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Impact of Corruption on Foreign Direct Investment Inflow to Asian Countries: GMM Analysis

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Abstract: *The present research study is devoted to examining the impact of corruption on FDI inflow to selected Asian countries. There are six sub-regions in Asia from each of the regions three countries have been selected for the period of 1995-2016. Along with corruption, some other important variables are added to the model based on literature which can affect income inequality. These variables are political stability, real interest rate, economic growth, and Inflation. Data were collected from World Governance Indicators (WGI) and World Development Indicators (WDI). Panel data techniques i.e. fixed effect regression, pooled ordinary least square, random effect regression and panel GMM were used. The results of all the panel data techniques are compared to get robust results. It is concluded that corruption negatively affects FDI inflow to selected Asian countries. Moreover, in the case of individual regions (sub-regions) cases techniques are arrived with mixed outcomes.*

Key Words: Corruption, FDI, Asian Countries and Panel GMM.

JEL Classification:

Introduction

In economic growth and development, Foreign Direct Investment (FDI) plays a vital role in a country mainly in developing countries Shabir (2014). Developing countries do not have the capital to invest, and additional capital is needed to create growth and jobs. Moreover, FDI caused technological diffusion and augmentation in the technical skill of labour by establishing a firm or industry in the host country. The technological diffusion and transfer of technical skills raised productivity in the production of the developing country. On the other hand, developed countries can access the cheap resources of the developing countries. Capital is generally abundant in developed countries and investors in developed countries can generate a huge form of resources in rising countries. Therefore, it shows a joint opportunity to get from the flow of FDI.

Dunning (2002) concluded that FDI depends on state policies, encouraging transportation and transparent governance of

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the state. Asiedu (2002) worked on the policy-making for developing countries for FDI inflows and focused on the degree of openness to FDI and rates of taxes. Zhang (2001) stated that the FDI positively affects the state where the transportation system is developed and good trade policies are made. Kinoshita and Campos (2002) examined that FDI and growth have a significant positive relationship if modern technology is transferred to their host state. Lensink et al. 2000) elicited that FDI's impact is poor on different uses and the same end result has been observed with the aid of Sylvester (2005) and Zaidi (2004) explained that the level of saving and funding in Pakistan is much less than its favoured stage; therefore they allocate the property in the form of FDI to meet the space. Zaidi (2004) tested that the increase in overseas capital inflows is improved through government rules, discounts in price lists and tax rest to the investors. The World Bank says corruption is the finest impediment to financial and social improvement. It can flip reasons the development of establishments of regulation and weakening the framework wherein financial boom depends.

To prosper, host nations need foreign direct investment and progress in other areas. Every country is making concerted efforts to attract foreign direct investment (FDI) by offering tax breaks, subsidies, and other perks to potential investors. The economies of emerging nations, such as Pakistan and a few Asian countries, could use more of it to create jobs for their citizens.

These increase the economic growth and also the labour productivity. Choi (1998), Markusen and Venables(1999) and Blomstromand and Kokko (1996) in their studies concluded that FDI decreases income inequality among countries with rich natural resources and cheap labour force. The Kuznets impact illustrates that when income inequality rises, the per capita income increases but downfall in the level of development Jin (2009).

Transparency International defines corruption as the abuse of entrusted power for private gain. There are various forms of corruption like Bribery, cronyism, parochialism, nepotism, patronage, influence, graft, peddling, lobbying, extortion, embezzlement bureaucratic corruption. The different studies suggested that bureaucratic corruption is at the top level. In bureaucratic corruption, government officials are involved and payment of bribes is made to the official for illegal activities. The second type of corruption is low-level corruption, when money is paid to bureaucratically inept government employees in exchange for obtaining products or services unlawfully. The determination of political figures to maintain their positions of power is the third form of corruption Markusen & Venables (1999), Bloomstrom & Kokko (1996), and Dinko (2011). Due to FDI inflow, the countries are developing and their citizens are getting employment and high managerial skills (Javorcik, 2012). In addition, those workers who get jobs due to FDI inflow are getting high salaries in host firms of developing countries. Foreign firms tend to offer good and more truthful education chances and familiarity with the use of modern technologies as well to the locals of the host country. Myint (2000) concluded that firms pay extra for contract-related risks because they cannot be proven in court. Corruption also reduces the production of inputs in a country, reducing the country's location attractiveness. Also, suppose a country's bureaucracy is corrupt. In that case, foreign firms give bribes to the officials and get the export-import permits, licenses etc. Empirically, corruption has been shown to have a detrimental impact on FDI. The Corruption Perceptions Index was used by Quazi (2006) to measure corruption. He has chosen six countries from South Asia and nine from East Asia, and has researched how corruption affects FDI flows into the chosen nations.

