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EFFECT OF CORRUPTION ON FOREIGN DIRECT INVESTMENT IN ASIAN ECONOMIES

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Abstract- This research paper investigates the effect of corruption on foreign direct investment (FDI) and compares the average corruption of Pakistan with 36 sampled countries on the basis of average corruption perception index (CPI) scores. There are two contemporary theories on the relationship of corruption and FDI, as according to 'grabbing hand' raising the cost of transactions and uncertainty which should deter inflow of FDI and in contrast 'helping hand' lubrication or greasing the wheels of business against the rigid and strict economic regulations by facilitating transaction and investment which should foster FDI. The sample consists of 37 Asian countries including Pakistan over the time span of 1995 to 2014 and using random effects (GLS) regression to analyse the data. In first part of study, the empirical results indicate that corruption has negative and significant effect on FDI which tends to discourage the inflow FDI in Asia and validates the grabbing hand theory of corruption. In addition the other variables GDP growth, openness, infrastructure and education are tested and find positive and significant relationships with FDI. On the basis of present study findings it is suggested that FDI can be attracted by eliminating level of corruption in Asian economies. The second part of the study is based on comparison, for which ANOVA analysis and Least Significant Difference (LSD) technique are conducted. The findings of the ANOVA analysis reveal that Pakistan with low average CPI score is ranked at 30th position in sample of 37 countries. Moreover, the results show that 29 countries are less corrupt and only 7 countries are more corrupt than Pakistan.

Keywords: Corruption, Foreign Direct Investment and Asian Economies

I. INTRODUCTION

Foreign Direct Investment (FDI) is indispensible for the economic development of the host country. Every country is striving hard to obtain more and more FDI by providing incentives and facilitating foreign investors. Especially the developing countries like Pakistan and elsewhere in Asia much needed foreign direct investment for boosting up the economy, for which the government policy should be easing to attract the inflow of FDI. As according to modernization theorists argue that, FDI provides host economies with foreign currency for investment, foreign capital, facilitating transfer of technological knowledge, modernize their managerial skills, creating modern job opportunities, increase local market competition, promote corporate governance and increasing global market access to export commodities. Akinlabi et al. (2011) found out that, FDI has a positive contribution to the 'host economy' by supplying capital, promote of technology and, management resources. Blomstrom and Kokko (1996), Choi (1998), Markusen and Venables (1999), 'which in-turn raise labour productivity, and accelerate economic growth'. FDI reduces the income inequality, through the 'Kuznets effect' in which income inequality increase at first as per capita income grow, but decreases later once a certain level of development has been obtained (Jin, 2009). The World Bank (2012) the annual inflow of FDI to the less developed countries (LDCs) during 1990 has risen from 0.29%, of their combined GDP to 4.65% during 2010.

As far as FDI benefit is concerned to the host countries, the foreign investors seek its advantages in the host countries i.e. "why and where" to supply investment abroad. Which is well explained in OLI framework paradigm developed by Dunning (1988) that, MNCs invest in foreign land to look for three types of advantages: in his ownership, location, and internalization (OLI), theory through an eclectic approach, as the 'Ownership' advantages like property right, expertise and, other intangible assets allow firm to compete with others in the market. The 'Location' advantages are labour advantages, trade barriers that restrict imports, natural resources and gains in trade cost and 'Internalization' are those incentives to internalize external transactions. Through MNCs a greater percentage of FDIs are carried out. Since the foreign investors or MNCs are risk averse and they take into consideration various factors that are affecting their investment in abroad. The researchers are 'strongly agreed' that multi-national corporations, (MNCs) make investment in a specific location focusing where the host countries, having strong economic fundamentals like stable 'macroeconomic environment', market size, availability of

infrastructures and skilled labours that influence the country's attractiveness to inward of FDI (Dunning, 1993; Globerman and Shapiro, 1999 and Globerman, 2001).

However, the economic fundamental of the host countries may not be sufficient for attracting FDI. In this connection the MNCs before entering in an emerging economies they take into account the most damaging risk for their investment the 'threat of corruption' which not only lessen the economic reform but also hurt the economic stability of the nation. The study of Rehman and Naveed (2007) corruption is not a new phenomenon, but it is as old as the government itself. Mauro (1997) corruption has been, around for a very long time, and will remain in the future until the government of the country can find out the effective ways to fight it. In economics the study, about the causes and consequence of corruption, has a long history and, most of the advanced / developed countries identified causes of corruption and controlled them to some extent but in developing countries like Pakistan corruption has a major effect. In the recent years the financial institutions, policymaker and development economists took a serious note of the harmful effect of bureaucratic corruption. According to literature on corruption highlight its 'harmful effect on growth' (Klitgaad, 1988; Shleifer and Vishny, 1993; Mauro, 1995 Cheung, 1996 and Bardhan, 1997). The host country corruption can increase the cost of the business like tax on profit hence discourages FDI inflow. Zhao et al. (2003) found that corruption raising the 'costs of the business operations', distorting the resources allocations and 'the price of goods and services' for consumers and discouraging inward FDI.

Transparency International Organization defined corruption, "the abuse of public or entrusted power for private gain" and corruption can be categorized which depend on the sector where the amounts of money is lost, various categories of corruption are listed as: 1) Grand corruption, these practices could be done at high level of the government where the officials/leaders distort polices or the main functioning of the state in order to benefit themselves at the cost of public good. 2) Petty Corruption, when low and middle level public officials everyday abuse their entrusted power while interaction with general public or citizens in the place of police department, other agencies, hospitals and schools where they try to access basic goods, and services. 3) Political Corruption, in this type of corruption the politicians who make political decisions manipulate polices, institutions and the rules of procedure, in order to the allocation of 'resources and, financing', they abuse their position in order to sustain their status, power and wealth. Following the definition of World Bank (1997), 'corruption is the abuse of public office' for private gain, which is frequently cited by researchers in their studies.

According to the study of Myint (2000) as the use of public office own private gain, or use of rank or status or use of official position by an office bearer for his own personal interest for example for the definition of above by Myint (2000) corruption behavior included "(a) bribery, (b) fraud, (c) nepotism, (d) extortion, (e) embezzlement, (f) cronyism, (g) influence peddling, and (h) appropriation of public asset, and property for private use. From the above mentioned the corrupt behaviours like fraud and embezzlement could be done by a single official without engaging with the second party. There are involvement of two parties (the giver and the taker) to carry out the corrupt activities like extortion, bribery and influence peddling. Political corruption can take many forms including embezzlement, nepotism, bribery, extortion, and graft in which the public officials, either directly steal 'the public fund' or take the benefit of public fund through illegitimate way. The simple and broad definition of corruption given by Habib and Zurawicki (2001) that corruption is sometimes, all inclusive like 'bureaucratic and institutional inefficiency' bribes, and 'political instability'.

In this study an effort is made to examine the effect of corruption on (FDI) inflow in the host country and to compare the level of corruption of Pakistan with sample Asian countries. The available literatures are focusing less on the very serious problem of corruption, especially in the context of Pakistan within Asian countries. Initially it was planned that all the Asian countries will be included in the study but lack of availability of the data this study is confined to 37 Asian countries including Pakistan. In order to achieve the objective of the study this study uses the corruption data, which is available for 20 years (1995 to 2014), along with other explanatory variables. The present study findings indicate negative and significant relationship between corruption and FDI, along with other important variables which are GDP growth, Openness, Infrastructure and Education are positive and significant relationship with FDI. On the basis of these findings the elimination of corruption is unavoidable in Asia to encourage foreign investors.

