IMPACT OF CORRUPTION ON FOREIGN DIRECT INVESTMENT: AN EMPIRICAL ANALYSIS OF SAARC COUNTRIES

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**ABSTRACT**

The current state of corruption has posed serious challenges to the stability of the macroeconomic environment causing the displacement of foreign direct investment (FDI). In this article the researchers have studied the impact of corruption on foreign direct investment in SAARC countries. Where corruption is something, “the use of public finance for private purposes” and its impact on foreign direct investment, which is “the direct acquisition of ownership in the host country”. Due to the present mysterious status of this issue (corruption) this article studied the impact of corruption on FDI and to know the unusual effect which it has on the economy of the host country. This study has been conducted over SAARC countries, which is labeled as “emerging” countries and they are most affected countries to face such problem. SAARC countries are under study, which is consisted eight countries, namely, Afghanistan, Pakistan, India, Bangladesh, Bhutan, Nepal and Sari Lanka and Maldives. Afghanistan has been excluded from this study because of insufficiency of the required data. So, sample of the study is concerned up to seven SAARC countries and a time period of sixteen year, which is from 2001-2016. The corruption index, corruption perception index (CPI) is used as a proxy for corruption. CPI indexes are published by transparency international by using different sorts of parameter for its calculation on perception bases. For the obtaining of a validating result, we have also included some of the control variables which are economic development of the host country, trade openness, infrastructures and Market size. A panel data technique is used for the estimation which elaborated the common effect model. The key findings are that corruption has a significant relationship with foreign direct investment. As this result is just on SAARC countries those have some similarities in their issues; this research may also apply on some other international organization like ASEAN etc. For an individual country analysis the sort of research may apply for the identification of the corruption’s impact on FDI inflows. The government should focus on the corruption issues as it has a significant relationship with country economy.

**KEYWORDS:** SAARC, Corruption, FDI, CPI, Government.

1. **INTRODUCTION**

Corruption one of the most debatable topics of the time, which has been proofed from the work of some of the last two decades, where most of the studies were conducted over corruption and especially it has been discussed in the research study of academic as well as in business. Corruption: One of the most debatable and discussing topic in the business as well as in the study circle in some of the recent decades. The world speak in 2011 represents a report in which they claimed that the study of corruption behaviors is as much important as other worst issues like, unemployment, poverty, security, illiteracy and health. World bank in 2013 reported that about 3% of the world GDP goes in grabbing hand not only in the developing but also in developed countries which about three trillion of the world GDP. Heywood (2015) stated that corruption was one of the more debatable topics in the last two and a half decades. Judge (2011) corruption is mostly studied in 2000, because of its up surging impact in the economy of the world. Everheart (2009) concluded the corruption relation with public investment. Mouro (2009) negatively related corruption with economic growth, which exhibited the relationship of corruption and economy of the concerned country. Adit (2009) showed empirically the corruption impact on the economic growth the country. Campose and Pradhan (2007) stated that corruption levels are developing in the whole world with the passage of time and showing an intense impact on the economy of the world. In the early days the studies were only discussing some main
determinants of FDI like Economic growth, Market size, Balance of payments, Inflations, trade openness, Monetary and Fiscal policies by the government Shah(2012).

Although there is so many articles and literature on the same topic, still a shortage of the study will occur to elaborate the appropriate answers of all the issues concerned with corruption in SAARC region. In SAARC region most of the countries are developing in the economic nature and in this economy, we can easily find out the corruption impact on FDI. The study strived to provide some addition in FDI study and its relationship with corruption in the specified region of SAARC countries environment. Which will give an advantageous decision making process for investors all over the world. This study will also provide a background for decision making as well as a bulk of policies especially for the SAARC region those will not only facilitate FDI investors but also clarify their way towards the achievements and goals. This study also contributing a ground of knowledge of FDI and corruption relationship and its overall impact on economy as well. These results of the study just be applied in SAARC region, and not only this but also to all those countries or regions of the same nature all over the world. The specification time period of the study is from 2001-2016 while should not be generalized.

1.1 Scope of the study

In most of the characteristics and features SAARC has a common nature like ruling style, political activities, Govt intervention, demography and geography, also the availability of natural resources due to many similarities they are exhibiting resemblances in the economy concerned behavior. It is one of the world highly leading economies as mostly higher growth rate detected from some decades, Sharif (1997). As all these nations cumulatively have same issues like poverty, corruptions, educations, populations, pollutions, extremism and health problems. Although it is richly populated region of the world with intense market opportunities.

