ISSN 2710-4761 (Print)
ISSN 2073-0969 (Online)
http://doi.org/10.52587/JEMS020104
Journal of Economics and Management Sciences
Spring 2021, Volume 2, No.1, pp 38-56

SOCIO-ECONOMIC AND INSTITUTIONAL DETERMINANTS OF FOREIGN DIRECT INVESTMENT IN SOUTH ASIA

Nayyra Zeb[1], Ishtiaq Ahmad[2], Ali Azam[3] & Hafeez Ur Rehman[4]

ABSTRACT

Determinants of foreign direct investment (FDI) is the key area of research in development economics. Earlier studies did not give due weight to the segregation of analysis across economic, social, and institutional factors for FDI. This study specifically attempts to explore the intervening role of social and institutional factors which affects the relationship between economic factors and inward FDI. For this purpose, three segregate models relating to economic, social, and institutional factors along with a composite model comprised of all these factors are taken into consideration in this study. Panel data utilized is related to South Asian countries from 2008 to 2016. In the light of Breusch-Pagan LM Statistics, Pooled OLS estimates are preferred for analyses. This study leads to the conclusion that in segregation analysis economic factors and institutional factors have an important role in attracting FDI, but social factors have no significant role in this regard. The intervening role of social and institutional factors is not found in this study. The only factors which are recognized in the composite analysis are economic. Enlarged market size having an efficient financial market with no inflationary pressure is found to be an economic environment in the South Asian region which is helpful for attracting FDI. The rule of law is not found to be an effective characteristic for inward FDI.

Key Words: *FDI, Socio-Economic, Institutions, South Asia*

---

[1]Assistant Professor, Department of Management Sciences, Khawaja Fareed University of Engineering and Information Technology, Rahim Yar Khan, Pakistan.
[2]Assistant Professor, Department of Economics, The Islamia University of Bahawalpur, Pakistan. Email: ishtiaq.ahmad@iub.edu.pk
[3]Assistant Professor, Department of Economics, The Islamia University Bahawalpur, Pakistan.
[4] Lecturer, Department of Economics, The Islamia University of Bahawalpur, Pakistan.

BACKGROUND OF THE STUDY

The role of foreign direct investment for development is not yet clear, and evidence enormously tilts in both directions [(Griffin, 1970), (Haddad & Harrison, 1993), (Carkovic & Levine, 2002), (Gourinchas & Jeanne, 2013), (Bermejo, Carbonell, & Werner, 2018); (Rosentein-Rodan, 1961), (Barro and Sala-i-Martin, 1999), (Blomstrom et al., 2000), (UNCTAD , 2003), (Durham, 2004), and (Basu and Guariglia, 2007)]. It is pointed out that in the absence of prudent allocation and utilization of FDI the developing World might not be regarded as beneficiary of FDI. However, keeping in view resource constraints the developing World is endeavoring to fill saving-investment gap [(Harrod, 1939), (Domar, 1947), and (Rostow, 1959)] through FDI and struggling hard to attract investment from all over the World [(Wint & Williams, 2002), (Gastanaga, Nugent, & Pashamova, 1998), and (UNCTAD, 1998)].