Corruption is the main problem of developing countries like Pakistan. This study is conducted to address this problem that either corruption has effect on FDI in Asian economies especially Pakistan. Prior

research studies examined the relationship between corruption and FDI. But still there is no clear evidence whether host country corruption encourages or discourages FDI inflow. As most of the research studies supporting "grabbing hand theory of corruption", there is negative relationship between corruption and FDI, corruption increases the cost of the economic activities which impede the inflow of FDI (Shleifer and Vishny, 1993; Bliss and Di Tella, 1997; Bardhan, 1997 and Aidt, 2003), whereas some of the studies also supporting the helping hand theory of corruption as corruption has positive effect on FDI, it could be, an efficient 'lubrication' for strict and rigid economic regulation, and red tape, attracting FDI (Lui, 1985; Beck and Maher, 1986; Walder, 1995 and Saha, 2001), because of the "mixed results" raise a major question to analyze the effect of corruption on FDI, whether it is beneficial or not in Asia. The current study is a step to answer the question in the context of Pakistan and Asian economies. This study is beneficial for foreign investors including MNCs to make decision about their investment in out-stations/abroad. It can be helpful for home country government which can take into consideration while formulating policy regarding FDI and corruption. This study can have role to cease host country corruption, institutions efficiency and hence attracting more inward of FDI. In addition, the current study contributes in the existing FDI literature to predict level of corruption and foreign direct investment in the context of Pakistan and sampled economies as well as enhances the knowledge of the readers regarding FDI in Asian economies, is more affecting through "grabbing hand or helping hand" theories of corruption.

Objective of the study

1. To analyse the effect of corruption on FDI
2. To compare the mean corruption level of Pakistan with sampled countries

Hypothesis development

H_{0A} ; Corruption has no significant effect on foreign direct investment

H_{1A} ; Corruption has significant effect on foreign direct investment

H_{0B} ; Corruption level of Pakistan has no significance difference from sampled countries

H_{1B} ; Corruption level of Pakistan has significance difference from sampled countries

Further the paper is organized as in section 2 theoretical and empirical literatures are discussed and section 3 reports methodology. The results and discussion are given in section 4 while conclusion and recommendations are described in section 5.

II. REVIEW OF LITERATURE

Most of the studies have been conducted to examine the level of corruption and FDI inflow in the host countries 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 and FDI. For example the study of King (2003), Johnson and Dahlstrom (2004), Mathur and Singh (2011) and Domokos (2011) figured out that there is a negative relationship between corruption and FDI. On the other hand a study highlighted that African corruption encouraged Chinese investment in the said place (Classen et al., 2011). The government officials may use their authority for the personal gains while formulating and implementing policies. Corruption has been criticized for the failures of the certain developing countries to develop, and the studies confirm a link between higher perceived corruptions and 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 affecting the companies particularly the international commerce, technology transfer and finance. The study of Argandona (2007) corruption is becoming an international phenomenon in scope, substance and consequences. There is existing of debatable theoretical literature as well as empirical literature on corruption with different set of variables, a brief review is presented in the next section.

2.1 Theoretical literature

There are 'two theories' that on the influence of corruption on FDI such as by Shleifer and Vishny (1993) the grabbing hand and by Walder (1995) the helping hand. Moreover, the eclectic paradigm theory of foreign direct investment developed by professor Dunning (1988) which is mostly quoted by researchers in their studies.

2.1.1 Grabbing hand theory of corruption

The "grabbing hand theory" of corruption which is supported by the economist Shleifer and Vishny (1993), Bliss and Di Tella (1997), and Aidt (2003) suggests that corruption act in an economy like a grabbing hand that increase, the cost of the economic activities to carry out in the market. According to Habib and Zurawicki (2002) and Brouthers et al. (2008), corruption creates additional costs, and risks for investors. A considerable numbers of empirical studies are available to support these arguments such as Wei (2000), Habib and Zurawicki (2002), Voyer & Beamish (2004) and Nguyen and van Dijk (2012). Corruption not only increases the cost for foreign investment but also lessen the return on investment of the domestic firm, hence impede inward of FDI. The study of Kaufmann and Wei (1999) indicates that the cost of investment in relatively a 'corrupt economy' can be as much as 20%, higher than its less corrupt counterpart. Zaho et al. (2003) corruption raises the cost of conducting business in form of irregular taxes, distorts the allocation of resources, and declines the production capacity of investment. If there is reduction in level of corruption by 4.7 points (using the scale of 1 to 10 or improve CPI score) brings 15% increase in the inflow of FDI (Javorcik and Wei, 2009).

2.1.2 Helping hand theory of corruption

The "helping hand theory" of corruption by (Leff (1964), Lui (1985), Beck and Maher (1986), and Aidt (2003) suggests instead of an obstacle for economic activities, corruption could be an efficient lubrication, which "greases the wheels" against the rigid 'economic regulations' and 'red tape'. Egger and Winner (2005) the cost of corruption assists transaction and speed up procedure of economic activities, hence helping to attract FDI. Through corrupt practices foreign investors obtain potential benefit from the host country government such as 'privileged access to the market', or subsidies which acts like an extra incentives to them engage in business and awarding profitable contracts etc by offering bribe to the host government officials (Lui, 1985; Beck and Meher, 1986; Walder, 1995; and Saha, 2001). Similarly, there is positive relationship between corruption and FDI in the economies with excessive regulations (Huntington, 1968 and Leff, 1989). In line with this, the empirical studies of Wheeler and Mody (1992), Henisz (2000), Barassi and Zhou (2012) and Helmy, (2013) reported positive relationship between corruption and FDI.

2.1.3 The eclectic paradigm theory of foreign direct investment

The FDI theory which is developed by professor Dunning (1988:1) and is a combination of three different theories of direct foreign investments that is OLI approach which tends to O = Ownership, L = Location, I = Internalization and it is said to be OLI framework. The theory describes that the micro and macro level determinants and to analyse them in term of "why and where" an MNCs invest in the foreign land. In light of the OLI framework that MNCs invest in outstation looking for three types of advantages.

The ownership advantages are intangible assets, patents, property rights and expertise, keeping in view of these advantages the firm allow to compete in the foreign market place however, the firm has the disadvantage of being foreign but it has the ability to access the available resources and can export and exploit the natural resources as well as resource based product. These advantages may be raised if the firm has the ability to coordinate its complementary activities (like manufacturing and distribution) and has the ability to use (exploit) difference between countries.

The location advantages are very important as the foreign investors make choice of the country having more attractive sites in term of 'strategic advantages', by utilization of intangible assets, trade barriers like imports restriction, availability of natural resources, gaining the trade cost, hence attracting more FDI. If there is existing of differences in country such as "transport expense, government rule and regulations", stability of macroeconomic, natural endowment and cultural factors, these are the causes through which the location advantage may arise.

Internalization advantages, are those where imperfection in "external markets" is existing the firm will be willing to engage in foreign market in order to exploit these benefit because of imperfection. These advantages are containing as lack of information to the potential buyers, uncertain situation and transaction cost differences because of inefficient information. Moreover, when the state generated imperfection is declined like foreign exchange control, tariff and subsidies.

2.2 Empirical literature

There are number of literatures exit about the relationship of FDI and corruption but not achieved the commonly accepted conclusion that perceived high level of corruption impede FDI. Corruption is difficult to study empirically, and its many likely determinants, interrelated in complicated ways' (Treisman,

2000), as some of determinants can be changed promptly and may be caused by corruption as well as the reverse. The other types of corruption like criminal activities is hard to observe directly so the researchers must rely on the surveys which are conducted to identify the corruption's victims where as the accuracy of the said surveys often difficult to assess.

Corruption is difficult to study empirically and its many likely determinants, interrelated in complicated ways' (Treisman, 2000), as some of determinants can change quickly and may be caused by corruption as well as the reverse. The other types of corruption like criminal activities is hard to observe directly so the researchers must rely on the surveys which are conducted to identify the corruption's victims where as the accuracy of the said surveys often difficult to assess. A study of Rehman and Naveed (2007) used panel data analysis sample of 104 countries for the period of 1995 to 2005 found the main determinants of corruption are secondary school enrollment, unemployment rate, log of GDP per capita, FDI and public spending on education, by the combination of the said factors the existing level of corruption can be changed. A study of Quazi (2014) found that, corruption is the 'significant and robust determinant' of FDI in East Asia and South Asia as the corruption perceptions index score improved by 1 point, can increase the average annual inward of FDI as little as 14%, to as much as 30% in the sample countries.

