages FDI to move into less developed countries.

Jensen (2003) and Ahlquist (2006) were in favor of democratic countries to catch the attention of more FDI than dictatorial countries. They further found that democratic governments have a tendency to decrease political hazards of foreign investors and also enhance the reliability of the recipient country for them. Moussa et al. (2016) and Aidt et al. (2008) found positive impact of economic freedom on FDI. On the contrary, because of cheap labor force, the domination of labor unions and other dictatorial rules, Li and Resnick (2003) reveals that democratic system in a recipient country has a negative result on FDI inflows. However, due to the weak formation of institutions, Peres et al. (2018) found an insignificant effect of institutions on FDI in developing countries when they measured governance factors by corruption and the rule of law and examined the effect of governance factors on FDI inflows in developed and developing countries.

1.2.2 Reviews on Different Dimensions of Governance Factor

In the second section of the previous studies, the study has analyzed the importance of different dimensions of governance factors on FDI inflows. Such as, Asiedu (2006) reveals that ineffective institutions like corruption, a lack of the rule of law, and political instability hinder FDI inflows. Gani (2007) found development in control of corruption (COC), political stability (PSTAB), regulatory quality (REGQ), and effectiveness of government (GEFF) have encouraging impacts on FDI inflows in South American countries. Amal et al. (2010) used a panel data model also found political stability as encouraging in South America. They further found government effectiveness as negative for FDI inflows while the other four governance variables (VAA, REGQ, ROL, COC) have insignificant coefficients. Buchanan et al. (2012) used the data of 164 countries and acknowledged that good governance factors matter to FDI. Subasat and Bellos (2013) confirm the FDI enhancement role in Latin America although poor governance existed there as the transition countries. Zeshan and Talat (2015) found positive and significant relation of VAA, PSTAB, GEFF, REGQ and COC on FDI in Pakistan by applying ARMA and OLS regression techniques.

Using random effects panel technique, Shah and Afridi (2015) found positive relation of FDI with PSTAB and REGQ and negative with COC in the selected SAARC countries. The main finding of their study is that good governance has a considerable impact on FDI inflows. Furthermore, Nguen and Cao (2015) found positive effect of governance factors on FDI inflows in Vietnam. They opined that three components of governance factors i.e. PSTAB, REGQ and COC are necessary elements of attracting FDI in Vietnam. Lucke and Eichler (2016) found a positive relationship between governance factors and FDI inflows in developing countries. They further investigated that foreign investors had a preference to invest in politically stable countries where societies were less diverged. Zidi and Ali (2016) by using the econometrics of panel data found VAA, GEFF, REGQ and the ROL positively associated with FDI in 11 countries in MENA region. However, the rest two governance variables (PSTAB and the COC) were found negative with FDI by their study.

Alternatively, impact of governance factors on FDI inflow in Sub-Saharan African countries was also studied by Nondo et al. (2016). However, their findings disagree with other studies as their study finds insignificant association between FDI and governance factors. Again, using a dynamic data of 113 developing countries, Kurul and Yalta (2017) found VAA, GEFF, COC, PSTAB and REGQ positive and significant with FDI inflows. Moreover, Gani (2007) and Ullah and Khan (2017)

found the same results from their study in Asia and Latin America, SAARC, Central Asian countries and the ASEAN region.

Findings of Wernick, Haar and Sharma (2014) also suggest the feature of the host country's governance factors is very significant factors of FDI flows to developing countries. Hossain and Rahman (2017), in the same way, stated that governance factors facilitate to enhance FDI inflow in developing countries. Likewise, Ahmad et al. (2018) found governance institutions as very important in attracting FDI in Pakistan.

1.2.3 Literature on Composite Governance Factors

The impact of composite governance index was explored in the third part of literature which is created by bringing together various components of governance indicators, such as VAA, GEFF, COC, PSTAB, REGQ and ROL. For instance, Globerman and Shapiro (2002) found the composite governance index as positive and significant on FDI inflows. Likewise, Buchanan et al. (2012) also state that composite governance index positively impacts FDI flows. However, according to Wheeler and Mody (1992), the location choices of US MNCs are not influenced by a composite governance index.

1.2.4 Other Important Determinants of FDI Inflows

Among other important determinants of FDI inflow, Shah (2017) finds trade liberalization (TRADO) and economic development as positive, whilst high inflation as negative. Additionally, a number of researches (Saleem et al. 2020; Asongu et al. 2018; Okafor et al. 2017; Rjoub et al. 2017; and Aziz and Mishra 2016) show a positive association between FDI and TRADO at the same time as a negative association was found by Mahmood (2018) in the nexus. On the other hand, some other studies (Blonigen and Piger 2014) stated that TRADO does not perform any important role in attracting FDI. Long-run cointegration between FDI and TRADO were also absent in Saleem et al. (2020) analysis.

