Does Corruption Affect Foreign Direct Investment: Evidence From East Asian Countries

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ABSTRACT

Globalization has resulted in a significant increase in the FDI inflows. The impact of corruption on FDI inflow has been extensively studied in previous research. However, this topic has received scarce attention in Asian economies countries. Asian Economies is different from other Europe, Africa, North America and South America as rapid growth have seen in recent years. To fill the research gap, we collected data for seven South Asians countries. Based on the collected data, we first find out the effect of corruption on FDI. The results showed a positive and significant effect of corruption on FDI and supporting the helping hand theories of corruption which suggesting that South Asian countries should bring political stability and good governance, peace to attract more MNC, make strong law and its implementation to make corruption lessen.

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1. Introduction

Direct Investment (FDI) plays an important role in the growth and development of a country, particularly in developing countries. Developing countries face shortage of capital to invest and they need additional capital to invest in the country to get higher growth and generate employment opportunities. Moreover, FDI caused technological diffusion and augmentation in technical skill of labour by establishing a firm or industry in the host country. Both the technological diffusion and transfer of technical skill raised productivity in production of the developing country. On the other hand developed countries have the opportunities of access to cheap resources of the developing countries. Capital is generally abundant in developed countries and the investors of the developed countries can generate high returns from the resources in developing countries. Hence there exist a mutual opportunity to get from flow of FDI. FDI is an important instrument for the developing countries through which developing countries can get access to the benefits of globalization (Azam &Uddin, 2001). Stern (2002) argued that multinational organization gives importance to the investment climate of the country thus sound climate of a country can attract more FDI inflow. The climate includes political, economic and social cultural aspects of country. Anjum and Nishat (1998) argued that political stability, law and order situation (peace), mineral resources, technical labor force and economic policies of the government has attracted foreign investors. Dunning (2002) stated that FDI depends on government policies, supportive infrastructure and transparent governance of the host country. Asiedu (2002) has focused on policy reforms as the determinants of the developing countries for FDI
inflows and found that the degree of openness to FDI and corporate tax rates are the determinants of FDI. Zhang (2001) argued that the FDI has a significant positive impact on those countries where infrastructure has developed and trade policies are more liberal. Kinoshita and Campos (2002) found significant positive impact of FDI on growth if there is a transfer of technology to the host the country. Lensink and Hermes (2003) found that FDI has a negative impact on the host country and similar results were found by Sylwester (2005). Zaidi (2004) stated that in Pakistan the level of saving and investment is less than the desired level, so the gap can be filled from the transfer of outside resources in the form of FDI. Further Zaidi (2004) stated that increases in the foreign capital inflow can be improved through the government policies that can give incentives such as tariff reduction and tax concessions to the investors. The World Bank states that it “has identified corruption as among the greatest obstacles to economic and social development. It under mines development by distorting the rule of law and weakening the institutional foundation on which economic growth depends. Foreign direct investment is indispensable for the economic development of the host countries. Every country is trying hard to attract more and more foreign direct investment by providing the exemption and incentive as well as facilities to foreign investors. Especially the developing countries like Pakistan and some Asian countries need more FDI to boost the economy and generate employment for locals. The ongoing process of world economy integration, which has been gaining momentum since the beginning of the 1990s, has led to a significant change in the attitudes of host countries with respect to inward FDI inflow. FDI is no longer regarded with suspicion by developing countries. Controls and restrictions over the entry and operations of foreign firms are now being replaced by policies that aim to encourage FDI inflows. Modernization theorists argue that FDI provides host economies with capital, promotes technology transfer, and modernizes their management skills and corporate governance. These in turn raise labor productivity and accelerate economic growth (Blomstrom and Kokko 1996; Choi 1998 & Markusen and Venables 1999). They also argue that FDI reduces income inequality via the Kuznets effect in which income inequality increases at first as per capita income grows but declines later once a certain level of development has been attained (Jin 2009). Along with this, an extensive network of bilateral and regional investment agreements, which seeks to promote and protect FDI from partner countries, has also emerged. Until recently, various literature strongly agreed that multinational corporations (MNCs) invest in 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 (Dunning 1993; Globerman & Shaprio 1999; Shapiro and Globerman 2001). However, the host country’s economic fundamentalists may not be sufficient for inward FDI. Therefore, studying a new which factors determine FDI inflow has become necessary. In this regard, one of the most damaging risks that MNCs must consider when entering emerging market economies is the threat of corruption, which undermines economic reform and, ultimately, national economic stability. Moreover, corruption raises the costs of business operations, distorts the allocations of resources and prices of goods and services for consumers, and discourages FDIs (Zhao, et al. 2003). For instance, surveys of private firms in Latin America found that corruption negatively affects sales, investments, and employment growth, thereby reducing firm competitiveness without producing any positive effects (Gaviria 2002). According to Myint (2000), corruption is defined as the use of public office for private gain, or the use of official position, rank, or status by an office bearer for his/her own personal benefit. From this definition, examples of corrupt behaviour would include: (a) bribery, (b) extortion, (c) fraud, (d) embezzlement, (e) nepotism, (f) cronyism, (g) appropriation of public assets and property for private use, and (h) influence peddling. In this list of corrupt behaviour activities such as fraud and embezzlement can be undertaken by a single official without the involvement of a second party. Other activities, such as bribery, extortion, and influence peddling, involve two parties, namely, the giver and taker in a corrupt deal. Political corruption by public officials can assume many forms, including bribery, embezzlement, extortion, nepotism, and graft in which public officials either directly steal public funds or illegitimately benefit from public funds. Freedom indexes an indicator of the degree to which an economy is free of such forms of corruption. Similarly, the World Bank focuses on the abuse of public power for private benefits in defining corruption (Tanzi 1998).