Corruption increases the costs of the business and decreases the incentive to invest hence high level corruption of the host deter the investment and MNCs avoid those countries where the prevalence of high level corruption (Azam and Ahmad, 2013). A study of Bardhan (1997) such additional costs decline the expected return on investment and so the corruption is generally considered as a tax on the profits. Therefore the foreign investors will have to pay extra costs like bribes in order to get the government permits to make and conduct investment or to obtain licenses meaning that, corruption increases the cost of investment. There is debate that the level of corruption has an adverse affect on inflow of FDI in the host country as considering it as costs of doing business. In deed 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 decreased (Alemu, 2012).

Al-Sadig (2009) used cross-sectional regressions, sample of 117 countries the time span 1984 to 2004 found that, corruption deters 'foreign investors', whereas moving towards panel data method the negative effect of corruption on FDI disappeared when control for 'host country's intuitional quality' which suggesting that, while location selection for the investment foreign investors gave value to the quality of the institutions in contrast low value to the level of corruption, the study also suggested that, the host country corruption reduces the inflow of FDI but the results should be seen as an indication that the 'quality of institutions' are crucial and important. A study of Azam and Ahmad (2013) used pane data and fixed effects model, 33 less developed countries (LDCs) for period of 1985 to 2011 found that there exist a robust linkage between and corruption and inward FDI, and thereby corruption adversely affected the inflow of FDI in the sample countries. The study of Alemu (2012) used the model 'balanced panel' data of 16 Asian economies for the period of 1995 to 2009 analyzed that, the corruption remains a significant problem in Asian economies for inflow of FDI, in case a country is able to decline the level of corruption by 1 percentage, the incoming of FDI may enhance by round about by 9.1 percentage points, it also highlighted that, some of the scholars argument that, corruption does not deter FDI from the corrupt countries, is either 'flawed or invalid'. The 'corruption perception index' has a vital role in making the investment decision by investors that, where to invest, in case the level of corruption is high in host country is perceived, to be the less inward of FDI (Mathur and Singh, 2013). Moreover the study of Revilla and Bayacag (2013) found that, corruption has negative effect on inflow of FDI in Philippines thereby the declining in level of corruption induce more FDI in short run as well as long run.

Quazi (2014) found that foreign investors having better familiarity with the host country economy, i.e. larger market size, access to infrastructure, higher return on investment, political stability and human capital boost the inflow of FDI, however the prevalence of corruption, 'causes the contrary'. The MNCs prime objective is to maximize the profit hence all those factors are considered which effect their investment and one of the factors that is, corruption is perceived a bad curse in way of inward FDI and ultimately it hindered the process of economic growth (Azam and Ahmed, 2013).

The poorly 'conceived and managed' policies, program and activities, 'poverty, income disparities', institutions inefficiency, inadequate civil servant remuneration, lack of transparency and accountability can be the main causes of corruption in any country (Alemu, 2012). It is possible to minimize corruption 'with strong political will' incase lacking of political will and not implementing the anticorruption

measures by political leaders, 'civil servants or military officers' the circumstance will not change. In order attract more FDI inflow creating a corruption free economy along with the other key factors, which provide an investment environment for foreign investors; such as purchasing power of people, infrastructure, investment on education (human capital) and health, sustainable economic growth and openness of the economy. Controlling all other factors including level of corruption, less inflow of FDI as investors tend and value to those countries where they ensure and enforceable by law of court the rights of the citizens, such as political and civil rights as well as economic freedom e.g. right to move capital in, and out from the country, personal property protection and the ability to trade, in the international markets openly, like China and Singapore though these countries having poor ranked on democracy but high ranked in the index of property rights and attracting more FDI inflow (Mathur and Singh, 2013).

Alemu (2012) found that, the Asian economies having the high potential to attract more FDI on account of their 'skilled and semi skilled workforce' and geographical proximity, to major "FDI origin countries". According to Gyimah-Brempong (2002) Corruption decline the growth rate of the income as corruption perception index increased by one unit, bring about decreased in the growth of GDP minimum 0.75% and maximum 0.9% point, in term of per capita income minimum 0.39% and maximum 0.41% and slow down the economic growth of African economy. In addition corruption, directly affects and reduces the 'growth rate of per capita income' by declining the productivity of existing resources, as well as reduced the investment in indirect way. Wei (2000) found that, the increase in host country corruption level and tax rate on MNCs, in either case the inflow of FDI would reduce, as the increase in level of corruption from that of "Singapore to "that of Mexico" corruption negatively affect the inflow of FDI as increasing the tax rate by 18% points to 50% point depending, on specification. Moreover, the investors of America are averse in connection of host country corruption but not like other investors, in spite of its unique, 'foreign corrupt practice act'. In determining the economic fundamentals, the regional differences are existing to inward FDI and favouring the 'East Asia, over South Asia' which may be explained by a combination of 'geo political and economic factors' (Quazi, 2014).

Podobnik et al. (2008) found that, in response to decrease the level of corruption, tend to significantly increase in the wealth of the country or GDP per capita growth rate'. Since most of the inflow of FDI is from the developed countries where it is perceived that there is generally, less corruption, Kwok and Tadesse (2006) the existence of MNCs may shape the environment of corruption in the host country's institutions over time. Moreover, the study highlighted the importance and existence of MNCs in host country, such as regulatory pressure effect, demonstration and professionalization effects thereby MNCs have impact on the host intuitions; as regulatory pressure of home country and international business community on MNCs, its subsidiaries are not engaged in offering bribery to host country officials and demonstration and professionalization effects leading to the host country government official and business people may alter their traditional business practices and model themselves over time (Kwok and Teadesse, 2006). Kwok and Tadesse (2006) confirmed that, over the time presence of FDI can help to reduce the level of corruption in the host country and MNCs point out to the host country government and its people, another potential benefits, for opening its doors to inflow FDI. According to Busse and Hefeker (2007) the important determinants to inflow of FDI such as stability of the host country government, law and order situation, internal and external conflicts, bureaucratic quality, ethnic tension, level of corruption and democratic accountability but political risk, and 'institutional indicators' are crucial while decision making regarding where to invest in developing countries by Multinational corporations.

III. RESEARCH METHODOLOGY

The aim of this section is to discuss the population, sample, data and its sources, defining variables that affect FDI inflow and to outline the model. The current study is conducted to analyze the effect of corruption, on FDI in the context of Asian countries. The universe of the study is all those countries which are included in the Asia. The sample of the study consists of a penal data set (annually) from 37 Asian countries for which data are available (See Table 3.1) over the time span of 1995 to 2014. The sample period starts from 1995 as in this year data for "corruption perception index" (CPI) launched by the transparency international organization and the index appears annually. This study uses convenient sample technique to draw the sample subject to the availability of the data of the sampled countries as adopted by the studies of **(**Al-Sadig, 2009 and Alemu, 2012), which is listed below in table 1.

Table 1: List of sampled countries

East Asia	South Asia	Middle East Asia	Central Asia	Southeast Asia
China	Bangladesh	Armenia	Kazakhstan	Cambodia
Hong Kong	India	Azerbaijan	Kyrgyz	Indonesia
Japan	Nepal	Bahrain	Russia	Laos
Kore (South)	Pakistan	Cyprus	Tajikistan	Malaysia
Mongolia	Sri Lanka	Georgia	Uzbekistan	Philippines
		Iran		Singapore
		Israel		Thailand
		Jordan		Vietnam
		Kuwait		
		Oman		
		Qatar		
		Saudi Arabia		
		Turkey		
		Yemen		

The annul data for dependent variable of FDI % of GDP collected from "world development indicator" (World Bank, 2014). The following independent variables are used in the current study such as GDPG, OPEN, INFR, EDU, INFL and HEALTH, for which annual data are collected from, 'World Development' Indicator (World Bank,2014), CPI is collected from Transparency International Organization (TI, 2014) and PSTATBILITY is collected from worldwide governance indicator (WGI, 2014).

3.1. Dependent and independent variables

The FDI % of GDP in the host country. FDI plays most significant role to boost up the host economy therefore every country is striving hard to attract more and more FDI inflow in the economy. In addition foreign investors being risk averse take into consideration various factors which are affecting their investment in the out stations and avoid the unfamiliar territories. It is crucial for the host country to have a sound track record of attracting FDI in order to dispel the fear of foreign investors, for investing in an unknown location. The choice of other explanatory variables which are affecting the inward of FDI, included in the study have been motivated and guided by the prior research studies.