Habib & Zurawicki (2001) studied the stage of bribery and the impact of FDI in countries. They analyzed bribery has impact on market entry, investment and strategic management decisions at the international level. They have examined how corruption can affect FDI. They have used the Corruption Perception Index (CPI) for 1999 and 2000

computed by Transparency International. They have identified that, if there is a change in the rate of corruption the impact on the FDI will be higher. They have further mentioned that uncertain prevention and manliness are highly linked with a high level of corruption.

Previous researchers such as Mauro (1995) revealed in their research papers that corruption decreases private investment resulting in a decrease in financial assets. They determined poor sizeable affiliation is Corruption Perceptions Index (CPI) and FDI and financial growth in economic theories angle like grabbing hand theories and statistical angle vast.

Akcay (2012) investigated the negative impact of corruption on investments. He concluded from the results that, due to an increase in corruption it reduces the investments in the country. His studies concluded that declines in investments in a country have very adverse effects on every sector. He explained that corruption distorts a country's economic growth, resulting in rising inflation, decreased health and education expenditures, increased armed expenditures and wastes the ability to rent-seeking actions. It drives companies into clandestine labour and distorts markets and allocation of resources, which leads to an increase in income inequality poverty, and a discount in tax revenue, infant mortality costs will also increase, distorting the crucial role and regulation of the state and undermining the authority of management and of the marketplace economic system. Generally, developing countries are facing hundreds of problems. Corruption decreases distant places' funding and monetary growth. Corruption exists in each part of the globe in developing countries. According to the Corruption Perceptions Index (CPI) from 2011, out of the 183 states and territories surveyed, none scored lower than a 05 on a scale from 0 (overly corrupt) to 10. (exceptionally clean and clear).

Myanmar, Somalia, and North Korea are at the bottom of the list of countries with the least corruption, while New Zealand, Denmark, and Finland are at the top. The World Bank claims that corruption is a major barrier to social advancement and economic growth. The inspiration, roles, and rules of the financial boom had been corrupted. The world is especially hard-hit by corruption's terrible effects. The majority of the poorest residents rely on the public offers' riders; at the very least, they might incur additional expenses via corruption and gaming. Al-Sadig(2009), World Bank (2004). According to Azam (2019) and Wang & You (2012), in a group of five South East Asian countries, corruption has a negative influence on economic growth whereas FDI has a favourable impact. In the context of Pakistan and the greater Asian region, the current research is an effort to answer the issue.

Problem Statements

Foreign direct investment is vital to every nation's development. Every state tries to avoid corruption and get a better economic condition of the country to make their country's economy advanced Sading et al. (1999). As per the literature, different studies have been done in various countries on the determinants of FDI. From these studies, it is proved that Inflation, Gross Domestic Per capita Growth (GDPCG), Political stability and real interest rate have considerable consequences on FDI inflow but the impact of bribery on FDI is largely ignored by the researchers while analysing FDI. Wei et al. (1999). This study has multiple hand-outs to broaden the literature scale by giving an in-depth approach to the corruption factor and its effect on FDI in Asia. The current study is conducted on corruption and its impact on FDI while using different factors like the Corruption Perception Index (CPI), Inflation, Real interest rate etc.

Moreover, this study will test the means of bribery in selected Asian countries. This study will also investigate the impact of corruption on different sub-regions of Asia. These Sub-regions are North Asia, South Asia, Middle East, and Central Asia. This analysis has some limitations and recommendations for the improvement of the Corruption level of sample countries, particularly Pakistan.

Research Question

The present study focused on the role of corruption in the inflow of FDI to developing countries. There are two strands of view i.e. corruption affects FDI inflow negatively, and Corruption affects positively FDI inflow. Different investment plans are differently connected to the state of corruption. Some businesses are flourishing with corruption in some nations while some are affected negatively and facing problems with the presence of corruption. Asian countries are highly different in terms of socio-economic conditions. Diversity has been observed in all of the countries, the size of the population, availability of natural and physical resources, religious diversity and law and order saturation have the ability to create a difference in the impact of corruption on FDI inflow. In this connection, this study tried to answer the question of how does corruption affects FDI inflow to selected Asian countries and the difference in its impact on sub-regions of Asia.