Furthermore, regarding the effect of interest rate (IR) on FDI, studies of Mishra and Jena (2019), Mahmood (2018) and Mengistu (2011) observed a positive whether findings of Hossain (2018), Chen (2018) and de Angelo et al. (2010) found a negative impact. On the other hand, Hossain (2021) and Chandra and Handoyo (2020) found the effect of the IR as insignificant in the entire Asian region. Moreover, according to Suhendra and Istikomah (2022), the decision to invest is depend on the amount of returns including IR. Ajija and Fanani (2021) pointed out a negative effect of IR on FDI inflow as when interest rate increases, the FDI inflow reduces.

Furthermore, a positive relationship was observed between GDP growth and FDI by the researches of Hossain (2021), Kurtović et al. (2020), Saleem et al. (2020) and Jaiblai and Shenai (2019). Therefore, GDPGR is recognized as an important element of FDI at present. However, the relationship between GDPGR and FDI is not discovered so far in Bangladesh.

Inflation is also a key factor of inward FDI. The study on the relationship between FDI and inflation rate has experienced diverse results also. For instance, research works of Agudze and Ibhagui (2021), Sabir et al. 2019), Rashid et al. (2017), Boateng et al. (2015), Ibrahim and Abdel-Gadir (2015) found a negative association and some other like (Bano et al. 2019; Boateng et al. 2017) exposed a positive association. Few other studies like Cavusoglu and Alsabr (2017) and Ceviş and Camurdan (2007) noted the persistence of a noteworthy association between FDI and inflation rate. Nevertheless, the nature of the associations was not verified by these studies.

Furthermore, about the impact of the corporate tax rate (CTR) on FDI, the largest part of the intellectual efforts (Nazir et al. 2020; Andersen et al. 2017; Du et al. 2014; Tang et al. 2014) revealed that CTR hinders the FDI inflow in recipient countries. A considerable number of studies (Alam and Quazi 2003; Mahbub and Jongwanich 2019) on the FDI–CTR nexus also showed a negative association in Bangladesh. In contrast, there are a number of contradictory outcomes too. For instance, among the OECD nations, Jones and Temouri (2016) foundd very nominal effect of the CTR on FDI and others (Kinda 2018; Hunady and Orviska 2014) found no impact in any way.

Besides, it is also seen that currency devaluation helps to get additional FDI to the recipient country (Mostafa 2020; Xing 2006). Mostafa (2020) and Qamruzzaman et al. (2019) revealed that acceleration of EXG reduces FDI inflow in Bangladesh. Therefore, the study has investigated the result of the EXG on fund flow in Bangladesh. Additionally, study in the FDI–wage rate nexus (Economou 2019; Blanc-Brude et al. 2014; Hunady and Orviska 2014; Bilgili et al. 2012) have typically argued that low WR invites further FDI and convinces the foreign firms to rally their manufacture units where the WR is cheap.

1.2.5 Literature Gap

The above discussion reflects that there is inconsistency on results in the previous researches. The findings of earlier researches no doubt demonstrate the contradiction and indecisiveness. Moreover, not many pragmatic researches have studied the association linking the governance indicators and FDI in Bangladesh. Again, ahead of concentrating just on one of the governance indicators as many the

previous researchers carried out (Wei 2000; Jensen 2003; Ahlquist 2006), the study analyzes the effects of varied factors of governance factors individually as well as collectively and with an composite index in order to identify whether governance quality affects the FDI. Carrying out such a move also approves us to suggest diverse policy recommendations about the level of governance required at the institution in Bangladesh.

Third, to avoid specification bias, the article studies the impact of governance indicators and FDI inflow by other key macroeconomic indicators for instance GDP growth, corporate tax rate, domestic investment, exchange rate, inflation, interest rate, trade openness, wage rate etc. Moreover, very few researches were carried out to evaluate the whole impact of all these indicators on FDI inflow. Thus, the present study is committed to satisfying the aforesaid research gap in the presented literature through an extensive study by finding out the impact of these indicators on FDI in Bangladesh.

Moreover, not too many researchers studied the relationship between FDI and GDPGR in Bangladesh (Hossain 2021; Hussain and Haque 2016; Sarker and Khan 2020). Hence, the research gap is clear. Likewise, very few studies highlighting Bangladesh that talked with the relationship between FDI and EXG. Furthermore, the association between FDI and INF has not been studied in the aforesaid researches, and very few studies have been carried out in the circumstance of Bangladesh. Also, in spite of everything, debate is still there about the effect of RIR on FDI. The relationship between FDI and TRADO also has not been determined comprehensively in the circumstance of Bangladesh. Regarding wage rate, not so many researchers (Sadekin et al. 2015; Nasrin et al. 2010) have found WR as a significant factor of FDI inflow in Bangladesh although the dataset of these researches is small.