This study also good for those countries to see their level of corruption and how much it effects These countries. This study will also contribute to the current literature. This study is also helpful for foreign investor to check the level of concern Asian countries for their investment and to choose the best countries for their future investment. This study is also helpful for those scholars and researchers who want to work in the relevant field with regard to corruption and foreign direct investment.
Numerous studies have been done on various countries of the world. In some study, they have taken Group a sample country but in some they are taken few countries from Asia. This Study is limited to 39 Asian countries due to lack of time and non-availability of data. Thirty-seven countries are enough for our study because it will accomplish our objective conveniently.

2. Review of Literature
Most of the study have been conducted to examine the level of corruption in FDI inflow in the host country and could not reach the commonly expected conclusion that the term corruption deters FDI. There are mixed results of the research studies conducted on the relationship of corruption in FDI. For example, the study of king (2003), Johnson Dahal strom (2004), Mathur and Singh (2011) and Domokos (2011) find out that there is negative relationship between corruption and FDI. On the other hand, a study highlighted that African corruption encourage Chinese investment in the said place (Classen et all,2011). The government officials may use their authority for personal gains while formulating and implementing policies. Corruption has been criticized for the failure of certain developing countries to develop and the studies confirm a link between higher perceived corruption in lower growth and investment (Mauro, 1995; Tanzi, 1995 and world bank,1997), corruption is a serious economic, political, social and moral blight especially in the developing countries which is effecting the companies particularly the international commerce, technology transfer and finance.

3. Material and Methods
This study has mainly focused on the impact of corruption on the foreign direct investment based inflow on the literature review, corruption has vital role in the determination of FDI inflow. Therefore, this research study will try to answer that whether corruption affect FDI inflow in Asian countries or play their part in the determination of FDI inflow?

Most results are bases on large sample size. Greater the sample size the most will be the accurate results. In This study a sample of comprise on panel data set on annual basis from thirty-nine countries of Asia for a period of 1995 to 2014. There were 48 countries in Asia and we have selected 39 countries for analysis due to missing and lack of data.

This study is in nature in quantitative and the data which will be used in this study is secondary as it is readily available on the official site of IMF and World Bank. We will be taken the data from the IMF and World Bank official sites. The data will be arranged in excel through panel data format for analysis purpose.