1.2 Problem statement

In the present decades, corruption is one of the main mysterious problems which specifically impacting not only developing nations but also developed countries, although its influences seriously find here in SAARC. As SAARC is one of the thick populated regions of the world and producing about of world economy but their speed of development is about much lower as compare to other regions of the worlds. According to the literature resources, some of the studied suggested the relationship between corruption and FDI is negatively but some of them analyzed it positively. This study also investigated an appropriate variables relationship specifically in the SAARC regions.

1.3 Research question

The only main research question is that to find out the corruption impact over FDI inflow in the south Asian association and regional cooperation.

• Does there any impact corruption has on FDI in SAARC?

1.4 Research objective

• To analyze the corruption and FDI relationship in SAARC.

2. LITERATURES REVIEW

In the concerned literature we have discussed relevant research studies showed the corruption relationship with the foreign direct investment and also with other control variables. Mahathur and Singh (2013) elaborated that Transference International exhibiting the different ranking positions of the different country on the basis of their corrupt nature, which they have concluded by a structural interview and survey, also it is concluded that corruption is the manipulation of public finance for secluded uses. According to the work of Transference International highly scored countries are most corrupted and low score countries are less corrupted countries of the world. As from the example of one of the 2007 survey half a dozen of study represented India and China scored 3,3 in respect to those of USA and UK, which represent the low corruption status of India and Chine as compare to that of USA and UK. According to Rabnawaz (2015), Rahim a Qazi (2014) studied corruption with FDI and concluded that it has a relation with each other. J. Edgrado Compos, Donald Lien (2012) urge that corruption decreasing investment opportunities. Karklins (2002) concluded that political corruption is like a monster for the country economy.

Tina Soreide (2016)By analyzing the current financial crises and economic disturbances of the world specially in SAARC countries.it is mandatory and compulsory to originate the potentialities those well appreciate and attract FDI. Although is the important variables for the rise and fall of investment the continent in foreign aids. According to the latest survey of credit rating a burden of trillion rupees owed to this region. So these accruals must be depreciated by foreign investment to bring back there economy on right track. By holding the previous recent Global economic
condition, it’s becoming mandatory to create a free corruption environment for investors, which attract them toward the host country. Unfortunately not only corruption but there are so many other variables like terrorism, political instability, natural disaster, and climate changes are some of the main issues of the developing countries. Mostly these problems have roots especially in Asian countries in which corruption is the most prior one that is the main barrier of the FDI inflow toward SAARC.

2.1 Theoretical framework

The theoretical background is derived from the FDI theory of John Dumming Electric theory. This theory elaborates the importance of microeconomics and industry economy. It is also denoted as OLI theory, where O is the abbreviation of ownership acquisition advantages for those investors takes interest in a foreign economy. L for localization advantages which means the owner want to acquire the raw material in the location nearby and also market approach must be easy for them without of the payment of a large. Where I for internalization, which means that foreigner investors must be, want to become resident of the host country, those he acquires the local agents and local labor from the host country. Industrial organization theory also says it was 1960-1970 when oligopolistic firm created a theory for tangible and intangible resources for the identification of FDI flow. The theory was proposed by Bain and Hymer (1956) which they have described this theory (in their Ph.D. thesis). It was proposed in 1960 and later it was published in 1976. It also has been refined by kindllyberger (1969) and cares (1974) this theory has two main factors those have been caused by the most common type of FDI.

1. to defeat competitors or to excluded conflict
2. Monopolistic advantages are the second factor that gives the firm a power to overcome their weaknesses while investing abroad.

2.2 Conceptual framework

![Conceptual framework](image)

*Fig. 1: Conceptual framework*

2.3 Hypothesis

*H0*: There is no relationship among Corruption, Market Size, Economic Development, Trade Openness and FDI.

*H1*: There is a relationship between Corruption, Market Size, Economic Development, Trade Openness and FDI.
3. RESEARCH METHODOLOGY

The main focus of the study is to identify the relationship between corruption and FDI. For analysing the relationship, I have taken a time period of 16 years from 2001-2016 and the population size is SAARC region out of which I have selected a sample of SAARC seven countries. Afghanistan has been excluded from the study in account of unavailability of desired data. Data has been derived from WB and WDI.