Therefore, it is evident from the above conversation that not so many studies highlighting on governance factors and other determinants on FDI inflow in Bangladesh. Moreover, reviewed literatures regarding the FDI provide full of inconsistent results. Hence, the results of this research work will support to assess the governance as well as macroeconomic factors in the context of Bangladesh from a diverse point of view.

2 Statement of the Problem

As said by IMF's BOPs database, net FDI inflow from 2010 to 2019 into Bangladesh amounted to \$20.5 billion only. However, during the same time, Myanmar received net FDI inflows of \$24.8 billion, Philippines \$58.6 billion,

Malaysia \$106.9 billion, Indonesia \$194.2 billion and India \$371.8 billion. Therefore, first research question of this project is: why FDI inflow of Bangladesh is so poor.

To get the answer of this question Bangladesh needs to identify what foreign investors look forward to from the host country. As said by Fedderke and Romm (2006), foreign investors when enter the foreign markets are more concerned about their risk and return. Global investors frequently retrieve business and economic data for 200 countries provided by TheGlobalEconomy.com ahead of taking investment decision.

‘The eclectic paradigm theory’ of Dunning (1988) proposed that a foreign investor opinion to invest in a recipient country relies on many issues such as the market size, admin and managing systems, labor and transportation costs, administration policies, in addition to governance and political strength. However, consistent with OECD, foreign investors concentrate mainly to the governance framework of a country in which they are going to invest (OECD 2012). On the other hand, North’s ‘institutional theory’ (1990) says that economic activities are affected by good institutions. Furthermore, profitability increases and the ‘cost of doing business’ is reduced by the high-quality institutions. Moreover, investors are indecisive to move in a country where institutions promote corruption, discrimination and formalities (Mengistu and Adhikary 2011). According to Lucas (1993), governance factors perform an important role as compared to economic factors in receiving inward FDI in emerging economies.

Foreign investors prefer to move in countries where effective elected structures exist (Harms and Ursprung, 2002). However, while investing, the MNCs give attention to the economic globalization, site determinants, infrastructural maturity, political atmosphere and useful cross-border trade rules in addition to governance factors of the host economies (Contractor et al. 2020; Kleineick et al. 2020; Alam et al. 2019; Paul and Jadhav 2019; Deseatnicov and Akiba 2016). Despite the above factors, several additional country-specific factors of FDI are also regarded as important factors of FDI inflow for several developing countries. Those are COC, ROL, and VAA (Osabutey and Okoro 2015).

FDI inflow can also been affected by a country’s social, political and governance features. Socio-political and political-governance varieties of researches (Ibrahim et al. 2020; Kurtović et al. 2020; Paul and Jadhav 2019; Mourao 2018; Rashid et al. 2017) have recognized the most important factors of FDI of world’s promising nations. Those are PSTAB, GEFF, REGQ, VAA, active start-up regulations, economic liberty, ease of doing business, government expenditure, improved one-

stop services dedicated for global trade etc. Several other researchers have found INF, EXG, RIR, and GDPGR, per capita GDP, TRADO, gross national income and external debt as macroeconomic factors of FDI (Hossain 2021; Asiamah et al. 2019; Sabir et al. 2019; Jaiblai and Shenai 2019; Kishor and Singh 2015). Therefore, the current study tries to determine both the governance and macro factors responsible for our insignificant inflow of FDI in Bangladesh.

3. Objectives of the Study

The major objective of the research is to identify the causes liable for our poor inflow of FDI in Bangladesh. However, the specific objectives are as follows:

- (i) to observe the association between governance factors and FDI inflows.
- (ii) to examine the association between macroeconomic factors and FDI inflows.

4. Methodology of the Study

The research work is quantitative in character and provides explanatory synopsis of variables of importance. It's also descriptive study since it evaluates the effect of both governance and macroeconomic factors on FDI in Bangladesh.