Objectives of The Study

- To provide an overview of corruption and FDI inflow to selected Asian Countries.
- Examining how corruption affected FDI flows into Asian nations during the (1995-2016).
- To investigate the impact of corruption on FDI inflow in different regions of Asian countries.
- To suggest some policy measures to increase the inflow of FDI., to get benefit from the beneficial process.

Hypotheses of the Study

The following are the main hypotheses of the present study

- Corruption does not affect FDI flow to Selected Asian countries.
- The impact of corruption on FDI inflow to sub-regions of Asia is the same.
- The helping hand theory of corruption is not valid in the selected region in sample Asian countries.
- The helping hand theory of corruption is not valid in the sub-regions of Asia.

Significant of the Study

The estimated Impact of a decline in FDI is good for economic activity in the country or not. This study is also good for those countries to check their level of corruption and its impact on their countries. This study will also make a contribution to the literature. This look is miles beneficial, even in the outward shape, they may be satisfactory for the Asian countries worried to the investor to pick out the object of its own, on behalf of the regions for future investments. This takes look at proves useful for researchers who want to work within the discipline of query, and FDI on the subject of corruption.

limitations of the Study

There have been several global studies covering many different nations. Researchers in some studies have sampled the whole region, while in others they have selected just a few Asian nations. Due to time constraints and a dearth of relevant data, this study can only focus on 37 Asian nations. We don't need to include more than 37 nations in our analysis since that number is sufficient to reach our goal with little effort.

Literature Review

Introduction

An explanation of the theoretical and empirical literature on FDI is forthcoming in this section of the research. Consensus on how much corruption affects foreign direct investment is mixed. Theories and empirical investigations on many aspects of FDI are discussed.

Theoretical Literature

The effects of corruption on foreign direct investment (FDI) have been studied using three different theoretical frameworks devised by Walder (1995), Shleifer and Vishny (1993) and Dunning (1988). Most researchers mentioned these theories in their studies.

Grabbing Hand Theory of Corruption

The Grabbing hand theory of corruption has been demonstrated by researchers such as Aidt (2003), Ades and Di Tella (1999) and Schleifer and Vishny (1993). Corruption, as shown by the Grabbing Hand Theory, boosts economic growth and consumer activity in areas around markets. According to Brouthers et al. (2008) and Habib & Zurawicki (2002), corruption has a higher value for investors.

Helping Hand Theory of Corruption

Aidt (2003), Beck & Maher (1986), Louis (1985) and Leff (1964) advocate that it is the resource of corruption instead of interfering with the monetary hobby. Habib & Zurawicki (2002) studied corruption and FDI in the context of developed, emerging and developing countries. They investigated the association between bribery and FDI. They collected three years of data from 1996 to 1999 for their study. They checked the theory of economics with corruption as well as with literature. They found that the corruption relationship is going in the right direction in literature arguments. They further explained that FDI avoids corruption and proves a negative relationship. In addition, they added that corruption is difficult to manage, costly and risky. They took note of the host nation's corruption rate and then compared it to that of their own country. In both instances, they discovered a negative correlation between FDI and corruption. They have found that foreign investors do not like corruption and shun it as they have given reasons that corruption is not good and creates inefficiency in operational matters.

Christopher .et.al. (2004) studied the stage of bribery and its impact on FDI. in countries. They analysed from their study that bribery impacts market entry, investment, and strategic management decisions at the international level. They have examined how changes in FDI. can affect corruption. They have used the Corruption Perception Index (CPI) for 1999 and 2000 computed by Transparency International. They have identified that the corruption level will be high if there is a change in the rate of FDI. They further elaborated that uncertainty in the markets is highly linked to corruption.

Empirical Literature

There is much evidence between corruption with foreign direct investment, although this research has not yet reached the generally accepted conclusion that a country's perceived degree of corruption prevents it from attracting FDI. James and Hines (1995) worked on the forbidden payment, foreign bribery and American business. They examined the role of anti-bribery legislation in the United States (US) firms' operation in bribe-prone countries and found that United States (US) firms' operations fell after the opening of the Foreign Corrupt Practice Act, 1997.