3.1 Conceptual Frame Work

3.2 The Model
In light of the current literature the following regression equation is used as following the studies of (Rehman and Naveed, 2007; Sadig (2009) and Alemu (2012).

\[ FDI_{it} = \alpha + \beta_1 CPI_{it} + \beta_2 INFL_{it} + \beta_3 GDP_{it} + \beta_4 GDPP_{it} + \beta_5 PRISK_{it} + \beta_6 RIR_{it} + \epsilon_{it} \]

In the given model, the subscript i represent to the unit of observation, example Countries whereas subscript t is referring to the time and \( \epsilon \) is the error term.
4. Results and Discussions
To examine the effect of independent variables on dependent variable and to analyze the change because of the independent variable in dependent variable Pooled OLS regression were used and through Chow Test Pooled OLS effect model was selected for analysis. The following table narrated the results of regression analysis.

**Table-1: Pooled OLS Regression**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-ratio</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost</td>
<td>140.328</td>
<td>4201.04</td>
<td>0.0334</td>
<td>0.97344</td>
</tr>
<tr>
<td>CPI</td>
<td>2822.24</td>
<td>1418.81</td>
<td>1.9892</td>
<td>0.05019</td>
</tr>
<tr>
<td>INFL</td>
<td>-205.937</td>
<td>141.195</td>
<td>-1.4585</td>
<td>0.14871</td>
</tr>
<tr>
<td>GDPG</td>
<td>-92.061</td>
<td>144.947</td>
<td>-0.6351</td>
<td>0.52720</td>
</tr>
<tr>
<td>PCGDP_</td>
<td>-0.326323</td>
<td>0.178715</td>
<td>-1.8259</td>
<td>0.07169</td>
</tr>
<tr>
<td>PRISK</td>
<td>2.93892</td>
<td>34.1896</td>
<td>0.0860</td>
<td>0.93172</td>
</tr>
<tr>
<td>RIR</td>
<td>-327.813</td>
<td>180.988</td>
<td>-1.8112</td>
<td>0.07395</td>
</tr>
<tr>
<td>Mean dependent var</td>
<td>5314.807</td>
<td>S.D. dependent var</td>
<td>5005.057</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>1.75</td>
<td>S.E. of regression</td>
<td>4740.975</td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.166832</td>
<td>Adjusted R-squared</td>
<td>0.102742</td>
<td></td>
</tr>
<tr>
<td>F(6, 78)</td>
<td>2.603091</td>
<td>P-value(F)</td>
<td>0.023670</td>
<td></td>
</tr>
<tr>
<td>Log-likelihood</td>
<td>-836.3971</td>
<td>Akaike criterion</td>
<td>1686.794</td>
<td></td>
</tr>
<tr>
<td>Schwarz criterion</td>
<td>1703.893</td>
<td>Hannan-Quinn</td>
<td>1693.672</td>
<td></td>
</tr>
<tr>
<td>Rho</td>
<td>0.266619</td>
<td>Durban-watson</td>
<td>1.79</td>
<td></td>
</tr>
</tbody>
</table>

Table-1 presents the results of the pooled OLS effects regression by using FDI of GDP US as a dependent variable. The first column consists of independent variables for the study. In additions, second Colum consist of coefficient of the variables. Similarly, the standard error, z and p-values are shown in third, fourth and fifth coulomb respectively etc.

The f-Value is 2.603091 with p-value is 0.0236 that shows that overall model fits the data. Moreover, the value of $R^2$ is 0.2938 which represents that there is 0.166832 variations in dependent variable (FDI) are due to the independent variables in the study.

The result of Pooled OLS regression shows that the coefficient of CPI (Corruption Perception Index) is 2822.24 and significant, suggesting that meddle east country corruption positively affect amount of inflow of FDI, which is supporting the “helping hand theory of corruption” i.e. there is positive relationship between corruption and inflow of FDI. This shows that the corruption increase by 2822.24 unit’s dollar when there is one unit positive increase in the level of FDI inflow (goes down the CPI score) in Middle east. According to Transparency International Organization (2014) CPI score range is (0 to 10), 0 means the most corrupt economy and 10 means most clean economy. Therefore, when the level of corruption increases the CPI score decreases or moving down toward 0 lead to worst governance of the economy. If the level of corruption decreases the CPI score increases or goes up toward 10 tend to improvement in governance. If the countries in middle east would be able to reduce the perceived uncertainty of corruption to the same level as Japan mean CPI score 7.112 highest score in Asian economies, would attract more FDI and Israel is the second countries which attract more FDI. In opposite, some of the countries like India and China having high level of corruption but at the same time attracting FDI, could even double their FDI inflow, if the existing level of corruption can have decreased(Alemu, 2012). In case a country like Angola with high level of corruption managed to decline its corruption to the level, of the country Bostwana an intermediately corrupt country its inflow of FDI would roughly double (Dahlström and Johnson, 2007). The earlier empirical research studies such as Wei (2000a), Habib and Zurawicki (2002), Voyer and Beamish (2004), Dahlström and Johnson (2007), Rehman and Naveed (2007), Mathur & Singh (2013) and Quazi (2014) confirmed that in fact the host country corruption reduce the inflow of FDI.