Table-1: Description of Variables used in the Study

Variable name	Notation	Description
Dependent Variable		
Foreign Direct Investment	FDI	FDI as a percentage of GDP
Independent Variables		
Governance Variables		
Control of Corruption	COC	Summarizes opinions of the degree to which civic rule is worked out for individual gain
Political Stability	PSTAB	Assesses opinions of the probability of political unpredictability
Rule of Law	ROL	Summarizes opinions of the degree to which representatives have faith in and abide by the set of laws of the people
Regulatory Quality	REGQ	Summarizes opinions of the government's capacity to prepare and execute sound strategies and schemes
Voice and Accountability	VAA	Summarizes opinions of the degree to which a nation's

Variable name	Notation	Description
Dependent Variable		
		citizens are capable to take part in choosing their government, as well as autonomy of expression, autonomy of union, and a liberated media
Government Effectiveness	GEFF	Summarizes opinions of the quality of the community and public services and the level of its autonomy
Macroeconomic Variables		
Corporate tax rate	CTR	Corporate tax rate of Bangladesh
Exchange rate	EXG	The average buying and selling of Bangladeshi Taka to US dollar
GDP growth rate	GDPGR	Annual GDP growth rate in percentage form
Inflation rate	INF	Consumer Price index (CPI)
Investment	INV	Gross fixed capital formation as percentage of GDP
Real Interest rate	RIR	Lending Interest Rate
Trade Openness	TRADO	The proportion of trade which is the summation of exports and imports to GDP
Wage rate	WR	An estimation of total income after taxes divided by the total number of employees employed

Source: Compiled by authors

4.1 Sources of Data

The research work has employed 22 years series data of Bangladesh from 2001 to 2022. The major sources of data were the World Governance Indicators (WGI) and the World Development Indicators (WDI). The study has collected data on the governance factors i.e., COC, VAA, GEFF, PSTAB, ROL, and REGQ from the WGI. On the other hand, data on EXG, GDPGR, INF, RIR, and TRADO were obtained from the WDI. Bangladesh Bureau of Statistics (BBS) provides WR data while the CTR were obtained from the National Board of Revenue (NBR).

4.2 Hypothesis Development

Based on related theory and previous literature, the study has developed the following hypotheses:

H₁: Governance factors and the FDI inflows of Bangladesh are positively correlated.

H₂: Macroeconomic factors and the FDI inflows of Bangladesh are positively correlated.

4.3 Analysis of the Study

This study has employed Ordinary Least Square (OLS) method to evaluate the variables of the model. The multiple regression model was applied by the study to find out the correlation between governance and macroeconomic variables and the FDI inflow. Before receiving findings from the OLS, the model was tested whether it can be employed to forecast the findings or whether the OLS model is best or not. To test the validity and reliability of the research findings the study has used Jacque-Bera test (to test the normality), Durbin-Watson test and Breusch-Godfrey LM test (to test the problem of autocorrelation), Breusch-Pagan test (to verify the heteroscedasticity) and finally CUSUM Test (to check the stability in the regression model).

4.4 Econometric Model of the Study

According to Dunning's eclectic paradigm theory and North's governance theory, FDI inflow relies on the host country's market size, macroeconomic stability and the governance factors. Algebraically the relationship can be written as:

FDI = f (market size, macroeconomic stability, governance factors)

Based on theoretical background, the study has used an empirical model below to evaluate the effect of governance factors on FDI inflow:

$$Y_t = \alpha + \beta X_t + \gamma Z_t + U_t$$

where Y_t is the log of FDI inflows, X_t are vectors of the governance quality of Bangladesh during period $t = (1, 2, 3, \dots)$, Z_t are the vectors of macroeconomic factors for example CTR, EXG, INF, INV, RIR, TRADO, GDPGR, and WR during period $t = (1, 2, 3, \dots)$, and U_t is the error term. Since the governance variables are highly correlated with one another, therefore, instead of taking all of them in a single equation the study has constructed a composite governance index of institutions by taking the simple average of six governance variables (Globerman and Shapiro 2002). The study has used EViews 10 software for data analysis and result interpretation.

5. Descriptive Statistics of Dependent and Independent Variables

Table-1 has described the descriptive statistics of FDI inflow, governance and macroeconomic indicators those were employed in this analysis. The table has displayed means, maximums, minimums, and standard deviations of the variables for the period from 2001 to 2022.

Table-1: Descriptive Statistics of Dependent, Independent and other Control Variables

Variable	Min	Max	Mean	Standard Deviation
Dependent Variable				
FDI	0.10	1.74	0.91	0.42
Independent Variable				
Governance Indicators				
COC	-1.5	-0.81	-1.08	0.23
GEFF	-0.91	-0.68	-0.68	0.34
PSTAB	-1.86	-0.72	-1.28	0.29
REGQ	-1.05	-0.57	-0.81	0.14
ROL	-1.13	-0.8	-0.92	0.09
VAA	-0.77	-0.23	-0.5	0.16
Macroeconomic Variable				
CTR	25.00	35.00	28.25	2.70
GDPGR	3.51	8.15	6.15	1.12
EXG	55.81	98.85	71.95	9.22
INF	2.00	9.94	6.39	2.03
INV	24.10	32.21	27.62	2.68
RIR	3.10	9.30	5.44	1.28
TRADO	36.03	48.11	26.00	7.25
WR	7.82	9.51	8.68	0.56

Source: Authors estimation.