Analyze the effect that corruption has on FDI inflows in the host nation. They were unable to get to the widely accepted conclusion that the phrase "corruption" discourages FDI. The findings of the research papers on the connection between corruption and FDI are conflicting. For instance, research by Mathur, Singh & Domokos (2011), Johnson, Dahal & Strom (2004) and King (2003) finds a link between corruption and FDI that is unfavourable. However, research showed that Chinese investment in the region is encouraged by corruption in Africa Classen et al. (2011). Government employees may take advantage of their position of power to further their own interests while creating and enforcing rules. World Bank (1997) and Tanzi & Davoodi (1998) show a correlation between greater perceived corruption and poorer growth and investment. Corruption has been blamed for the inability of certain emerging nations to develop. Notably in developing nations, corruption is a significant economic, political, social, and moral scourge that has an impact on businesses, particularly on global trade, technology transfer, and financing.

Argandona (2007) outlined the importance of corruption and presented a variety of global patterns. A quick analysis of the theoretical and empirical research/literature on corruption, which has amazing devices of variables, is available in the

phase that follows. Corruption is a huge and contentious problem.

Mauro (1995) investigated corruption and growth and analyzed the impact of Corruption on economic growth. They analyzed the bad courting between corruption and funding. They analyzed the data collected from subjective corruption indicators, red tape, judicial system and political stability. They analyzed data for cross-country. The study's results proved that bureaucracy efficiency increases investment and economic growth. They found that if there was corruption, that would lead to a deficiency in investment which lowered the economy. They suggested that if a country improves the efficiency of bureaucracy, its gross domestic product (GDP) will increase.

Mauro & Paolo (1996) investigated the impact of corruption on growth, investment and public spending. They discussed the causes and consequences of corruption in their work through empirical analysis. In his new evidence for different countries, Ata explained the relationship between corruption and the composition of public spending.

Smarzynska & Jin Wei (1999) investigated the corruption and composition of FDI. at the company level. They chose a joint venture and a wholly owned company. The study suggests that bureaucracies are less transparent and that they have found ways to reduce the bureaucratic maze. Furthermore, In their study, they found that corruption reduces investor's protection. Corruption reduces the effectiveness of intangible assets and reduces the likelihood of fair trial disputes between foreign and domestic partners and the value of local partners. They tested the hypothesis that the FDI. reduces corruption.

Teksoz (2001) examined to learn more about how corruption affects capital flows and looked into FDI and corruption. Two statistical methods were utilised in the investigation: the Fixed Effect Model (FEM) and the Generalized Method of Moments (GMM). He also argues that corruption isn't the sole issue in stifling foreign direct investment and that a wide range of other variables also play a role. The findings demonstrated the detrimental effect corruption has on FDI.

Dahlstrom & Johnson (2007) investigated bureaucratic corruption, Multinational Organizations (MNOs), and FDI. They analyzed the flow of FDI and the link between corruption in the host country. For the study, they used a model that explained the incentives for corrupt Multinational Organizations (MNOs), and host country bureaucrats. The model shows that Multinational Organizations (MNOs) operating costs are increasing due to corruption in the country. The model shows that corruption costs reduce the inflow of FDI. into the country. Paned conducted a regression analysis of the data, indicating that corruption hurts FDI. from developing countries.

Kendall & Zhao (2009) work on the effect of corruption on FDI. They have used a game theoretical model to analyze the impact of investment corruption. They have shown that the marginal surge in corruption might have a growing influence on the foreign firm profit and such increase from FDI caused by higher corruption.

Toby & Zhou (2009) practised the game theory model to find the probable effects of corruption on a Multinational Entrepreneurs (MNEs) choice between FDI and exporting if it is likely competition from a local stable in the host country. They have analyzed that non-discriminatory corruption supports international firms to be engaged in FDI or motivates them to export items. When FDI changed to prevent entrance by host firms, would be advantageous when Multinational Entrepreneurs are involved in exporting. They have analyzed that when corruption increases it reduces the welfare in the host country. From the model, they have shown that a higher level of corruption may strengthen welfare by transferring profits from the foreign firm to the host firm. They provided theoretical explanations for the assorted empirical consequences of the effect of corruption on FDI.

Quazi (2007) investigated corruption and FDI in East Asia and South Asia to investigate the effects of corruption on FDI. He defended that corruption may stop FDI. or improve the wheels of commerce if there is a weak supervisory structure, which should facilitate

FDI. He collected paned data for 1995-2011 and used the Generalized Least Square (GLS) method for analysis. He has found that corruption can affect FDI inflow negatively. His study has proved the grabbing hand hypothesis, which shows the negative impact of FDI. He has examined from economic fundamentals accounting that East Asia has a high attraction of FDI inflow due to its location advantage vis-à-vis South Asia.