Corruption perception index (CPI): It is the key explanatory variable of the study. CPI index defines the corruption as "misuse of the public power for the private benefit". According to Dr Eigen, who is the Chairman of TI, in releasing the survey "the index is a "poll of polls", showing the average scores which individual countries have been given by 'international businessmen' and 'the financial journalists' when polled in a variety of contexts". Most of the research studies such as Wei (2000a), Habib and Zurawicki (2002) Zhao et al. (2003) Voyer and Beamish (2004) Ketkar et al. (2005) and Egger and Winner (2006) have used "Corruption Perception Index" (CPI) which is published by Transparency International (TI) annually for the countries and is considered a reliable measure of corruption. As the present study used Corruption Perception Index (CPI). The index allocate the scores to the countries ranging 0 to 10, where 0 means most corrupt economy and 10 means most clean economy. The high score of CPI indicates the less corruption level in the countries. In the following studies corruption perception index (CPI) is used to measure corruption for example (Brempong, 2002; Robertson and Watson, 2004; Quazi and Mahum, 2006; Kwok and Tadesse,2006; Dahlstrom and Johnson, 2007; Rehman and Naveed, 2007; Mathur and Singh, 2013; Azam and Ahmad, 2013 and Quazi, 2014).

Moreover, according to Egger and Winner (2006) there exist other sources which measure the corruption like "International Country Risk Guide" from Political Risk Service, (ICRG - PRS) whereas their focus is on political risk. In study of Alemu (2012) used another measurement of corruption that is the index freedom from corruption (FFC) and published by "The Wall Street Journal" and, 'The Heritage Foundation' since 1995. FFC index score range is 0 to 100, the most corrupt country indicated by 0 score and 100 means the country free from corruption.

Openness (OPEN): The degree of openness of a home country is considered one of the significant and important factors which give confidence to foreign investors hence attracting FDI. The degree of OPEN is measured by the sum of exports plus imports as a %age of GDP and its effect is expected to be positive as there is an increase in the degree of OPEN attracting more FDI in economy. A study highlighted that one percentage point increase in the openness brings an approximately 1.094 % point to 1.323% point enhancement in the inflow of FDI in China. Openness has been added in the study following Quazi and Mahum (2006), Kwok and Tadesse (2006), and Rehman and Naveed (2007), and Ali Al-Sadig (2009).

Infrastructure (INFR): The availability of infrastructure is very crucial in the host country economy as the foreign investors consider those economies with a well developed infrastructure like water supply, telephones, internet access, airports, uninterrupted power supply network of roads and railway tracks. When there is poor infrastructure in the host country it increases the cost of production and hence reducing the return on investment. 'Other things being equal' the production costs are typically, lower in the countries having better and well developed infrastructure than, in the countries having poor infrastructure. According to Morisset (2000) FDI can be attracted if the countries have 'good infrastructure' system. In order to attract more FDI in country, the government of Pakistan needs to have good and well developed infrastructure, as the foreign investors avoid the countries having poor state of infrastructure (Shahzad & Al-Swidi, 2013). The availability of roads and telecommunication networks etc facilitate transportation, linking the cities, which increase the productivity and tend to boost the locational advantage of the host country and attracting more FDI (Quazi, 2014). This study uses the Mobile cellular subscriptions (per 100 people) as proxy for the infrastructure of the country and expected to have positive correlation with FDI. Infrastructure has been added pursuing the study of Guisinger and Loree (1995), Chuck Kwok Solomon Tadesse (2006), Matthias Busse & Carsten Hefeker and Quazi (2007).

Inflation rate (INF): Inflation, GDP deflator (annual %) reflects the economic stability in the host country. Negative relationship is expected between INFL and FDI inflow. Inflation has been added following the study of Rehman & Naveed (2007) and Al-Sadig (2009).

Political Stability (PSTABILITY): Political stability is an important factor, foreign investors take into account while making investment decision. According to the study of Al-Sadig (2009) there is negative relationship between political stability and FDI inflow. This study uses "Political Stability and Absence of Violence/Terrorism", it is an element of country governance in (WGI) project by World Bank Group as a proxy for political stability, it expresses the perceptions, of the likelihood that the government will be destabilized or overthrown through the means of unconstitutional or violence, it may contain 'politically-motivated violence' and terrorism. Stable political and social environment have a strong effect on inflow of FDI and building the confidence of the risk averse foreign investors. Political risk has been added following the studies of Hanson (1996), Jaspersen et al. (2000), Kwok and Tadesse (2006), Quazi (2007), Al-Sadig (2009), and Quazi (2014).

Gross Domestic Product Growth (GDPG): The sustainable GDP growth is an indication of vibrant economy of the host country. The foreign investors focus on the host country past economic growth, if its government is generated impressive growing economy, is likely to attract more FDI. The past policies are very crucial in predicting the country future and stability of its government. The foreign investors are encouraged, by the past growth performance of the country as flock to China in an anticipation of improved intuitions (Fan et al., 2007). As a growing economy is market potential of the host country hence attract FDI. The findings of the studies explain that large market size generates economies of scale, a growing market improves the prospects of the 'market potential' so that attracting more inward of FDI (Bhattacharya et al., 1996; Chen and Khan, 1997; and Mbekeani, 1997). This study uses the growth rate of GDP to capture the effect on FDI and expect to have the positive effect on FDI inflow as the prior studies also found positive effect of GDPG on inward FDI (Wheeler and Mody, 1992; and Zhang and Markusen, 1999). GDP growth has been added following 'Rehman and Naveed (2007), Al-Sadig (2009), Alemu (2012), Mathur and Singh (2013)'.

Health (life expectancy) (HEALTH): This study uses life expectancy as a proxy for health. There is dire need of good health facility of the public in order to have healthy workforce. The host country government should ensure good health facility of the citizens as the healthy workforce is necessary to contribute in economic growth, in case it fails to provide such facilities for the citizens it is less likely to grow, hence decreasing the attractiveness of the country for inward of FDI (Alemu, 2012).

School enrollment Secondary (% gross) (EDU): The variable education has a significant role to attract more FDI in the host country. The level of education is used to measure the availability of skilled and semi skilled labour of the host country. This study uses school enrollment, secondary (% gross) as proxy to measure level of education of the host country (Alemu, 2012). Furthermore, MNCs and foreign investors are often attracted to the developing economies by having cheap labour, in this way the cost advantages can be counterbalanced by low labour productivity as well as availability of skilled labour in the host country can enhance the locational advantage (Quazi, 2014). School secondary enrollment variable is added following (Al-Sadig, 2009; Rehman and Naveed, 2007; Alemu, 2012 and Quazi, 2014).

3.2. The Model

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

$$FDI_{i,t} = \alpha + \beta_1 CPI_{i,t} + \beta_2 GDPG_{i,t} + \beta_3 OPEN_{i,t} + \beta_4 INFR_{i,t} + \beta_5 EDU_{i,t} +$$

$$\beta_6 PSTABILITY_{i,t} + \beta_7 INFL_{i,t} + \beta_8 HEALTH_{i,t} + \varepsilon_{i,t}$$

In the above model subscript i represent to the unit of observations i.e. countries whereas subscript t refers to the time and ε is the error term.
Where the dependent variable FDI is Foreign Direct Investment % of GDP in the host country
Independent variables
CPI represents the corruption perception index
GDPG shows gross domestic product growth, OPEN portrays trade (% of GDP) openness sum of export and imports of goods and services
INFR shows Infrastructure, EDU is education (secondary school enrollment)
PSTABILITY shows Political Stability, INFL represents Inflation rate (GDP deflator)
HEALTH is Health (life expectancy)

3.3. Panel data analysis

In the present study panel or longitudinal model is used. The observations involve in panel data having two dimensions, that is the 'cross-section dimension' represented by subscript i tends to the economies and 'time series dimension' indicated by t tends to the time span (1995 to 2014) in this study and used unbalanced panel data.

3.3.1. Pooled regression analysis

In the pooled regression all the observations are pooled together and run the regression analysis with the assumption that the regression coefficients are the same for the Asian economies. Joseph (2010) these analyses are carried out when the data is homogeneous. There is no distinction between the economies, though this assumption may be difficult to maintain (Gujarati, 2005). While in this study the Asian economies (which represent the groups) are not the same, Joseph (2010) since this study used the more complex models REM and FEM for data analysis.