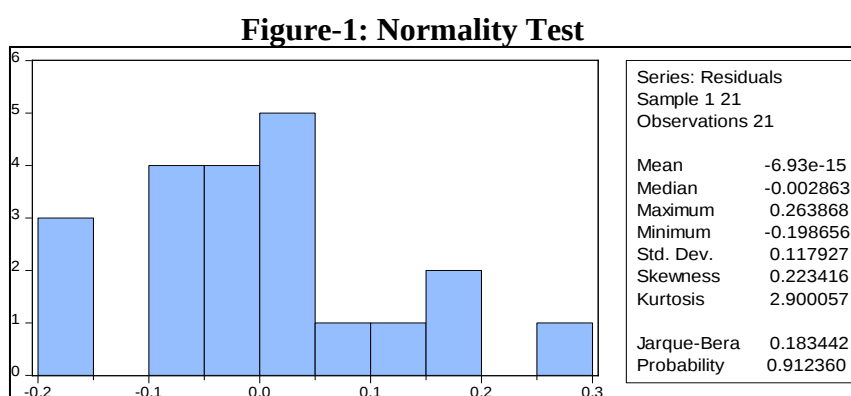
From Table-1, it is further seen that FDI of Bangladesh was very insignificant (0.913%) against its GDP during the study period. The values of all governance factors found negative meaning that our institutions are not performing well. Among the governance factors of Bangladesh, PSTAB has the highest negative mean value (-1.28), followed by COC, ROL, REGQ and GEFF. Meanwhile, important economic factors like CTR, EXG, INV, GDPGR, INF, RIR, TRADO and WR has been used as the control variable in this study.

5.1 Diagnostic Test

Before running the OLS, the study has performed several diagnostic tests on the residuals to examine the validity and reliability of the estimated model. This includes normality test, autocorrelation test, heteroscedasticity test and stability test. The outcomes of these issues are presented below in the following tables.

5.1.1 Normality Test

The research article has used the Jarque-Bera test to examine the normality of distribution in Figure-1. According to the test, it is observed that the result of Skewness (0.223416) and Kurtosis (2.900057) satisfies the condition of normal distribution. Again, it is seen that the Jarque-Bera value (0.183442) and the p-value (0.912360) of this distribution is greater than 0.05. These results suggest that the residuals of the model follow the normal distribution. Therefore, the study cannot reject null hypothesis of the normal distribution.



Source: Derived by the authors from E-views software

5.1.2 Test of Autocorrelation

With the aim to investigate whether the error terms in the regression model are independently and identically distributed, the study has carried out Durbin-Watson test and Breusch-Godfrey Serial Correlation LM tests.

5.1.3.1 Durbin-Watson test

The Durbin-Watson test was employed to assess whether there is autocorrelation problem in the model in addition to recognize which group the problem fits in. Durbin-Watson test statistics of Table-2 to Table-7 found an acceptable range between 1.46 and 2.33 which are more than their R-squared values. Based on these results, it can be said that the problem of autocorrelation does not exist in these models.

5.1.3.2 Breusch-Godfrey Serial Correlation LM test

The study has employed 'Breusch-Godfrey Serial Correlation LM Test' to find there is any serial correlation in the residuals. The findings of this test in Table-2

show that the p-value of the F-statistics (0.8973) is greater than 0.05. So, the null hypothesis is accepted at 5% level of significance and it can be assumed that correlation problems do not exist in the model.

Table-2: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.10951	Prob. F(2,10)	0.8973
Obs*R-squared	0.450084	Prob. Chi-Square(2)	0.7985

Source: Derived by the authors from E-views software

5.1.4 Heteroscedasticity Test Results

The study has verified the heteroskedasticity by applying the Breusch-Pagan-Godfrey for White Heteroskedasticity test in Table-3.