The variable inflation (INFL) is negative but significant effect on dependent variables. The coefficient of INFL is -205.937 with p-value is 0.14871 is significant at 10% level meaning that INFL has found effect on dependent variable. It indicates that if there is one unit change or decrease in independent variables that is (INFLA) there will
be -205.937 increase in FDI. These finding are aligned with Busse and Hefeker (2007) and Drabek and Payne (2002) as they examined that inflation has negative but insignificant effect on incoming FDI.

The coefficient of (GDPPG) is negative and statistically insignificant. The empirical results explain that one unit increase and improvement in GDP growth (GDPPG) brings -92.061 units increase in the inflow of FDI in Middle East but in this case the p-value is insignificant which show no contribution. GDP growth is the significant determinant of the ability of host country, to attract more FDI. The sustainable economic growth of the host country is one of the most important and positive attributing factors and has a vital role to encourage and boost up foreign investors’ confidence, and a symbol of stable government hence promote inward of FDI (Alelu, 2012). The same results also found by the previous research studies i.e. GDPG has positive significant effect on FDI (Al-Sadig, 2009; Alelu, 2012 and Mathur & Singh, 2013).

The political risk (PRISK) has expected positive sign and insignificant contributor in the regression model in the current study. Which means the coefficient i.e. 2.93892 of (PRISK) is different from zero as the p-value is 0.93172 which is greater than 0.05 shows no effect response variable. It indicates that if PRISK is increases by 0.93172, it will decreases the FDI inflow to meddle east. The current study results are consistent with the existing literature Quazi (2014) and Al-Sadig (2009) who found that political stability has negative significant effect on FDI which means that the stable political environment of the host country can boost up the foreign investors’ confidence hence attracting more FDI. This study find out that variable PCGDP insignificant contributor in regression model as its coefficient is -0.326323 (where opposite coefficient sign obtained, to the existing literature) with p-value is 0.071 meaning that PCGDP is affecting the response variable. It indicates that if one unit decrease in PCGDP there will be -0.326323 decrease in FDI inflow. PCGDP play important role in the economy of the countries and can bring FDI inflow to the countries. GDP inflow is strongly based on PCGDP and its effect is found is positive and these results are support by many literature of various research paper. The real interest rate has negative sign but insignificant which show no contribution in response variables. The coefficient is -327.813 with p-value 0.07395 which indicates that there is one unit increase in real interest rate, there will be -327.813 decreases in FDI Inflow. The real interest rate is most important determines because if the interest rate of the countries decrease investor will take more debt to support their investment and as a result the economy will boost up. If the interest rate of a countries increase the investor shall try to do less investment and take low debt because of more interest charges, as a results the FDI inflow will decrease and countries economy shall go down. In this case the results is insignificant which indicates that real interest rate has no effect on response variables and not a good contributor. These results are not supported by the various literature of different papers such as Quazi (2014) and Al-Sadig (2009) who found that real interest rate has negative significant effect on FDI which means that the low interest rate of the host country can boost up the foreign investors’ confidence hence attracting more FDI. In a conclusion results in the table are support by helping hand theory and encourage corruption.

4.1 Diagnostic Tests

The Chow test is used to describe whether fixed effect model or simple pooled OLS regression is fit for analysis of the data.

Null hypothesis: Pooled OLS regression model is fit (no structural break)

Alternative hypothesis: Fixed effects model is fit (structural break)

F statistic = 1.69533 with p-value = 0.1240

As the p-value is greater than 5%, so the Alternative hypothesis rejected in favour of null hypothesis and concluded that there is no structural break in the data and suggesting pooled OLS model is fit for data analysis.