In this background, most of the scholarly literature explored the determinants of inward FDI for developing countries. Again no consensus is observed for highlighting core determinants of FDI for Developing World and the determinants vary from time to time, region to region, and environment to environment [(Büthe & Milner, 2008), and (Economou et al., 2017)]. The rate of returns is the core element for attracting FDI. It is positively affected by economic environment of the host country which could be termed as an important determinant of FDI. Market size, trade liberalization, exchange rates, credit markets, infrastructure, and inflationary pressures are the core economic factors for making economic environment to attract international investors. Enhanced social development is also found to be an important element in improving productivity of economic factors. Hence, it is suggested that social development plays its role, as intervening variable, in the relationship between economic environment and inward FDI. Recently, uncertainty in rate of returns is also the focus of inward FDI. If rate of returns is not certain then investors will avoid investing. With this perspective role of institutions as determinants of FDI that is institutional determinants, also takes its importance in attracting inward FDI. Hence, two core categories of determinants are found for inward FDI that is economic and non-economic as intervening variables (society and institutions). Literature survey on determinants of FDI, as discussed below, points out that no earlier study takes into account a comprehensive analysis of the determinants of FDI while focusing both the categories for the determinants of inward FDI that is economic and non-economic (institutional determinants). This study attempts to contribute to the scholarly literature on the determinants of inward FDI by exploring the role of social and institutional factors as intervening variables in the relationship between economic determinants and inward FDI in developing countries. Further non-economic determinants of inward FDI are uniquely segregated in this study between social and institutional factors because social factors relate to general society whereas ‘institutional’ factors relate to governmental institutions’ approach to the society that is governance. In

this way this study could be termed as a comprehensive analysis of the determinants of inward FDI.

South Asian developing economies attracted low a level of FDI, and its share in total inward FDI to developing countries was found to be less than one percent. The economic environment, social development, and governance in institutional setup are also not promising in South Asia (Sahoo, 2006). Comparatively performance of developing countries from Latin America and East Asia is found to be very well. The eagerness of South Asian countries is relatively more than other developing countries. Along with this, catchup effect for inward FDI is also observed to be elevated in this region. Hence, keeping in view higher marginal effects of the determinants in South Asia, this study has selected this region as a representative of the developing world, however, generalizations of the study will not be utilized for developing world. It is left to further research for exploring the issue in case of developing countries.

Core objective of this study is to conduct a comprehensive analysis for South Asian countries to find out the determinants of FDI and to explore the role of social and institutional factors as intervening variables in the relationship between economic factors and inward FDI. In Section 1 of this study an introduction to the topic is discussed wherein research question along with contribution of the study is highlighted. Next in Section 2, brief survey of the concerned and the up-to-date evidence is presented. Section 3 is about data and methodology which leads to the results and discussion in Section 4 while Section 5 concludes the analysis.

LITERATURE REVIEW

Athukorala (2009) concludes that determinants of FDI are multidimensional, whereby investors are in search of markets, resources, and productive efficiency. Even these dimensions look different, but objective is purely economic that is profit maximization. Most of the literature cited in publications overwhelmingly consider economic dimension of the determinants of inward FDI. Gravitational factors (market size and distance) are found to be well-known determinants of inward FDI in case of transitional economies (Demekas, Horvath, Ribakova, and Wu, 2007). The large market size provides economies of scale and is the leading cause of attraction for foreign investment (Riedl, 2010). In an analysis considering a panel of 50 States in US from 1984 to 2007, it is shown that economic factors of growth, unemployment, per capita income, and economic freedom are the core elements attracting FDI at states level (Pearson, Nyonna, & Kim, 2012). Weaker economic institutions cause foreign investment to decline in different regions of China, and this effect is found to be stronger in enterprises' investments than joint ventures' investment (Du, Lu, & Tao, 2012). Hayakawa, Lee,, & Park, (2013) have explored determinants of inward and outward FDI and emphasizes that economic factors of market size, wages, and entry costs play an important role in inward FDI.

Important role of economic factors for inward FDI is also evident in the case of developing countries (Kok & Acikgoz Ersoy, 2009). The case of sub-Saharan African countries is found to be different for inward FDI in response to economic factors. Effect of openness is even found positive but less effective in Africa, while other economic factors are not proved to have a significant role in this regard (Asiedu, 2002). Even openness is not found to be a promising determinant of inward FDI in case of a panel dataset of 32 developing countries from 1982 to 2008, but market size, infrastructure, reserves and labour costs are found to be the main economic factors to attract FDI. Economic factors play central role in attracting overwhelming FDI in a selected group out of developing countries leaving behind other developing countries in inward FDI performance (Tarzi, 2005). In a time-series framework from 1970 to 2007 Hakro and Ghumro (2011) have concluded that stability and continuity in macroeconomic performance of Pakistan's economy is not only effective in the short-run for inward FDI, but also in the long-run. Economic factors are important in OECD countries while economic factors along with institutional factors are found essential for developing countries (Economou et al., 2017).