Table-3: Heteroskedasticity Test: Breusch-Pagan-Godfrey

H ₀ : There is no heteroscedascity			
F-statistic	1.745454	Prob. F(8,12)	0.1853
Obs*R-squared	11.29412	Prob. Chi-Square(8)	0.1856
Scaled explained SS	3.579343	Prob. Chi-Square(8)	0.8929

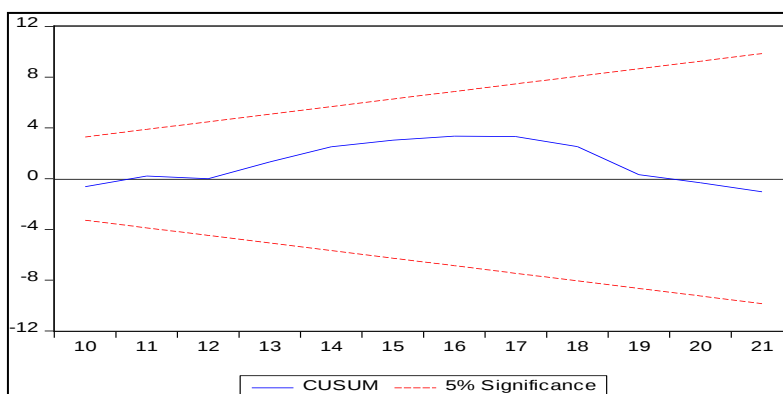
Source: Derived by the authors from E-views software

From the test, it is found that the p-value (0.1853) is greater than 0.05% which indicates that the model cannot reject the null hypothesis in the residuals. So, it is suggested that the errors in the residuals are homoscedastic.

5.1.5 CUSUM test

To assess the stability of the coefficients and the model's structural stability, the study has employed the CUSUM test as seen in the Figure-2. Throughout the examination, the CUSUM values stayed within the allowed range of +/- 5%, as seen in the graphs indicating that all parameters and coefficients derived from the regression are stable. The results of the test mean that the coefficients in the data are stable. Therefore, since the estimated model looks to follow a steady relationship throughout the assessment period, this model can be exercised for policy decision-making purposes in Bangladesh.

Figure-2: CUSUM Test



Source: Derived by the authors from E-views software

The above diagnostic tests results show that the model displays pleasing econometric properties, residuals are normally distributed, serially uncorrelated, homoscedastic and follow a stable pattern. Therefore, it can be said that the results are reliable and can be applied to generate significant explanations. Thus, the explanatory variables are the basic determinants of FDI inflow of Bangladesh. This of course enhanced the reliability of regression analysis.

5.2 Impact of Governance Factors on FDI Inflow

At the stage, to see the impact of the governance factors on FDI inflow to Bangladesh the study has used the regression analysis. OLS technique was used to test the effectiveness and impact of the COC, GEFF, PTSAB, REGQ, ROL and VAA on the FDI inflow. The findings of OLS are described in the following sections.

5.2.1 Impact of Control of Corruption on FDI

It is noticed in Table-2 that the impact of control of corruption on FDI is negative and statistically significant. That means Bangladesh is not making any effort to decrease the level of corruption and ultimately fails to get FDI. This result were supported by Zidi and Ali (2016) and Shah and Afridi (2015) who earlier found the COC as a negative and significant factor on FDI. It is further seen that CTR, EXG, INF, RIR, TRADO and WR were the significant economic factors that attract FDI in Bangladesh. However, the CTR and EXG negatively affect FDI.

Table-4: Impact of Control of Corruption on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.54	4.09	-1.84	0.09
COC	-1.59	0.73	-2.18	0.05*
CTR	-0.08	0.03	-2.80	0.02**
EXG	-0.10	0.04	-2.60	0.02**
GDPGR	0.08	0.07	1.15	0.28
INF	0.11	0.05	2.31	0.04**
INV	-0.22	0.14	-1.62	0.13
WR	0.13	0.05	2.62	0.02**
RIR	0.16	0.06	2.53	0.03**
TRADO	0.07	0.03	2.65	0.02**
R-squared	0.85	Adjusted R-squared		0.73
F-statistic	6.90	Durbin-Watson stat		1.46
Prob(F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

5.2.2 Impact of Government Efficiency on FDI

In Table-5, government effectiveness also shows a negative impact on FDI inflow in Bangladesh. However, the result is not significant. However, the result is inconsistent with Kurul and Yalta, (2017), Zidi and Ali (2016), Amal et al. (2010) and Zeshan and Talat (2015). Among the economic factors, EXG, GDPGR, INV and TRADO found insignificant in this analysis.