Haydaroglu (2016) studied the connection between monetary freedom, FDI and financial boom within the selected countries namely Russia, India, Brazil, China, and South Africa, from 1995 to 2013. Panel information is used in his study and it concluded that the entire index of Economic Freedom (EF) courting is fine with monetary growth. His effects portrayed that direct overseas funding is a fantastic court with a monetary boom and statistically great. He analyzed the impact of FDI and Economic Freedom (EF) on Economic increase. He has decomposed monetary freedom into five classes and found that the most effective government length is negatively associated with an increase.

Shabbir, Anwar, and Adil (2016) studied the effects of political stability on economic development in eight emerging Muslim nations. The actual data shows that political, demographic, and investment stability all contribute to economic expansion. The institutional quality of a country is a major factor in determining the extent to which corruption affects economic development. Corruption operates as sand in the gears in more politically stable countries, but in places like Nigeria and Pakistan, it functions as grease on the gears.

Using cross-country empirical research, Belgibayeva & Plekhanov (2019) looked at the effect corruption has on foreign direct investment (FDI). Differentiated patterns of investment flow across nations with varying degrees of corruption control are determined by extending the gravity model to account for the combined impacts of corruption in the origin and destination countries. Evidence suggests that nations with low levels of corruption will attract more foreign investment. Investment flows from cleaner nations increase more strongly than those from countries with a greater incidence of corruption if control of corruption in the destination country improves. As a consequence, a larger proportion of investment may come from nations with low corruption, which may help support efforts to fortify economic and political institutions that help keep corruption in control.

Research Methodology

Introduction

Methodology in research refers to the steps used to systematically address a challenge. Both the research strategy and the study's justification for using that strategy are important considerations. This section of the research methodology discusses the many steps that will be taken to examine corruption's effect on FDI. inflow, including the theoretical framework, study model, selection of nations and data, and estimating procedures. Some of the events are described below.

Theoretical Frameworks

Corruption can have a significant impact on FDI inflows, and there are several theories about how this occurs, one theory is the "grease the wheels" hypothesis, which suggests that corruption can actually facilitate investment by helping to overcome bureaucratic red tape and speed up the approval process for permits and licenses. This theory argues that corruption can be a necessary evil in developing countries where bureaucracy is slow and inefficient, and that it can help to stimulate economic activity by reducing the time and costs associated with doing business.

However, other theories suggest that corruption can have a negative impact on FDI inflows. For example, the distortion effect theory argues that corruption can distort competition and create an uneven playing field for investors. This can discourage foreign investors from entering the market and reduce the amount of FDI flowing into a country.

Another theory is the "investment climate" hypothesis, which suggests that corruption can damage the overall investment climate of a country by creating uncertainty and instability. Corruption can erode trust in government institutions, undermine the rule of law, and increase political risk, all of which can make it less attractive for foreign investors to invest in a particular country.

Overall, the impact of corruption on FDI inflows is likely to depend on a range of factors, including the nature and extent of corruption in a particular country, the type of industry and investment involved, and the broader economic and political environment. In general, however, reducing corruption is likely to be beneficial for promoting FDI inflows and stimulating economic growth.

Transaction cost theory: According to this theory, corruption increases transaction costs and reduces the efficiency of business operations. This, in turn, reduces the attractiveness of a country for foreign investors.

Institutional theory: This theory suggests that corruption erodes the quality of institutions in a country, such as the rule of law, property rights, and contract enforcement. This, in turn, reduces the confidence of foreign investors in the country's institutions and legal framework, leading to lower FDI inflows.

Political economy theory: This theory argues that corruption is often linked to political instability and a lack of democratic accountability. This, in turn, creates uncertainty and risk for foreign investors, leading to lower FDI inflows.