Recent literature, however, diverts the attention of research towards the importance of non-economic factors for variations in inward FDI (Gastanaga et al., 1998). (Noorbakhsh, Paloni, & Youssef, (2001) has mentioned the importance of human capital as a core determinant of inward FDI. In developing countries, a negative relationship of democracy and inward FDI is explained by Li and Resnick (2003) on the basis that democracy is the hurdle in the way of monopolization process of multinational corporations (MNCs). The significant role of political stability is proved as intervening variable for a relationship from economic variables to inward FDI (Najaf and Najaf, 2006). In developing countries Dutta and Osei-Yeboah (2013) explores an interrelationship between human capital and institutional factors of political rights and civil liberties because in presence of institutional factors the impact of human capital on inward FDI is found increased. Long run causality in case of institutional factors and inward FDI is found to be two way in case of Pakistan while having significant impacts on services and manufacturing sectors (Shah, Ahmad, & Ahmed, 2016). Filippaios, Annan-Diab, and Hermidas (2017) takes into consideration a large sample of investment projects in developing and emerging countries and finds that there exists a relationship between civil liberties and inward FDI and this relationship is augmented in the presence of human capital. The role of governance is also found to be supportive for impact of technology on inward FDI in emerging markets (Kayalvizhi & Thenmozhi, 2018).

However, enormous evidence is available on FDI but this study focuses on determinants of inward FDI and finds that out of two main factors of economic and non-economic determinants no earlier study takes into consideration the issue comprehensively and treats economic, social, and institutional factors as integrated determinants of FDI. Along with this it is also highlighted here that earlier no set of institutional factors (social and

institutions) is utilized to explore intervening role of institutional factors in the relationship between economic factors and inward FDI.

DATA AND METHODOLOGY

Data utilized in this study is a panel data of nine years from 2008 to 2016 for five countries of South Asia; Bangladesh, India, Nepal, Pakistan and Sri Lanka. Years and countries are based on the availability of data. Data measurement and sources are discussed in the following. Where specific source is not mentioned, the data is collected from World Development Indicators (WDI). As the number of countries (n=5) in sample is less than no of years (T=9) and T is also not sufficiently large, so, the stationary and cointegration analysis is not utilized for analysis. In current scenario with few n and T it is adequate to utilize regression technique for econometric analysis of the study. Three basic regression estimates are available for panel datasets; pooled/panel OLS estimates, random effect estimates, and fixed effect estimates. The utilization of these estimates depends upon heterogeneity among cross-sectional units of panel. Heterogeneity represents unobserved variables among cross-sections that do not change over time and in absence of heterogeneity panel is known to be homogeneous. Homogeneity among cross-sectional components of a panel is the basic assumption for utilizing pooled OLS methodology where same constant is utilized for all cross-sections. In case no homogeneity is assumed, then heterogeneous panel is either estimated by random effect or fixed effect estimates. Random effect estimates are preferred when it is assumed that heterogeneity issue is not severe and then constant term along cross-sections is randomly chosen. However, in case that cross-sectional units in panel are significantly heterogeneous then constant term is assumed to be fixed among cross-sections and fixed effect estimates are preferred for analysis purposes. To observe homogeneity in the panel is not an easy task and is a matter of personnel judgment; therefore, econometrics offers some certain tests to verify heterogeneity. It is a twostep procedure. In the first step F-Statistics/Breusch-Pagan LM Test Statistics is used to find out whether random effect model is preferred or not. When heterogeneity is assumed, then in second step Hausman Test is utilized to know whether random effects estimates are preferred over fixed effects estimates or not. In case that random effect estimates are not suitable then fixed effect estimates should be the choice of researchers. This is why it is suggested that special care should have been taken for utilization of fixed effect estimates.