Table-5: Impact of Government Efficiency on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.89	2.37	0.37	0.72
GEFF	-0.20	0.22	-0.93	0.37
CTR	-0.08	0.03	-2.57	0.03**
EXG	-0.04	0.03	-1.27	0.23
GDPGR	0.08	0.08	1.04	0.32
INF	0.34	0.79	1.70	0.12
INV	-0.24	0.17	-1.38	0.20
WR	0.12	0.06	1.96	0.08*
RIR	0.14	0.07	1.90	0.08*
TRADO	0.02	0.02	0.91	0.38
R-squared	0.80	Adjusted R-squared		0.64
F-statistic	4.90	Durbin-Watson stat		1.47
Prob (F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

5.2.3 Impact of Political Stability on FDI

In Table-6, political stability, another governance variable is also found negative with FDI. And this result is also statistically insignificant. The result is supported by Amal et al. (2010). This result does not confirm empirically studies by Kurul and Yalta (2017), Zeshan and Talat (2015) and Shah and Afridi (2015) who found positive impact of political stability in the attraction of FDI. Among other economic factors, CTR again provide negative results for FDI inflows in Bangladesh. However, WR, and RIR found positive and significant results for FDI inflows.

Table-6: Impact of Political Stability on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.02	2.81	-0.72	0.49
PSTAB	-0.44	0.34	-1.31	0.22
CTR	-0.07	0.03	-2.09	0.06*
EXG	-0.05	0.03	-1.44	0.18
GDPGR	0.06	0.08	0.84	0.42
INF	0.46	0.77	1.89	0.09*
INV	-0.19	0.15	-1.27	0.23
WR	0.10	0.05	1.88	0.09*
RIR	0.19	0.08	2.26	0.04**
TRADO	0.02	0.02	1.08	0.30
R-squared	0.81	Adjusted R-squared		0.66
F-statistic	5.33	Durbin-Watson stat		1.88
Prob (F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

5.2.4 Impact of Regulation Quality on FDI

According to Table-7, regulatory quality has a negative impact on FDI inflows. However, the result is not significant.

Table-7: Impact of Regulation Quality on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.94	2.55	-0.76	0.46
REGQ	-1.59	1.01	-1.58	0.14
CTR	-0.08	0.03	-2.72	0.02**
EXG	-0.06	0.03	-1.74	0.11
GDPGR	0.11	0.08	1.39	0.19
INV	-0.31	0.17	-1.81	0.10

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
INF	0.91	0.86	2.22	0.05*
WR	0.14	0.06	2.37	0.04**
RIR	0.16	0.07	2.33	0.04**
TRADO	0.02	0.02	1.17	0.27
R-squared	0.82	Adjusted R-squared		0.68
F-statistic	5.74	Durbin-Watson stat		1.90
Prob(F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

This result supports the study of Amal et al. (2010). But does not support our theoretical hypothesis (Kurul and Yalta, 2017; Zidi and Ali, 2016; Zeshan and Talat, 2015; Shah and Afridi, 2015). Among other economic variables, CTR again shows negative impact on FDI. In contrast, INF, WR and RIR have positive and significant impact on FDI.

5.2.5 Impact of Rule of Law on FDI

The study finds the ROL has a negative impact on FDI inflows in Table-6 and it is significant. Therefore, it is proved that systems of rules are not executed in Bangladesh. Institutions do not work and do not maintain a favorable implementation of these rules. As a result, FDI inflows discouraged to come into Bangladesh. This result is supported by Buchanan et al. (2012) but inconsistent to the results of Zidi and Ali (2016) who found positive impact of ROL on FDI. We further note that apart from the variable of GDPGR and TRADO most other control variables are statistically significant. On the other hand, CTR, EXG, and INV found significant but negative with FDI. On the other hand, INF, WR, and RIR are significant and positively correlated to FDI.

Table-6: Impact of Rule of Law on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.29	2.60	-1.65	0.13
ROL	-2.23	0.88	-2.54	0.03**
CTR	-0.07	0.03	-2.40	0.04**
EXG	-0.06	0.03	-1.89	0.09*
GDPGR	0.07	0.07	1.10	0.30
INV	-0.27	0.14	-1.93	0.08*
INF	0.14	0.77	0.65	0.02**
WR	0.14	0.05	2.86	0.02**
RIR	0.13	0.06	2.00	0.07*
TRADO	0.02	0.02	1.24	0.24
R-squared	0.85	Adjusted R-squared		0.72
F-statistic	6.30	Durbin-Watson stat		2.33
Prob(F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

5.2.6 Impact of Voice and Accountability on FDI

Table-7 shows that VAA has a negative and statistically significant impact on FDI. This indicates that the lack of accountability and lack of democratic system discourages FDI inflows in Bangladesh. The result opposes the findings of Kurul and Yalta (2017), Zidi and Ali (2016) and Zeshan and Talat (2015) but supports the findings of Buchanan et al. (2012). Among the control variables, CTR and INV are significantly but negatively related with FDI. In contrast, INF, WR, RIR and TRADO are positively and significantly correlated to FDI inflow in Bangladesh.