For Heteroscedasticity detection the Brusch-Pagan/Cool-Weisberg test is used in this study and checks the linear form of Heteroscedasticity in the data. In the data the hypothesis is tested are;

Null hypothesis: error variances are all equal

Alternative hypothesis: error variances are a multiplicative function of one or more variables
The alternative hypothesis shows that when there is increase or decrease in the error variance as the predicted value of y increase i.e. the bigger the predicted value of ‘y’ having the bigger error variance and the large chi-square value shows that Heteroscedasticity is existing in the data. In the panel data, the Heteroscedasticity is present because of the different units i.e. in the current study has the Asian economies. As the above chow tests describing that pooled OLS model are fit as well as the absence of Heteroscedasticity in data which is detected by Breusch-Pagan / Cool-Weisberg, test leading that the pooled regression model can be used for analysis.

To examine the effect of independent variables on dependent variable and to analyze the change because of the independent variable in dependent variable Pooled OLS regression were used and through Chow Test Pooled OLS effect model was selected for analysis.

The results of the f-Value are 2.603091 with p-value = 0.0236 that shows that overall model fits the data. Moreover, the value of R² is 0.2938 which represents that there is 0.166832 variation in dependent variable (FDI) is due to the independent variables in the study. The result of Pooled OLS regression suggesting that meddle east country corruption positively affect amount of inflow of FDI, which is supporting the “helping hand theory of corruption”. It concluded that east Asian countries is facing of corruption and Corruption considered for FDI inflow. The variable inflation (INFL) is negative but significant effect on dependent variables. It indicates that if there is one unit change or decrease in independent variables that is (INFLA) there will be positive increase in FDI. These finding are aligned with Busse and Hefeker (2007). If east Asian countries controls on INFL will attract more FDI inflow. The coefficient of (GDPG) is negative and statistically insignificant. It contributes no contribution and has no effect on FDI but in reality, GDP play important role to attract FDI inflow. This results may be due to data problem. The political risk (PRISK) has expected positive sign and insignificant contributor in the regression model in the current study. The variable PCGDP insignificant contributor in regression model as its coefficient is -0.326323 (where opposite coefficient sign obtained, to the existing literature) with p-value = 0.071 meaning that PCGDP is affecting the response variable. The real interest rate has negative sign but insignificant which show no contribution in response. The real interest rate is most important determines because if the interest rate of the countries decrease investor will take more debt to support their investment and thus the economy will boost up. If the interest rate of a countries increase the investor shall try to do less investment and take low debt because of more interest charges, as a results the FDI inflow will decrease and countries economy shall go down. In this case the results is insignificant which indicates that real interest rate has no effect on response variables and not a good contributor. In a conclusion results are support by helping hand theory and encourage corruption.

5. Conclusion and Policy Recommendations

This study is to find out the effect of corruption on FDI in six East Asians countries. To analyze this objective, we have taken the 6 countries data based on convenient sampling technique for central Asia for the year 1995 to 2014. We have applied the pooled OLS model techniques to check the relationship of all independent variables with FDI. The Panel data is not having the issue of Heteroscedasticity and multicollinearity which was tested and not found these issues. The result of Pooled OLS regression reveal that east country corruption positively affect amount of inflow of FDI, which is supporting the “helping hand theory of corruption”. It concluded that east Asian countries is facing of corruption and Corruption considered good for FDI inflow. The variable inflation (INFL) is negative but significant effect on dependent variables which reveals that inflation rate is also controls in central Asian countries. The political risk (PRISK) has expected positive sign and insignificant contributor in the regression model in the current study. The variable PCGDP insignificant contributor in regression model is not statistically significant. The real interest rate has negative sign but insignificant which show no contribution in response. In a conclusion, the overall results are mixed and supporting the helping hand theories of corruption states that central Asia countries governance is not good with compare with whole Asia countries. In a conclusion, the overall results is mixed but most of the results is supporting the helping hand theories of corruption and encourage corruption and only Central Asia results support the grabbing hand theories which states that corruption is considered ill for countries economy. The Pakistan is considering most corrupt countries in Asia because out of 39 nine countries, Pakistan is ranked 23 countries which is not good symbol. So, these countries need to improve their governance, political stability and concentrate nepotism and follow merit as well as should attention on peace to attract more FDI inflow.
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