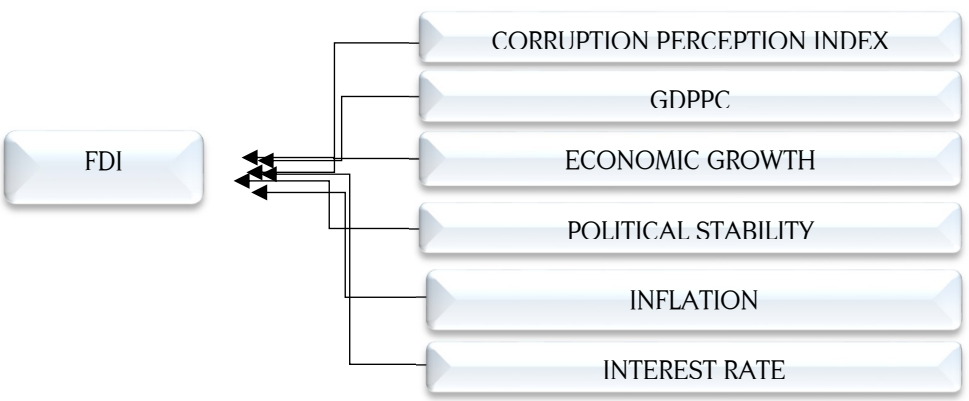
Resource-based theory: According to this theory, corruption can reduce the competitiveness of a country's economy by misallocating resources and distorting market signals. This, in turn, reduces the attractiveness of a country for foreign investors.

The effect of corruption on FDI is debated from two perspectives, such as Schleifer & Vishniy (1993), who hold hands and are assisted by Walder (1995). In addition, the selective theory of FDI is a paradigm which was documented by Professor Dunning (1998), who is most commonly referred to in his research. The first theory (Grabbing Hand theory) is that corruption is not good for a country's economy and is a handshake that increases the cost of doing business in the market.

The second theory (Helping hand) states that corruption is not a barrier to economic activity but can be a lubricant and a good lubricant for tough economic regulation and bureaucracy.

Overall, these theoretical frameworks suggest that corruption can have a negative impact on FDI inflows by increasing transaction costs, eroding institutional quality, creating political instability and uncertainty, and reducing the competitiveness of a country's economy.

Conceptual Framework



Model of The Study

The model of the study is based on the following studies in literature i.e. Naveed & Rahman (2007), Sadiq (2009) and Alemu (2012) etc.

$FDI = \alpha + \beta\ CPI + \beta\ INFL + \beta\ GDPP + \beta\ PS + \beta 6\ RIRi,t + \varepsilon i,t$

Where,

CPI= Corruption Perception Index

INFL= Inflation

PS=Political Instability

RIR= Real Interest Rate

EG= Economic Growth

GDPGC =Gross Domestic Per Capita

Generalized Method of Movements

The Generalized Method of Moments (GMM) is a widely used approach to parameter estimation in econometrics and statistics. Semi-parametric models, in which the parameter of interest is finite-dimensional, are a common setting for its use. Whereas it may be impossible to determine the optimal estimate method since the true distribution of the data is unknown. The technique relies on the model having had a predetermined set of moment conditions established.

The expectation of these moment conditions is zero when the model parameters are set to their correct values since they are functions of the parameters and the data. Therefore, the GMM technique seeks to minimize a certain norm of sample averages of moment circumstances.

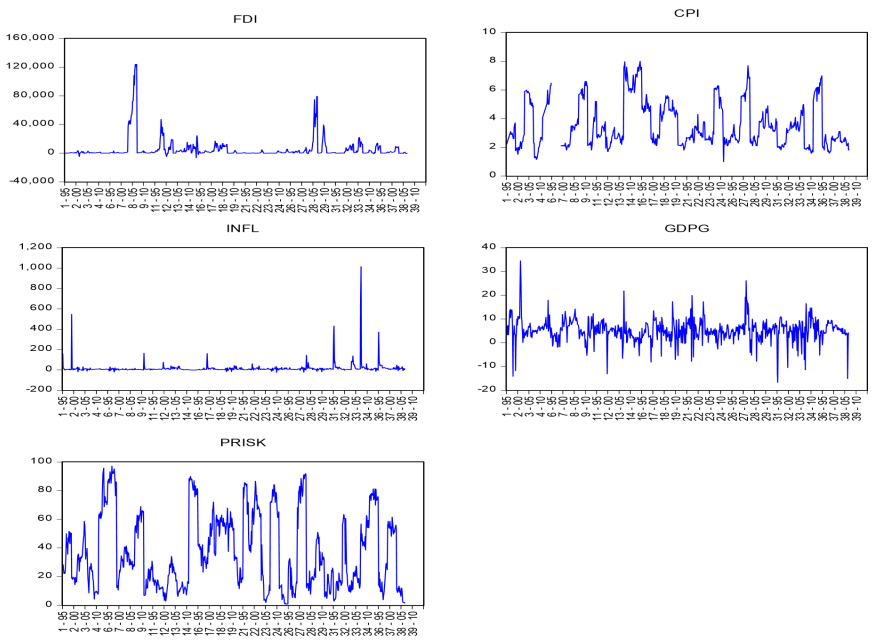
With respect to the class of all estimators that rely only on the information provided by the moment conditions, the GMM estimators are established as being consistent, asymptotically normal, and efficient.