3.1 Variable’s explanation

3.1.1 Dependent variable

3.1.1.1 Foreign Direct Investment (FDI)

Direct acquisition of the owner in the host country’s assets is called FDI. FDI is something the acquisition of ownership across the boundary by any investment firm or investors is called foreign direct investment, where in this study FDI is used as dependent variable and Net FDI inflow is used as a proxy for its quantitative measurement. The data has been extracted from WDI site.

3.1.2 Independent variable

3.1.2.1 Corruption (CPI)

According to the theme of the study this is the main independent variable of the study over which the study is hypothesized, and it is investigated that there any impact corruption has over FDI as it is a qualitative type of variable, fully explanation of which may be ambiguous, but because of some of the previous studies, a proxy of CPI (corruption perception index) has been included my many of others researchers like in the study of Habib and Zurawiwicki (2002), voyer & Beamish (2004), Winner (2006) and Ketken (2005). It is measure as 0 for no corrupt, while 10 for highly corrupted. Data has been taken from Transference international.

3.1.3 Independent / conventional controlling variables

Four conventional controlling variables is used in this study:

3.1.3.1 Market Size (MktSz)

Market size is also one of the important and significant determinants of FDI which is mostly used in FDI studies. This study also used it and a proxy of population is used for its measurements. Also used by some other researchers like in the work of MOODY (1997), and Assiedu (2006). Data has been taken from WDI WB sites.

3.1.3.2 Economic Growth (EcoGr)

GDP growth rate per capita is used as proxy and it is also an important variable for FDI economic growth as a variable used by Shah (2015). And extract from NOP.

3.1.3.3 Trade Openness (TrOp)

Trade openness is also very significant variable used by Rehman (2008) Yinyw (2000) and Asiece (2002) where import + export as % of GDP as a proxy of this collected from WDI.

3.2 Model of the study

The study model is a panel data model for choice of appropriate panel data model the study has conducted the following procedures.

3.2.1 Pool regression model vs fixed effect model

First the study applied F-test for Model specification between pool and fixed effect model, also by the hypothesis made the decision by its probability value of consequences.

3.2.2 Fixed effect model vs random effect model

For further selection in case of F-statistics will be more than 2 so the study will be proceeded towards fixed and random effect model. For model specification study used HAUSTMAN test and decided on the value significance of probability to reject or select null hypotheses.

3.3 Regression model

Some of the qualitative natures of some of the variables are ambiguous. To estimate those accurately are for obtaining a reasonable conclusions as well as dependency of relative factors and correlation, this study has estimated it by the following limitations and specification, like $FDI_{jt} = f(X_{jt}, Y_{jt}, Z_{jt})$ Used in the study of Stein and Daude (2007) log speciation model is the best adjustment in log imperial data study, also gravity model reduced

\[ FDI_{it} = \alpha + \beta_1 (CPI) + \beta_2 (MktSz_{it}) + \beta_3 (EcoGr_{it}) + \beta_4 (TrOp_{it}) + \epsilon_{it} \]

FDI = Foreign direct investment
CPI = Corruption Perception Index
MktSz = Market Size
EcoGr = Economic Growths
TrOp = Trade Openness

Table 1: Variables their proxy and data sources from which these data extracted

<table>
<thead>
<tr>
<th>Variables</th>
<th>Proxy</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Direct Investment</td>
<td>Net FDI inflows in US$</td>
<td>WB, WDI</td>
</tr>
<tr>
<td>Corruption</td>
<td>CPI (corruption perception Index)</td>
<td>Transparency international</td>
</tr>
<tr>
<td>Market Size</td>
<td>Population</td>
<td>WB, WDI</td>
</tr>
<tr>
<td>Economic Development</td>
<td>GDP growth per capita</td>
<td>WB, WDI</td>
</tr>
<tr>
<td>Trade openness</td>
<td>Import plus Export % of GDP</td>
<td>WB, WDI</td>
</tr>
</tbody>
</table>

4. RESULTS AND DISCUSSIONS

In this study secondary data is used of the SAARC seven countries sample and a time period of sixteen years from 2001-2016, and only Afghanistan has been excluded due to insufficiency of the required data. The following is Table 2 which shoes the descriptive statistics of the studied analysis which has the quantitative valves of all the variables maximum, minimum, standard deviation, skewness, means and median and also probability valves and variables.