In this perspective following model is utilized in this study for the purpose of analysis:

$$lnfdi_{it} = \alpha + \beta X_{it} + \mu_{it} \quad [1]$$

Where, FDI, $lnfdi_{it}$, is the dependent variable, X_{it} denotes set of independent variables, i represents a cross-sectional element and t represents time element. The parameter α and β are representing constant and slope whereas μ is the error term. Independent variables comprise of two different vectors; economic, and non-economic. Vector of economic

factors is helpful for attracting FDI on account of their capability to enhance rate of return. Vector of non-economic factors are the institutional factors. In this study institutional factors are divided into two subcategories; social and institutional, and each category is treated separately with separate vectors. The factors which are specifically related to norms of society are included under the subcategory of social determinants of FDI, whereas the factors which are related to effectiveness of governmental institutions that is governance are treated as institutional determinants of FDI.

Determinants of FDI

As per methodology in the first step following three models are analyzed for three different vectors of determinants of inward FDI:

Economic Determinants:

$$lnfdi_{it} = \alpha + \beta_{2k} ECON_{it} + \mu_{it} \quad [2]$$

Here $2k$ is the number of independent variables related to vector of economic determinants of FDI shown by $ECON$. The variables included in $ECON$ are GDP growth, openness, real exchange rate, broad money, and credit market regulations. Measurements and acronyms of the variables along with their hypothesized relationship with dependent variable are discussed during analysis presented below in Section 4.

Social Determinants:

$$lnfdi_{it} = \alpha + \beta_{3k} SOCIAL_{it} + \mu_{it} \quad [3]$$

Social determinants of FDI, are represented by $SOCIAL$ and $3k$ is the number of independent variables included in it. The variables of political rights, human development index, legal system & property rights, and civil liberties are used as social vector.

Institutional Determinants

$$lnfdi_{it} = \alpha + \beta_{4k} INSTITUTION_{it} + \mu_{it} \quad [4]$$

This equation about institutional determinants of FDI that is $INSTITUTION$, includes government effectiveness, rule of law, regulatory quality and control of corruption, whereas $4k$ is the number of its independent variables.

Intervening Role of Institutional Determinants

The second step in methodology of this study is to find out the role of social and institutional determinants of inward FDI as intervening variable in the relationship between economic factors and inward FDI as discussed in Equation [2] above. For this purpose the last model to be estimated for analysis of this study is as under:

$$lnfdi_{it} = \alpha + \beta_{2k} ECON_{it} + \beta_{3k} SOCIAL_{it} + \beta_{4k} INSTITUTION_{it} + \mu_{it} \quad [5]$$

FINDINGS OF THE STUDY

In Table: 4.1, variables used in this study, measurement of the variables, acronyms, and descriptive statistics are presented. The overall average value of the data is calculated as mean in Columns 4 of the table. After that standard deviations are calculated for overall data, cross-sectional data and time series data. Overall variance around mean is calculated

for pooled dataset. In case of between variance firstly an average on the basis of time values is computed for each cross-sectional unit then between variance is computed between cross-sections. The within variance is the variation among cross-sectional unit over time. It is necessary to keep in mind that log-log is the functional form of all the models of the study. This is due to the reason that measurement unit of the variables are different and uniformity in analysis is required for comparative analysis. Uniformity in analysis becomes crucial specifically when core question of the result is to inquire about the intervening role of institutional determinants of FDI.