Table-7: Impact of Voice and Accountability on FDI

Dependent Variable: FDI				
Method: Least Squares				
Included observations: 21 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.48	1.92	0.25	0.81
VAA	-1.83	0.77	-2.40	0.04**
CTR	-0.10	0.03	-3.55	0.00***
EXG	-0.04	0.03	-1.45	0.18
GDPGR	0.11	0.07	1.66	0.12
INV	-0.47	0.18	-2.59	0.03**
INF	0.09	0.75	2.79	0.02**
WR	0.12	0.05	2.63	0.02**
RIR	0.25	0.08	3.18	0.01**
TRADO	0.03	0.02	1.85	0.09*
R-squared	0.86	Adjusted R-squared		0.74
F-statistic	7.41	Durbin-Watson stat		1.67
Prob(F-statistic)	0.00			

Note: *Significance at 10%, **Significance at 5%, ***Significance at 1%.

Source: Authors estimation.

5.3 Major Findings of the Study

The results of the above models found GEFF, REGQ and PSTAB are negative but not significant factors for FDI inflows in Bangladesh. However, the other three governance variable--COC, ROL and VAA were found negative and significant on FDI inflow in Bangladesh. These findings were supported by Zidi and Ali (2016) and Shah and Afridi (2015) Buchanan et al. (2012). The results reveal that corruption practices, the undue pressure on bureaucracy, vulnerable political system, lack of transparency and accountability of the politicians cause a decrease in FDI inflows. It also discourages the MNCs to bring fund into Bangladesh. The results further indicates that constitutional rights and human rights of the people like autonomy of protest and channel, capacity to execute policies and rules by the administration encourage the FDI inflow. On the other hand, taking advantage of civil authority to make personal benefit prevent the foreign investor to provide funds into Bangladesh. The negative results of the governance indicators mean that bad governance cause to deter FDI inflow to Bangladesh. This is a symptom of an

immature political environment in Bangladesh which does not attract foreign investors to come here.

Among the macroeconomic variables, CTR, WR and RIR found significant in all six models. Of them, WR and RIR were positively correlated with the FDI inflow. The outcomes of the models are similar to the studies of Mishra and Jena (2019), Economou (2019), Mahmood (2018), Blanc-Brude et al. (2014), Hunady and Orviska (2014), Bilgili et al. (2012) and Mengistu (2011). In contrast, correlation between CTR and FDI inflow was negative. The result supports the works of Nazir et al. (2020), Andersen et al. (2017), Du et al. (2014), and Tang et al. (2014). But, GDPGR was found insignificant in all the models. The results, however, are not backed by the findings of Hossain (2021), Kurtović et al. (2020), Saleem et al. (2020) and Jaiblai and Shenai (2019).

5.3 Evaluating Regression Equation

All the tables above specify that this is a good-fit of regression equation as the R^2 and the adjusted R^2 values were greater than 80%. The values denote that the variations in the independent variables can describe about 80% of the dependent variable. The F-statistics of the model give us an idea it is significant at 1% level as well. The findings of the diagnostic tests also point out that the model exhibits desirable econometric properties. Thus, the explanatory variables are the basic determinants of FDI inflow of Bangladesh.

6. Policy Implications

The above findings guide us to make a conclusion that if a country is incapable to control of corruption, has inefficient administration, non-transparent government policies, has irresponsible civil service, non-reliable and non-participatory political system should initiate to change their governance policies and preparations to get more FDI inflows. The findings of the study thus make a get up call for policy makers of Bangladesh. They should focus to develop attractive good governance environments particularly get better law and order situation. For receiving the FDI, Bangladesh needs to develop an efficient, neutral and transparent legal system. Qualified civil and public services and control of institutional corruptions are also presently vital for our country. Improving governance indicators for a good investment atmosphere should be a significant instruction for developing policy in Bangladesh. Hence, developing the governance quality should be regarded as a vital issue for a favorable investment environment that improves the trust of the foreign investors, and could be a noteworthy instruction for policymakers in Bangladesh. Alongside, for expediting FDI inflows in Bangladesh, a sound physical infrastructure, steady and projected macroeconomic strategies, high GDP

growth rates over the previous years, sound trade policies, national capital formation and inexpensive labor are of maximum significance. Bangladesh should pay out more on human capital, increase household investment, uphold macroeconomic solidity and support trade openness for getting more FDI inflow. This can further generate a vibrant spillover outcome in the economy what we observed earlier in East and Southeastern Asia. In conclusion, policymakers should take into account that the ongoing matter is not whether the policy situation is by and large dominant or liberal but whether policies are accurately planned to deal with the necessary demands of FDI attraction and as a consequence economic growth in general.

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