Generalized Method of Moments GMM

Descriptive Analysis

The graphical representation of the variables FDI, corruption index, inflation, Gross Domestic Product GDP growth and political risk are given below. These variables are transformed into logs to reduce the severity of the non-normality problem and also transformed after taking the first difference to solve the problem of non-stationary.

Figure



Descriptive analysis is the summary of 37 countries in a panel data set and 720 observations. It clarifies the data's mean and standard deviation and their relationship to one another. Mean, standard deviation, minimum, maximum, skewness, and kurtosis for FDI are shown in the table.

Table 1

Mean, Standard Deviation, Median, Minimum, Maximum Skewness And Kurtosis

	FDI	CPI	INFL	GDPCG	P-Risk
Mean	20.60604	1.339822	4.131836	8.314001	3.381183
Median	865.0541	3.000000	6.895347	5.245160	30.39000
Maximum	123985.0	8.000000	1014.256	34.50000	97.12000
Minimum	-6505.844	1.000000	-25.12813	-16.70000	0.470000
Std. Dev.	15059.62	1.570630	56.29608	4.636682	26.16789
Skewness	5.139803	0.831366	12.15776	0.055212	0.517062
Kurtosis	33.63400	2.618753	179.1636	8.874996	2.019410
Jarque-Bera	33063.55	89.72575	1001454.	1093.380	64.31409
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	4164780	2650.864	11385.49	3985.853	28488.11
Sum Sq. Dev.	1.72	1823.023	2405460.	16317.60	519731.6
Observation	720	720	720	720	720

The mean value suggests that the average of the variable in a given data set is 20.60604 and this value is the centre of FDI. Standard Deviation shows the deviation from its mean or central value. The deviation from the mean of FDI is 15059. Whereas, minimum value of FDI is 6505 and the maximum value is 123985 indicates the lowest and highest values respectively. By the same token, the mean value of CPI is 3.58 and the standard value is 1.57. The minimum and maximum value of CPI is 1 to 8. Inflation values lie between 25.91 and 10.14 with the mean value of 14.98 and a Standard Deviation (SD) are 56. Gross Domestic Per Capita Growth (GDPCG) value lies between the minimum and maximum value is 16.70 to 34.50, respectively. The central value of GDPCG is 5.24 and the standard deviation is 4.36. The value of P-risk lies between the minimum value of 0.47 and to maximum value of 97.12 and the mean and SD are 37.48 &30.39 respectively.

Correlations

A linear link between two variables may be measured with the help of the correlation coefficient, which is shown in the accompanying table. Correlation values range from +1 to -1, with Pearson,s being the most prevalent. Statistical measures of association or Correlation Asteriou (2006). +1 implies to positive one-to-one relationship of the variable and -1 implies the negative one-to-one relationship of the variable.

Table 2

	FDI	CPI	INFL	GDPCG	PRISK	RIR
FDI	1					
CPI	0.2620	1				
INFL	0.1148	0.0022	1			
GDPCG	0.3284	0.2835	0.2242	1		
PRISK	0.2779	0.2651	-0.0599	0.1433	1	
RIR	-0.1724	-0.0208	-0.0494	-0.1924	0.0880	1

The value of correlation always lies between the +1 and -1. In the given table Political Instability (PRISK) is highly correlated with corruption as compared to the other variables. Because the coefficient correlation with CPI and PRISK is 26%, CPI and INFL are 11%. This indicates that the country which has a large amount of corruption is having more political instability and hence, fluctuation in the overall macro variables. If the country can control corruption, this will be favourable for the FDI, GDP and PS.

Results of Generalized Method of Movements

The following table shows the results of the independent and dependent variables, where the dependent variables are FDI, CPI, GDPGC, INFL and PRISK. These variables are transformed into logs to reduce the severity of the non-normality problem and also transformed stationary after taking the first difference.