Table: 4.1: Summary Statistics

Variable (in Logarithm)	Measurement	Acronym	Mean	Standard Deviation		
				Overall	Between	Within
Foreign Direct Investment	Foreign direct investment, net inflows (% of GDP)	lnfdi	-0.110	0.981	0.802	0.660
Gross Domestic Product	GDP (constant 2010 US$)	lngdp	25.660	1.559	1.716	0.144
Openness	Trade (% of GDP)	lnopen	3.780	0.203	0.199	0.093
Real Exchange Rate	Real Exchange Rate (IMF)	lnrer	4.416	0.301	0.303	0.124
Broad Money	Broad money (% of GDP)	lnbm	4.119	0.273	0.279	0.104
Credit Market Regulations	Index developed as a Economic Freedom of the World Index*	lncmr	1.879	0.044	0.025	0.038
Political Rights	Index developed by Freedom House	lnpr	1.247	0.321	0.324	0.131
Human Development Index	Index developed by World Bank	lnhdi	-0.521	0.132	0.141	0.035
Legal System and Property Rights	Index developed as a Economic Freedom of the World Index*	lnlspr	1.401	0.231	0.241	0.076

Civil Liberties	Index developed by Freedom House	lncl	1.378	0.168	0.182	0.032
Government Effectivenee	World Governance Index	lnge	3.442	0.444	0.481	0.085
Rule of Law	World Governance Index	lnrl	3.489	0.423	0.448	0.121
Regulatory Quality	World Governance Index	lnrq	3.415	0.323	0.347	0.079
Control of Corruption	World Governance Index	lncc	3.296	0.440	0.460	0.142

*Index disseminated by FRASER Institute and The CATO Institute
Prepared by: Authors

In Table 4.1, negative values are also observed in the table which is due to the logarithm of lower values of original data. No discrepancy is observed in the table and mean of all variables and their variances are found as per expectations. It is also observed that between variance of all the variables except credit market regulations is greater than within variance. None of the between variance or within variance is closer to zero. Even some of values are observed to be closer to zero but in the perspective of logarithm values these could not be termed as problematic. Therefore, no odd results are observed in the descriptive analysis of the data.

The negative correlation of FDI is evident in the table for real exchange rate, broad money, civil liberties, and political rights. Exchange rate and inflation are hypothesized to be in negative correlation with FDI. However, correlation between civil liberties/political rights and FDI is claimed to be positive. Busse (2004) investigates this relationship and explores that up to 1980s this relationship was found to be negative and increased FDI is observed in oppressed countries. But in 1990s this relationship was estimated as positive. Filippaios et al. (2017) have also mentioned a non-linear relationship between the two. In such scenario when no clear evidence for positive relationship between civil liberties/political rights and inward FDI is concluded, then negative correlation is not strange.

In case the variables of model investigating social determinants of FDI no correlation coefficient is observed to be more than 0.80 which is a positive sign. However, independent variables of the model exploring institutional determinants of FDI are found to have correlation coefficients between 0.80 to 0.90 which is even high but not worried. A similar analysis is evident in the table when correlation coefficients of independent variables relating to composite model are observed wherein only human development is

even highly correlated but not to be worried. Therefore, correlation coefficients also pose a positive analysis among the variables of the model (see annexure table 1).

Thereafter, next important problem related to the analysis for achieving the objectives of the study is to inquire about homogeneity among the cross-sectional units of the study because study in question is related to panel dataset. In case of homogenous data, pooled/panel OLS is sufficient to find out the determinants of inward FDI. Otherwise, it is to decide that out of random effects and fixed effects which one is preferred for regression analysis. For this purpose first of all, Figures 4.1-4.3 are presented here to visually decide whether countries in the analysis are homogenous or not. However, as mentioned in data and methodology above that Breusch-Pagan LM Test and Hausman test are used in econometrics for this purpose (see annexure).