Table 2: Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Observations</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI</td>
<td>112</td>
<td>4.070000</td>
<td>4.140000</td>
<td>4.450000</td>
<td>-6647984</td>
<td>1.000000</td>
</tr>
<tr>
<td>CORRUP</td>
<td>112</td>
<td>3.125000</td>
<td>2.900000</td>
<td>5.000000</td>
<td>1.200000</td>
<td>0.879547</td>
</tr>
<tr>
<td>LOGTRDOPN</td>
<td>112</td>
<td>4.007677</td>
<td>3.866286</td>
<td>4.913479</td>
<td>3.224426</td>
<td>0.491735</td>
</tr>
<tr>
<td>LOGECOGR</td>
<td>112</td>
<td>1.420069</td>
<td>1.487275</td>
<td>2.118861</td>
<td>0.291586</td>
<td>0.416022</td>
</tr>
<tr>
<td>MSIZE</td>
<td>112</td>
<td>2.240000</td>
<td>26608481</td>
<td>1.320000</td>
<td>292000.0</td>
<td>4.080000</td>
</tr>
</tbody>
</table>

Table 3 shows the correlation among independent variables and from the result it is concluded that there is no multicollinearity found among variables.

Table 3: Correlation

<table>
<thead>
<tr>
<th></th>
<th>FDI</th>
<th>CORRUP</th>
<th>LOGTRDOPN</th>
<th>LOGECOGR</th>
<th>MSIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDI</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CORRUP</td>
<td>0.11</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOGTRDOPN</td>
<td>-0.14</td>
<td>0.57</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOGECOGR</td>
<td>0.22</td>
<td>0.32</td>
<td>0.31</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>MSIZE</td>
<td>0.86</td>
<td>-0.09</td>
<td>-0.3</td>
<td>0.21</td>
<td>1.00</td>
</tr>
</tbody>
</table>

For the suitability and appropriation of the model we test F statistics on the following formula and which gave the valve 1.5 that is test then 2 and so the study restricted to elaboration of common effect model.

\[ F = \frac{(R^2_{FE} - R^2_{CE})/(N-1)}{(1-R^2_{FE})/(NT-N-K)} \]
The coefficient of determinants are R² (FE) and R² (co) both are from common effect and fixed model respectively by N and where ‘t’ represent time period and by K the study has represented the number of independent variables. As f statistic are applied to panel data model for the study data set and decided the study model common effect or fixed effect model. So as from the study obtained results showed to obtain the common effect model, this is the null hypothesis criteria. If the results were be more than 2 so the study should be enlarging further up to the fixed and then to random effect model. The following is common effect model regression results in table number 4.

### 4.1 Regression model of the study

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CORRUP</td>
<td>1.050</td>
<td>4.950</td>
<td>2.123</td>
<td>0.036</td>
</tr>
<tr>
<td>LOGTRDOPN</td>
<td>1.820</td>
<td>9.610</td>
<td>1.898</td>
<td>0.060</td>
</tr>
<tr>
<td>LOGECOGR</td>
<td>4.510</td>
<td>9.410</td>
<td>0.479</td>
<td>0.633</td>
</tr>
<tr>
<td>MSIZE</td>
<td>0.727</td>
<td>2.819</td>
<td>16.931</td>
<td>0.000</td>
</tr>
<tr>
<td>C</td>
<td>1.090</td>
<td>3.140</td>
<td>3.485</td>
<td>0.001</td>
</tr>
</tbody>
</table>

### 4.2 Explanation common effect model results

The concluded data results are showing here in table no 3. It shows that in the common effect model corruption is significant because of it probability ratio of 5% level of significant, and also it is found that except Economic growth (EcoGr) all the other control variables are also found significantly effecting the Foreign direct investment. In my results beta coefficient is find out up to 1.05 level of modifier, which elaborates that corruption can produce change in the FDI flows up to 1.05 units. It is also concluded as significant because of it probability level of 0.03 level which is less than 0.05. β co-efficient of trade openness was detected 1.82 which explain the significance and power of influencing the FDI flows, also its giving information about a strong positive relationship in between FDI and Trade openness. Its significance level of probability is about 0.06. A trade openness and FDI are significantly related so it showed that it can change FDI inflow up to 1.82 units if a change will occur in Trade openness. β co-efficient value for the economic growth is 4.51 which show an insignificant relationship with FDI. In account of its probability value of 0.63 which is more than the critical value so in short, economic development of a country has not significantly affected the FDI. In case of market size β co-efficient is 0.72 and having a probability value of 0.000 not only a strong positive but also have a significant ratio of 1%. Consequently, it can modify a 0.72 unit of FDI. The explanatory power of the model are R-squire and adjusted R-squares and their values are 0.47 and 0.46 the model is fit well with level of dependent and independent variables as a whole.