Table 3

Results of Generalized Method of Movements

Variables	Coefficient	Robust Error	Standard	P-value
CPI	-.3227	610.74		0.000
INFL	0.14	9.706		0.000
GDPGC	.3043	3.217		0.000
P-Risk	.2359	11.14		0.034
RIR	-.3038	5.968		0.000
Cons	17.35	35.43		0.624

Instrument variables: Corruption, Inflation, PCGDP, Political Risk, and RIR

Corruption and FDI

FDI is affected not only by quantitative and qualitative factors (Hasan et. al.2017). There are numerous other factors, instead of corruption, which strongly influence the decision to invest in the home country by the host country or not, and in fact each individual investment considers many factors Hilding and Ohlsson (2007). Corruption has a negative and significant impact on FDI inflows. These results coincide with the results of Ali Al-Sadig & Wei (2000), Zurawicki (2002), and Beamish (2004).

The first interpretation of the negative relationship between the amount of FDI and the level of corruption is that the government fails to control the quality of institutions. Becker (1968) highlighted that corruption is an illegal activity and engaging in this activity solely depends on the imposition of penalties. As a result, the country engaging in this activity will be considered bad bad-quality institution; hence, corrupt countries fail to attract a large amount of FDI in the country. Notwithstanding these restrictions, policymakers also play a vital role to enhance and encourage FDI inflows. They have been creating a favourable business environment like financial serving and infrastructure Epaphra & Massawe (2017). Furthermore, public policies should aim to reduce corruption levels because they negatively affect living standards Hilding and Ohlsson (2007).

Interest Rate and FDI

Another important determinant of FDI is the interest rate. Singhania (2011) emphasises that interest rate adjusted for inflation is a vital variable for FDI inflows. The interest rate can be defined as the cost of borrowing and return on corporate savings. Investors will always look for a source where the cost is low and investors always prefer where return or interest rates are higher Anna (2012) Singhania (2011). This implies that capital will fly from low to high rates Siddiqui & Aumeboonsuke, (2014). According to the international capital mobility hypothesis, money will always flow to the nations where the interest rate is greater Pholphirul (2002). This suggests that foreign

direct investment is dispersed across nations offering varying rates of return in the form of interest. That is why, in the last decade, FDI has become the indicator of economic growth, especially in developing economies Fornah &Yuehua (2004).

However, in this analysis, the interest rate coefficient expresses a negative and significant association with FDI. The result 0.0000 shows that a 1% change in interest rate will 0.000% change in FDI with the same direction. These results are coinciding with numerous studies by Khan, Zahra & Chakrabarti (2001).

Pcgdp and FDI

The coefficient of interest rate expresses a positive and insignificant association with FDI. The result indicates that GDPCG has no correlation with FDI. These results do not coincide with Rahaman & Chakraborty (2015). In general FDI and GDPCG have a significant relationship. FDI increases as a result it would affect the macroeconomics variables: unemployment, per capita income, poverty, inflation and economic growth. When FDI increases in the economy this will create jobs and people will hunt for their jobs, hence, unemployment decrease. After getting their jobs, consumers' per capita income will increase consumption and saving as described by the Keynes conjecture. Hence, theoretically, FDI has a significant veritable to enhance economic growth.

Political Instability and FDI

Political instability is responsible for affecting many economic variables. FDI is also affected by political instability. When there is political instability in an economy then foreign and domestic investors feel hesitation while investing in the economy. If there is political stability in the economy, there is an enviable political environment through which investors can easily forecast the results of investing in the current time period. More political instability means more risk associated with investment. According to this analysis, a country's political volatility increases its chances of attracting foreign direct investment. Now we turn to the results of the study. The variable of political instability is statistically significant at a 10 % level of significance. The results show that a 1 % increase in political instability will decrease FDI by 0.23%. Our results are similar to many past studies e.g. Nadeem (2015), Nazeer & Masih (2017), Kim& Haksoon (2010).

Inflation and FDI

Inflation is an important determinant of FDI inflow. Inflation affects FDI through different channels. An increase in inflation is responsible for a decline in the real interest rate, and a decrease in the real interest rate means a decrease in FDI. Hence, it can be said that inflation is harmful to the FDI. Our results are also showing the same story. At a 10% level of significance, a 1% increase in the inflation rate will decrease FDI by 0.14%. Our results are similar to previous studies e.g. Valli & Masih (2014), and Alshamsi *et al,* (2018).

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