Figures 4.1 and 4.2 are related to the data utilized in the study. In Figure: 4.1 it is attempted to analyze heterogeneity across cross-sectional unit of the study. For this purpose on horizontal axis cross-sections are taken, and then for each cross-sectional unit, mean value of FDI across the years in the perspective of its dispersion is drawn on vertical axis. It could be observed in the Figure that the mean values of FDI for all the countries except Nepal are almost similar. Only in case of Nepal the average value is bit lower in comparison to other countries. In case of Figure 4.2 it has been endured to express the data for considering heterogeneity across time. Horizontal axis represents the time and vertical axis represents values of FDI in cross-sectional units along with dispersions. It is easily concluded that data in case of time is almost homogeneous. A small heterogeneity observed across countries might be due to the size of the economies which is quite observable. It looks necessary to further explore the data in the perspective of market size. In Figure 4.3, data utilized is collected from United Nations Conference on Trade and Development (UNCTAD) forum while keeping in view the context of this study. In Panel-A of the Figure the FDI is measured in terms of currency while in Panel-B population of each country is also considered and FDI is measured in terms of per capita. A close observation of Panel-A and Panel-B of the Figure 4.3 highlights that the performance of FDI is totally different in two different scenarios regarding measurement of FDI. In these circumstances, it could be concluded that bit heterogeneity observed in Figure 4.1 is not problematic. Therefore, it could be assumed that the panel data used in this study is quite homogenous and Pooled OLS estimates are adequate in the regression analysis of the panel data. But visual inspection could be limited and might not be able to guide in the right direction. Hence, econometric inspection for detecting heterogeneity is also necessary to be evaluated. This is why in each regression result presented hereafter the test of Breusch-Pagan LM test is conducted along with Hausman Test. As per methodology as described above in first step when F-Statistics is greater than 0.05 then the null hypothesis that "random effect is suitable" is rejected. Therefore, there is no need to go for Hausman test

to specify whether random effect model is preferred to fixed effect model or not. This is why only Breusch-Pagan LM test statistics are reported in the analyses below.

Table 4.3 is about disaggregated analysis related to determinants of FDI for economic, social and institutional determinants of FDI. In each analysis first of all Breusch-Pagan LM Test is considered. It is obvious in all the disaggregated models discussed in the table that statistics are zero and probability values are 1. So far as interpretation is concerned it is argued that the statistic is not different from zero and null hypothesis is rejected. However, reported values are observed to be strange. This is due to reporting procedure of Stata-Software on account of problems in degree of freedom. It is also clarified by the software that there is no issue in data and interpretation will not differ from the interpretation that probability is greater than 0.05 and pooled effects estimates are suitable in each case.

In first panel of Table 4.3 economic determinants of inward FDI are analyzed. At first signs of estimates are discussed. Market size measured by GDP is positively related with FDI. This result is adequate in theoretical background because larger markets are suitable for higher returns and attracts foreign investors. Theory also suggests that liberalization of the economy for foreign trade will be helpful for domestic investments. Openness as measured by trade as percentage of GDP is hypothesized to be positively related with inward FDI. Estimates of Pooled OLS regression also confirm this relationship. Real exchange rate is helpful to estimate returns on investments. As the real exchange rate appreciates, value of exports in host country declines which consequently decreases rate of returns in host country. Therefore, foreign investors desire exchange rate stability in host countries. Expected sign of minus could be observed in the results. Broad money is the representative of inflation which is negatively related to economic growth and FDI. In case of low performance due to economic environment of the country, investments are at risk. Risk element is not favourable for foreign investors. This theoretical sign of negative is also apparent in the results. Better credit market regulations pose a stable financial market which is helpful to boost better economic environment regarding investments in the country. Therefore, in such scenario foreign investors are interested in investments at host country. The sign of credit market regulation is as per theoretical expectations.

After it is observed in Table 4.3 for panel of economic factors attracting FDI that all of the signs of the variables are in line with the theoretical aspect, it is now time to explore statistical significance of the variables. Only openness is not found to be significant. Variables of market size and inflation are significant at 1 percent level while those of real exchange rate and credit market regulations are significant at 5 percent level. Economic factors for attracting FDI are observed to behave ideally but yet diagnostics are also required to be checked to enhance the reliability of such results. Results reported here are robust which show that heteroscedasticity is no more a problem. Along with this cross-

sectional dependence is also not found in the model. Therefore, reliability of results is also satisfactory.