3.3.2. The Fixed Effect regression Model

Fixed effects model is used to have different intercept for each entity, in this case 37 Asian economies. By providing each subject i (groups) with its respective intercept, assuming constant coefficients (slopes) for explanatory variables and, constant variance across subjects i and the technique is said to be Fixed Effect Least Square Dummy Variable (LSDV) model (Gujarati, 2005). However this study used the Fixed Effect Within-Group estimator for selection of appropriate model. It explains the values of dependent variable and independent variables for each economy as deviation from their respective mean values, and the resulting values are called demeaned or mean corrected values and then pooled these mean corrected values (Gujarati, 2005).

3.3.3. The Random Effect Regression Model

Random effects model measures the variation across entities (groups) is assumed to be random, and uncorrelated with explanatory variables which are included in the study. The 37 Asian economies included in the present study sample are drawn from the large universe of such economies and they have common intercept which reflect the mean value for all the cross sectional, the Asian economies intercepts and the error component $\varepsilon_{i,t}$ expresses the random deviation, of individual intercept from this mean value (Gujarati, 2005). The individual differences, in the values of intercept for each economy are expressed in the error term $\varepsilon_{i,t}$. This study validates random effects model for data analysis after conducting model specification test. The random effect is used to control the "differences in the variance" of the error term, to model groups together with the assumption that the intercept and the slopes (coefficients) are constant.

3.3.4 Hausman Specification Test

Hausman specification test is used, whether the FEM or REM is valid for data analysis developed by (Hausman, 1978). The null hypothesis of the Hausman test states that the fixed effects, and random effects are not distinct systematically. According to Greene (2006) if the p-value is less than 05 % tend to reject the null hypothesis in favour of alternative hypothesis and concluded that FEM is appropriate for the data analysis. However this study validates the null hypothesis and used the REM for analysis.

3.4 ANOVA Analysis

Analysis of variance (ANOVA) is one of the statistical models which is used to analyse the differences between or among group means whether the mean of several groups are equal or not, developed by (Ronald Fisher, 1921). Moreover, the present study has used 37 Asian economies (groups) and to analyse these groups' means differences. In order to achieve the second objective of the study that is to compare the corruption level of Pakistan with sampled countries. This study uses ANOVA analysis for the country's corruption comparison with the rest of the sampled countries, specifically in case of Pakistan.

IV. EMPIRICAL RESULTS

This chapter contains the data analysis of the current study. These results include the summary statistics of the data and regressions. In order to specify the appropriate model and to detect multicollinearity and heteroskedasticity this study used diagnostic tests such as Chow Test, Breusch-Pagan LM test for random effect and VIF and Breusch-Pagan / Cool-Weisberg test respectively. In addition Hausman specification test is used to decide the fitness of the model between fixed effects model and random effects model.

The first part of the study is to examine the effect of corruption on FDI in Asian economies. The analysis starts with the summary statistics of variables included in the study. The summary statistics reflects the overview of the data for the reader as well as helps in identifying the outliers.

Table 2 reports the summary statistics of the data after removal of outliers which shows the name of variables in first column and their mean, standard deviation, minimum and maximum values in the second, third, fourth and fifth column respectively. On an average, countries in Asia hold 4.5 of FDI % of GDP and secured CPI score of 3.8 out of 10. The GDPG is 5.14% and OPEN value 97.63 of the Asian economies. The availability of infrastructure is 52.58 and education 78.66 representing the skilled labour in Asia. The other variables such as political stability, inflation and health (life expectancy) are 36 out of 100, 7.88 and 71.22 respectively.

Table 2: Summary Statistics of Data, 1995-14

Variable	Mean	Std. Dev.	Min	Max
FDI	4.5006	6.4296	-5.1118	45.2899
CPI	3.8325	1.8608	0.4000	9.4000
GDPG	5.1424	4.3492	-16.7000	26.1704

OPEN	97.6370	73.9223	16.7497	455.2767
INFR	52.5770	52.7767	0.0017	239.2979
EDU	78.6528	22.1372	16.2884	124.2994
PSTABILITY	36.0738	25.3876	0.4700	96.6800
INFL	7.8831	7.5818	-8.7048	27.7619
HEALTH	71.2173	5.7275	57.7517	83.8317

Note: N = 740 unbalanced panel data
Source authors' calculations.

Table 3 explains the existence of correlation among the variables of the current study, meaning that changes in one variable are correlated with changes with other variable. It indicates only the presence or absence of relationship not the nature of relationship. However Table 3 shows almost low and few portray moderate correlation among the variables of the study.

Table 3: Correlation Matrix, 1995-14

	FDI	CPI	GDPG	OPEN	INFR	EDU	PSTABILITY	INFL	HEALTH
FDI	1								
CPI	0.1612	1							
GDPG	0.2115	-0.1322	1						
OPEN	0.5905	0.4406	-0.0171	1					
INFR	0.2482	0.4116	-0.0401	0.3242	1				
EDU	0.1485	0.4504	-0.0451	0.1224	0.4478	1			
PSTABILITY	0.235	0.6479	-0.0165	0.3801	0.2335	0.3459	1		
INFL	-0.0672	-0.4475	0.0771	-0.1678	-0.2469	-0.0558	-0.2827	1	
HEALTH	0.1761	0.8068	-0.0844	0.3425	0.5563	0.6354	0.5285	-0.4435	1

Note: N = 740 unbalanced panel data
Source authors' calculations.

High correlation among the predictors of a regression model suggests that multicollinerity is existing in the data. According to Gujarati (2003) before estimating the regression analysis considered one of the important assumptions that the predictors do not have high collinearity. In order to check the multicollinearity among the explanatory variables this study used the variance inflation factor (VIF). As the Table 4 reports the variance inflation factor (VIF) and obtaining the mean value of VIF in the study is 2.23 which means that there is no problem of multicollinearity among the predictors. In case the value of VIF > 10 then the data would have multicollinearity.

Table 4: Variance Inflation Factor for multicollinerity, 1995-14

Variable	VIF	1/VIF
HEALTH	4.66	0.2147
CPI	3.95	0.2529

EDU	2.01	0.4980
PSTABILITY	1.81	0.5521
INFR	1.59	0.6295
INFL	1.44	0.6963
OPEN	1.37	0.7317
GDPG	1.03	0.9709
Mean VIF	2.23	

Note: N = 740 unbalanced panel data
Source authors' calculations.

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 = 13.88 with p-value = 0.00001, as the p-value is less than 5%, so the Alternative hypothesis accepted in favour of null hypothesis and concluded that there is structural break in the data and suggesting fixed effects model is fit for data analysis.

The Breusch-Pagan LM test is used to decide the appropriateness of the model between random effect and pooled OLS regression for data analysis.
Null hypothesis: Variance of the unit-specific error = 0 (Pooled regression is fit)
Alternative hypo: Variance of the unit-specific error # 0 (Random Effect Model is fit)

Table 5: Breusch-Pagan LM Test for random effect

	Var	sd = sqrt(Var)
FDI	38.8770	6.2352
E	14.7626	3.8422
U	8.4398	2.9051
Chi^2 = 717.3300 and P-value = 0.0000		

Note: N = 740 unbalanced panel data
Source authors' calculations.
Keeping in view of Table5, Chi^2 = 717.3300 with p-value = 0.0000 showing significance, therefore accept the Alternative hypothesis and concluded that the random effects model is fit for data analysis in favour of null hypothesis pooled OLS regression model.

In order to detect hetroskedasticity in the data this study used Breusch-Pagan / Cool-Weisberg test, it checks the linear form of heteroskedasticity in the data. The following hypothesis is tested.
Null hypothesis: error variances are all equal
Alternative hypothesis: error variances are a multiplicative function of one or more variables

In light of Chi-square = 327.11 with p-value = 0.000 which means heteroskedasticity present in the data. The meaning of the alternative hypothesis is when the error variance increase or decrease as the predicted values 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 hetroskedasticity is existing in the data. Usually there is presence of heteroskedasticity in the panel data because of the different units i.e. in the current study has the Asian economies.