5. **CONCLUSION**

The research study has been conducted from analyzing the influence of corruption on the flows of FDI in SAARC region. For that perseverance I have chosen as sample size of seven SAARC countries those are Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka for a time period of 16 years from 2001-16. Excluding Afghanistan because of the shortage of required data. All the variables of the study corruption, Economic growth, Market size and Trade openness have positively and significantly associated with foreign direct investments. Corruption also determined a significantly and positively associated with FDI that is the dependent variable intensively needed for not only developing but also for developed Countries. So my results of the research is like the work of work of Cuervo-Cazurra (2008), Habib and Zurawicki (2002); Lambsdorff (2007); Shapiro and Globerman (2002). they also concluded positive relation between corruption and FDI from the results of their studies. the study shows that both corruption and FDI are positively related which give a short-cut for investors to achieve their desire projects, Rules regulations benefits, lower taxations and minimizing the risk and uncertainty. According to WDI (2016-17) report most of SAARC countries are in their economic momentums and the graph of their FDI flows are not downsizing and...
that is the support of my study. In the global business environments investors are diverting their interest from low corrupted region to high corrupted region in sake of the acquisition of more private benefits, not only this study but also some others research studies have discussed the relationship between corruption and FDI.

6. **RECOMMENDATIONS AND FUTURE DIRECTIONS**

6.1 **Limitation of the study**

The study limitations are concerned with corruption and FDI relationship in the SAARC regions (seven countries excluding Afghanistan) with the following details.

1. Sixteen years data sample is used in the study from 2001-2016.
2. Only a five set of variables are used (corruption, FDI, trade openness, economic growth and Market size.
3. Terrorism issue is not included in this as it is one of the most important issues of the entire world
4. Financial crises of 2007-08, aren’t included in the study and their impact is not showed.

6.2 **Future study**

A study that analyzes the relationship of corruption and FDI on the basis of strong modern literatures, which should create a new vision for the innovation of new ideas and principals for foreign investments, Decision making characteristics for investment with the help of some other unique combination of variables, those are not included in this study. According to this contribution in the study, some extreme ideas for finding the relationship of corruption with foreign direct investment will be proceeded and some additional ideas may be taken from this, like if in some areas it is showing positive relationship, it will help government that how to make direct investments, and may be as under,

1. Time factor may be changed for bringing some modification in consequences.
2. Only SAARC region is taken in the study, so some other combination my give other results.
3. Also, for a single country economy this may applied.

6.3 **Recommendations**

1. Corruption has an important role in the economy of a country, especially for the investors and policies makers as they can take decision according to the vast and divert nature of it.
2. It also has an impact on the financial environment if the country which may increase some beneficial projects in the host countries and may attract FDI.
3. The people of the country should be informed from this issue and must be well-known from the characteristics of corruption that how to use it for the country well-being.
4. The government should focus on the corruption issues as it has a significant relationship with country economy.
5. Economic growth is also has a positive significant role in the FDI inflows, so it should be responsibly focused on the economy growth of this country.
6. Trade openness is also so important for foreign Investment, it should be controlled and the government should make the policies to increase export and decrease import which is good for the health of country’s economy.
7. Market size has a positive relationship with FDI so if the population of the country will be large so it execs the amount of FDI, so Market size should be enlarge.

In the current decades corruption has been rose one of the most serious and mysterious monster of the modern world’s macroeconomic environment and such issue is supposed to be the displacing and mostly influencing agent of foreign direct investment. The concerned study has focused the mentioned problem in the SAARC region specifically and in simple to study the corruption impact on FDI in SAARC region.

6.4 **Implications**

As from previous literature it has been cleared that corruption shows impact not only on FDI but also on each sort of investment with and without the boundaries. The government should to understand its importance and applicability, and should also to know the appropriate incantation of its control and monitor it. According to its significantly influencing on investment, so it should be watched carefully. Some other variables those have been observed in the study like trade openness, also it has a significant relationship with FDI and playing a positive role in the attraction of FDI inflow. Trade openness must be monitor and must be controlled by the govt. Government should
generate huge beneficial policies those should be used in the appreciation of Trade openness, in the shape of increasing exports ratio while decreasing imports ratios. Economic growth is the upgradation of GDP of the nation if this will be huge, FDI will be attracted more. Government should be attentive towards it. The next variable of the study is the Market size that is also so much significant an attractive for FDI Inflow, as SAARC already have this opportunity, but should be developed by special attention of the government.

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