As the above tests describing the mixed statistic i.e. Breusch and Pagan Lagrangian Multiplier Test for Random effect suggesting REM, Chow decided in favour of FEM as well as the presence of heteroskedasticity in data which is detected by Breusch-Pagan / Cool-Weisberg, test leading that the pooled regression model cannot be used for analysis. Though heteroskedasticity is present in the data but this is used the random effects model which measures the difference in variance of "error term" to model group together, and random effect GLS regression is used as the similar technique is by (Alemu, 2012 and Quazi, 2014)

The empirical findings of the pooled regression are shown in appendix Table A1. The first column of the table enlists the explanatory variables of the study. Coefficients, standard error, t and p-values are reported in column second, third, fourth and fifth respectively. The overall model is good fit as shown by the F statistic of 65.48 with p-value 0.000 and the R^2 value is .4319. This R^2 represents the ratio of variation, in dependent variable FDI explained by the variation in explanatory variables. The variables inflation and health are negative and insignificant means their coefficient are not different from zero. The other independent variables i.e. GDPG, OPEN, INFRASTRUCTURE, EDU and PSTABILITY show positive significant relationship and Corruption has negative significant relationship. However these relationships are discussed in more detail in the random effects model.

In current study both random effects and fixed effects models, were tested to analyse the data. In order to find out the efficient model over other which are less efficient, Hausman test is run. It decides about the appropriateness of model between FEM and REM. However, to make choice between REM and FEM this study carried out Hausman specification test under the following hypothesis.
Null hypothesis: Random Effect Model is appropriate
Alt hypothesis: Fixed Effect Model is appropriate

In appendix Table A2 shows the result of Hausman specification test. Where the value of Chi^2 (8) is 6.33 with P-value is 0.6098, since p-value of the said test is greater than .05, it suggests that the estimates of fixed effect and random effects models have no systematic differences. So the Alternative hypothesis is rejected that fixed effects model is good and null hypothesis is accepted. Therefore this study used the random effects model for analysis of the data.

Table 6 presents the results of the random effects regression with constant by using FDI % of GDP as a dependent variable. These results are based on 37 Asian economies including Pakistan. The first column of the table enlists the independent variables, of the study. Similarly coefficients of independent variables, standard error, z and p-values are reported in second, third, fourth and fifth column of the table respectively. The value of Wald Chi^2 is 238.51 with p-value is 0.000 that indicates the overall model fits the data. Moreover, the value of R^2 is .4225 which suggests that there is 42.25% variation in dependent variable (FDI) is due to the independent variables in the study and the value of rho is .3637 meaning that there is 36.37% of variance is due to the differences across the panel.

In order to easy interpretation of the coefficient of CPI this study rescale the score of CPI as 0 denote the most clean economy and 10 means the most corrupt economy (Straub, 2008). The result of random effects regression shows that the coefficient of CPI (Corruption Perception Index) is -0.9301 and significant, suggesting that host country corruption negatively affect amount of inflow of FDI, which is supporting the "grabbing hand theory of corruption" i.e. there is negative relationship between corruption and inflow of FDI. This shows that the inflow of FDI decreases by -0.9301 units when there is one unit increase in coefficient of CPI (increase in level of corruption) in Asia. 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, in case the level of corruption decreases the CPI score increases or goes up toward 10 tend to improvement in governance.

If the countries in Asia would be able to reduce the perceived uncertainty of corruption to the same level as Singapore mean CPI score 9.096 highest score in Asian economies, would attract more FDI. In deed 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 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 coefficient of (GDPG) is positive and statistically significant. The empirical results explain that one unit increase and improvement in GDP growth (GDPG) brings 0.2125 units increase in the inflow of FDI in Asian economies. 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 (Alemu, 2012). The same results also found by the previous research studies i.e. GDPG has positive significant effect on FDI (Al-Sadig, 2009; Alemu, 2012 and Mathur & Singh, 2013).

The variable (OPEN) has positive and significant relationship with FDI of the sampled Asian countries shown in (Table 6). The results portray that one unit increase by in the variable OPEN increase the inward of FDI by 0.0734 units. The degree of openness of the economy is an important variable and a significant determinant of incoming FDI in the host economy. When the host economy is more open, the flow of goods and inputs, in and out of the country, which is the dire need of MNCs operation, as trade liberalization create, sound business climate, expectations to have better long term economic growth and enhancing the size of the market (Alemu, 2012). As the previous study of Brenton et al. (1999) claimed that the trade flows and FDI are complements. The present study findings are consistent with prior research studies regarding OPEN as (Alemu, 2012; Al-Sadig, 2009; Dahlström and Johnson, 2007 and Brenton et al., 1999).

The results reflect that one unit, increase in infrastructure (INFR) brings about 0.0105 units increase in the dependent variable (Table 6) i.e. INFR showing positive significant effect on FDI with reference to the Asian economies. According to the study of Alemu (2012) the availability of infrastructure in the host country is necessary condition in term of locational advantage, increases the productivity and has a significant role in attracting foreign investors and MNCs. The current study results are consistent with following studies for example (Quazi, 2014; Alemu, 2012; Canning and Bennathan, 2000; and Mody, 1992).

The relationship between education (EDU) and FDI is positive and significant by visualizing the (Table 6) as it accounts for the availability of skilled and semi skilled labour in the host economy which means that the coefficient of education is 0.0521 different from zero. When there is one unit increase in education brings about 0.0521 units increase in FDI % of GDP. As Alemu (2012) the role of education is important and attracts foreign investors and MNCs as it measures the quality of skilled labour and semi skilled labour, which is available in most of the Asian countries. The current study findings are consistent with existing literature (Alemu, 2012; Al-Sadig, 2009 and Rehman and Naveed, 2007).

The political stability (PSTABILITY) has expected positive sign but insignificant contributor in the regression model in the current study. Which means the coefficient i.e. 0.0206 of (PSTABILITY) is not different from zero as the p-value is 0.157 which is greater than 0.05. The current study results are inconsistent with the existing literature Quazi (2014) and Al-Sadig (2009) who found that political stability has positive 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.

The variable inflation (INFL) is insignificant but with negative sign as expected. The coefficient of INFL is -0.0156 with p-value is 0.554 which is greater than 0.05 meaning that INFL has found no effect on dependent variable. The current study findings are consistent with study of Busse and Hefeker (2007) and Drabek and Payne (2002) as they examined that inflation has negative but insignificant effect on incoming FDI.

This study could not find the variable HEALTH (life expectancy) significant contributor in regression model as its coefficient is -0.1248 (where opposite coefficient sign obtained, to the existing literature) with p-value is 0.227 meaning that HEALTH is not affecting the response variable. Whereas a country fails to ensure adequate health facility to the citizen and the other aspect is not having healthy workforce for employing in MNCs, hence it is less likely, to attract incoming FDI in the host economy (Alemu, 2012). The current study results are inconsistent with prior study of Alemu (2012) who verified that health is

positive and significant variable which tend to have healthy workforce is one of the important factors which can attract more inward of FDI and MNCs in the host economies.

Table 6: Random Effects GLS Regression, 1995-14

Dependent variable is FDI % of GDP				
Independent variables	Coefficient	Std. Err.	z statistic	P-value
Cons	3.6886	6.2738	0.590	0.557
CPI	-0.9301	0.2706	-3.440	0.001***
GDPG	0.2125	0.0367	5.790	0.000***
OPEN	0.0734	0.0061	11.950	0.000***
INFR	0.0105	0.0042	2.480	0.013***
EDU	0.0521	0.0203	2.570	0.010***
PSTABILITY	0.0206	0.0145	1.420	0.157
INFL	-0.0156	0.0263	-0.590	0.554
HEALTH	-0.1248	0.1034	-1.210	0.227
Wald Chi^2 = 238.51 with p-value = 0.000, R^2 = .4225 and rho = .3637				

Note: N = 740 unbalanced panel data (***=1%, **=5%, *=10%)
Source authors' calculations.

In order to better selection of random effects model, which is used in the present study, since the results of fixed effects model are also tested. The results of fixed effects (within) regression are presented in appendix Table A3 the value of rho is .4134 which means that 41.34% of variance is because of the differences across the panels. The overall R^2 = .3929 which indicates that there is 39.29% variation in response variable FDI is due to the variation in explanatory variables used in the study. Moreover, the value of F statistic is 22.60 with p-value is 0.000 which suggests that the overall model is fit. Both the models, REM and FEM are fit for data. However Hausman specification test suggested the REM, therefore this study preferred and used random effects model for data analysis.

The second part of the study is about the comparison of Pakistan average corruption during 1995 to 2014 with sampled countries. In order to fulfill the purpose this study conducted ANOVA analysis. The results of ANOVA analysis are presented in the (Table 7). The first column is unlabeled source of variance having two rows between groups (the estimate that measures the effect and error) and within groups (the estimate of error). The second column of the table gives the sum of squares for each of estimates of variance. The third column depicts the degree of freedom i.e. in this study there are 37 Asian countries which represents in first row 'between groups' for which degree of freedom calculated as 37-1 = 36, degree of freedom value for 'within groups' is 703 that is determined, as the current study time span is 1995 to 2014 (n = 20), subtracted one from each unit's sample size i.e. 20-1 = 19 and then multiplied it with the number of units (37*19=703). Mean squares are presented in column four, each mean square is obtained by dividing the sum of square by its respective degree of freedom. The fifth column of the Table 7 shows the F-value that calculated as dividing the mean square 'between groups' by the mean square 'within groups' and the sixth column reflects the p-value. Where F value is 299.357 and p-value is 0.000 which suggests that to accept alternative hypothesis as corruption mean differences of 37 sampled countries are different against the null hypothesis that is corruption mean differences of sampled countries are same. Since the ANOVA result is statistically significant reported in Table 7 therefore every country mean CPI score (represents corruption) is different from the other country. However, Table 7 results are not showing how much one country mean CPI score is different from other. To address these

difference among the countries mean CPI score this study used the ANOVA technique of multiples comparisons that is Least Significant Difference (LSD) technique.

Table 7: ANOVA analysis, 1995-14

Corruption					
	Sum of Squares	df	Mean Square	F	Sig
Between Groups	2402.160	36	66.730	299.357	0.000***
Within Groups	156.699	703	0.223		
Total	2558.860	739			

Note: N = 740 unbalanced panel data (***=1%, **=5%, *=10%)
Source authors' calculations

Table 8 displays the ANOVA analysis that reports and compares the level of corruption in Pakistan with the sampled Asian economies on the basis of Corruption Perception Index (CPI) score published by the reliable and widely accepted source "Transparency International Organization" which ranks the country by conducting multiple surveys about the country concerned and its publication is lunched in 1995 and reported the data annually. Therefore this study used the CPI data since 1995 to 2014 covering twenty years. According to the Transparency International Organization, the CPI score range is 0 to 10, lower rank represents i.e. 0 most corrupt economy and higher rank as 10 reflects the most clean economy. Moreover, the country with high rank (high CPI score out of 10) like Singapore in Asian CPI score is 8.40 in 2014 which shows the economy is approximately free from corruption. The present study conducted ANOVA analysis to compare the level of corruption on the basis of average CPI score of Pakistan with 36 sampled Asian economies given in (Table 8). The first column of the table got the name of the countries, mean CPI score, mean differences and Significance value are enlisted for each country in second, third and fourth column respectively from country 1 (Singapore) to 18 (China). In order to facilitate the reader and better understanding of the results this study revised the same process as mentioned above, in column five, six, seven and eight as name of country, mean CPI score, mean differences and significance value accordingly from country 19 (India) to 36 (Uzbekistan).

On the basis of current study results given in Table 8 show that the countries with high mean CPI score and significant mean differences Singapore, Hong Kong and Japan are ranked first, second and third in Asia representing lower corruption, in comparison of Pakistan having low mean CPI score 2.359 tend high level of corruption. The negative mean differences means countries with high mean CPI score and positive mean differences leads the countries with low mean CPI score than Pakistan mean CPI score 2.359. There are 25 countries ranked from (Singapore till Nepal) having negative and significant mean differences (calculated as Pakistan mean CPI score 2.359 minus sampled countries mean CPI score) which means that their mean CPI scores are different from the mean CPI score of Pakistan hence better performer in comparison of Pakistan. In addition, countries like Iran, Kazakhstan, Russia and Indonesia have negative mean difference but not significant meaning that their mean CPI scores are not statistical different from the mean CPI score of Pakistan. In sample of 37 Asian countries there are 29 countries (ranked at 1 Singapore and at 29 Indonesia) have high mean CPI score tend to lower corruption when compared with Pakistan mean CPI score 2.359 indicating high level of corruption as Pakistan ranked at 30 position after Indonesia. There are only seven countries such as Yemen, Kyrgyz, Cambodia, Azerbaijan, Tajikistan, Bangladesh and Uzbekistan with positive mean differences and lower mean CPI score than Pakistan mean CPI score, meaning that they perform worst and practicing in high level of corruption.

Table 8: Least Significant Difference (LSD) test for multiple comparison of sampled countries' corruption with Pakistan, 1995-14

Pakistan Mean CPI Score = 2.359							
Countries	Mean CPI	Mean differences	Sig	Countries	Mean CPI	mean differences	Sig
Singapore	9.096	-6.737	0.000***	India	3.083	-0.724	0.000***
Hong Kong	7.866	-5.507	0.000***	Georgia	3.065	-0.706	0.000***
Japan	7.112	-4.753	0.000***	Armenia	2.870	-0.511	0.000***
Israel	6.630	-4.271	0.000***	Philippines	2.841	-0.482	0.000***
Qatar	6.185	-3.826	0.000***	Vietnam	2.704	-0.345	0.021**
Cyprus	5.965	-3.606	0.000***	Laos	2.685	-0.326	0.029**
Oman	5.560	-3.201	0.000***	Nepal	2.665	-0.306	0.041**
Bahrain	5.445	-3.086	0.000***	Iran	2.630	-0.271	0.070*
Malaysia	4.976	-2.617	0.000***	Kazakhstan	2.550	-0.191	0.201
Korea (South)	4.840	-2.481	0.000***	Russia	2.457	-0.098	0.514
Jordan	4.825	-2.466	0.000***	Indonesia	2.416	-0.057	0.705
Kuwait	4.715	-2.356	0.000***	Yemen	2.270	0.089	0.551
Saudi Arabia	4.065	-1.706	0.000***	Kyrgyz	2.160	0.199	0.183
Turkey	3.908	-1.549	0.000***	Cambodia	2.120	0.239	0.110
Sri Lanka	3.395	-1.036	0.000***	Azerbaijan	2.090	0.269	0.072*
Mongolia	3.385	-1.026	0.000***	Tajikistan	2.080	0.279	0.062*
Thailand	3.369	-1.010	0.000***	Bangladesh	2.062	0.297	0.047**
China	3.354	-0.995	0.000***	Uzbekistan	2.010	0.349	0.020**

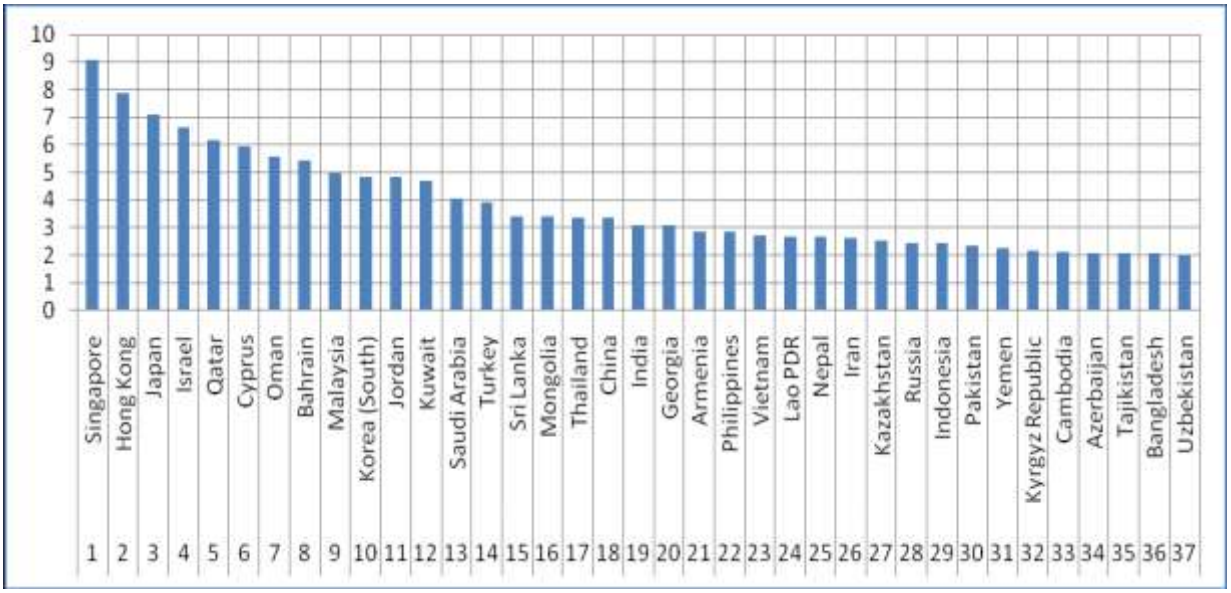
Note: N = 740 unbalanced panel data (***=1%, **=5%, *=10%)
Source authors' calculations.

Figure 1 contains the mean Corruption Perception Index (CPI) score of the sampled 37 countries included Pakistan. According to Transparency International Organization, CPI score range is 0 (most corrupt economy) to 10 (most clean economy), meaning that country with high CPI score considered less corrupt and otherwise. On y-axis mean CPI score and on x-axis the sampled 37 countries of Asian economies along with the ranking on the basis of current study findings (1995 to 2014) are reported and shown in (Figure 1). The curve represents the downward slope because the mean CPI score of countries are arranged in order from largest to smallest scores with the respective ranking. Moreover, economy like Singapore with high mean CPI score is 9.096 which is close to 10 hence considering less corrupt economy and Uzbekistan with low mean CPI score is 2.01, nearby 0 tend to most corrupt economy therefore ranked at first and thirty seven (last) position in Asia respectively as shown in (Figure 1).

Similarly, Pakistan mean CPI score is 2.359 low distance from 0 considering lying in a danger zone and corrupt economy. To visualize the Figure 1 in sample of 37 Asian countries the position of Pakistan is not good as ranked at position thirty after Indonesia. It indicates there are high level of corruption and weak

governance system as well as low quality and inefficient institutions in Pakistan. There are only seven countries such as Yemen, Kyrgyz, Cambodia, Azerbaijan, Tajikistan, Bangladesh and Uzbekistan with mean CPI score 2.27, 2.16, 2.12, 2.09, 2.08, 2.062 and 2.02 (close to zero) respectively in Asia having lower mean CPI scores than Pakistan which means more corrupt economies. According to panel study of Al-Sadig (2009) confirmed that foreign investors' value to the quality of institution and corruption reduce the inward of FDI to the host country. Keeping in view of the Al-Sadig (2009) findings host country corruption and institutions are important factors which are widely considered by the foreign investors before making investment decision in abroad.

Figure 1: Average Corruption Perception Index (CPI) in Asian economies, 1995-14



Note: N = 740 unbalanced panel data
Source authors' calculations.

V. CONCLUSION

Corruption is the serious issue in Asia and especially Pakistan which not only deter FDI but it has harmful effect on economic growth. However the present study is conducted to examine the effect of corruption on FDI in first part. In the second part of the study compare the level of corruption of Pakistan with sampled countries. To achieve these objectives this study used a sample of 37 Asian countries including Pakistan and collected annual data for 20 years (1995 to 2014). In the study FDI is dependent variable along with explanatory variables corruption perception index, GDP growth, Openness, Infrastructure, Education, Political Stability, Inflation and Health. In order to analyse the effect of corruption on FDI, panel data analysis is carried out. Thereafter using the various diagnostic statistics that is chow test, Breusch pagan LM test for random effect and Hausman test, Rand Effects Model is selected for data analysis. Moreover, VIF test for multicollinerity and Breuschh-Pagan / Cook-Weisberg test for heteroskedasticity. The findings suggests that corruption has negative significant effect on inflow of FDI (as p-value is less than .05) which means that the host country corruption discourage the foreign investors and serious hurdle in way of inward FDI in Asian economies. Moreover, overall model is fit as the p-value is 0.000 (less than 5%) with Wald chi2 value is 238.51. The overall R^2 value is 0.4225 which means that 42.25% variation in FDI is explained by the model and the remaining 58.75 variation is because of other factors which are not included in the model.

The second part of the study is based on comparison therefore ANOVA analysis is conducted. The result indicates that the average CPI score of Pakistan is 2.359 that is very low (poor performance) and ranked at 30th position in sample of 37 countries which means that 29 countries are less corrupt (having good governance) than Pakistan and only 7 countries are more corrupt.

The main objective of the present study was to analyze the effect of corruption on FDI in Asian economies or the factors like corruption and other determinants that can increase in the inflow of FDI in the host country. However, to assess the other types of criminal activities are difficult to observe directly (Treisman, 2000) but the researchers rely on the numbers surveys of corruption conducted by the Transparency International Organization. This study used the annual data on corruption from Transparency Interactional (2014) the time frame 1995 to 2014. To achieve the objectives the current research study used the data of 37 Asian economies including Pakistan for time period of 20 years i.e. 1995 to 2014.

The first objective of the study effect of corruption on FDI, the current study found that the corruption has negative and significant effect on FDI which not only is a serious hurdle in way of attracting inflow of FDI but harm the confidence of investors in Asia. The foreign investors take into account corruption as a crucial threat for their investment in host country. The variable GDP growth proved to be an important factor in the study. This implies that the stable GDP growth boost up the confidence of foreign investors hence attract more FDI in the economy. The contributors Open and Infrastructure play a significant role in incoming of FDI. As the economy with no restriction, trade barriers and open trade policy as well as well developed infrastructure such as proper communication, network system, roads, railway track and telephones etc can boost up the importance and attractiveness for FDI of the host country. Another most important determinant of FDI is education (secondary school enrollment). It indicates the availability of skilled and semi skilled labour of the host economy. Moreover, it can increase the public awareness about their rights and duty of bureaucrats as they are public employees, have to serve the public, which is a charm of the host country for foreign investors and MNCs.

Keeping in view of the second objective of the study that is compare the level of corruption on the basis of mean Corruption Perception Index (CPI) of Pakistan with sampled 36 countries. For this purpose this study conducted ANOVA analysis and found that in sample of thirty seven Asian economies Pakistan ranked at thirtieth position as with low mean CPI score means that country practicing high level of corruption and there are twenty nine countries which perform better than Pakistan. Only seven countries' performance are worst than Pakistan in Asia. Singapore is a country with highest mean CPI score is 9.096 which reveal less corruption as having sound and efficient institutions hence performed well. These are the host country attractiveness for MNCs and foreign investors to supply capital. In Asia Singapore is the top performer county on the basis of mean CPI scores. In order to eliminate the high level of corruption Pakistan has to improve the Corruption Perception Index by following the Singapore paradigm, which tend to boost up the confidence of MNCs and foreign investors.

5.1 Recommendations

The present study convey an important message that the inflow of FDI can be increased in Asian economies if the policymakers, formulate the policy to curb the level of deep rooted corruption on priority basis. In order to have morally developed authoritative officials and workforce, impart moral education which tends to make behaviour as favouring the institutions heartedly and stimulate their sense of nationalism.

Inflow of FDI is significant for Asian economies but need to ensure favourable socio-economic as well as political environment and improve law and order situation. This can be achieved, by implementing, rule of law and better quality of institutions, improve the governance system, and by enhancing the quality of economic institutions and hence providing conducive atmosphere for foreign investors.

The present study analyzed the effect of corruption on FDI in Asian economies. The researchers are encouraged to study other factors such as natural resources and Geo-Strategic significance of Pakistan and Asian economies, and also examine Corruption Perception Index (CPI) and choose those factors which are more important for attracting FDI in the host country.

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