Second panel of Table 4.3 is about social determinants of inward FDI and four variables are considered here: human development index, legal system and property rights, political rights and civil liberties. Intuitively it looks that better social structure of a society should be helpful in attracting more FDI but realty is bit different. Li & Resnick, 2003 discovers that democracy is pro-domestic process and does not allow extractive agreements, therefore, is not favourable for returns oriented multinational corporations (MNCs). Hence even a positive sign is expected for all variables included in social and institutional model but negative sign will also not be strange. It could be concluded that desired objective of the multinationals is the returns on investment and not the status of social or institutional set up of the societies.

With this understanding when sign of social determinants of FDI are observed in second panel of the Figure 4.3, it come to surface that civil liberties and human development index are positively related with inward FDI whereas legal structure and political rights are negatively related. These relationships look practical on rational grounds. Human development increases productivity and civil liberties pose stable private sector and both these elements are adequate one for returns on investments. On the other hand legal structure and political rights are offshoots of democracy which might not be favourable for international investment. Now, when statistical significance of estimates is focused, this study reports two different results for social determinants of FDI; one with heteroscedasticity and other after resolving heteroscedasticity (robust results). Robust analysis shows that no social determinant of FDI is statistically significant whereas results in presence of heteroscedasticity show that variables of political rights and human development index are significant at 1 percent level. However both the results are reported here but this study tilts in favour of robust results.

Finally institutional determinants of inward FDI are presented in third panel of Table 4.3. It is apparent that government effectiveness and control of corruption are positively related with inward FDI. On the other hand rule of law and regulatory quality are negatively related with inward FDI. Understanding behind the relationship have earlier discussed that international investment seek opportunities on the basis of rate of returns and not on the basis of idealism. In this sense effective and honest governments could play a better role for international investments. However, rule of law and regulatory quality could limit extractive nature of international investments. Except control of corruption all variables of governance are statistically significant in this model.

Now after analyzing economic, social and institutional models exploring determinants of FDI separately it is time to verify intervening role of social and institutional factors in the relationship between economic factors and inward FDI. For this purpose now a composite model is analyzed. In composite model all the variables of model relating to economic

determinants of inward FDI are included. Whereas the variables of social and institutional models which are proved statistically significant are included as control variables to test their intervening power for economic factors attracting inward FDI. As discussed in Table: 4.3, robust results show no social variable statistically significant and results in presence of heteroscedasticity mentions two of the variables in social model as significant. On this basis two composite models are discussed in Table: 4.4 below: one with no variable out of social model and other with two variables from social model. This study will prefer the results with composite model wherein no variable from social determinants of FDI model are included because this model is based on robustness of the results in model discussing social determinants of FDI (see annexure table 4.3).

Theoretical relationships are already discussed. It could be observed that sign of all the economic factors is the same as is observed in segregated economic model. Similarly, statistical significance of economic factors is also the same except real exchange rate which is earlier proved significant is now insignificant in presence of social and institutional factors. The only variable out of social and institutional factors which is proved statistically significant is rule of law and its sign is also the same as observed earlier.

Table 4.4: Economic, Social and Institutional Determinants of Foreign Direct Investment in South Asia: Composite Analysis

Variable	**Coefficient (Simple)**	**S.E**	**Coefficient (Robust)**	**S.E**
lngdp	0.451*	0.166	0.417**	0.190
lnopen	0.230	0.792	0.981	0.736
lnrer	-1.646	0.982	-0.212	0.466
lnbm	-0.772*	0.228	-1.043*	0.210
lncmr	5.857**	2.991	7.808	4.322
lnpr	0.159	1.018	-	-
lnhdi	5.933	4.183	-	-
lnge	-0.211	1.140	0.775	0.649
lnrl	-1.566**	0.793	-1.141**	0.496
lnrq	0.308	0.809	0.044	0.788
CONS	-5.075	9.956	-22.799	13.422
Diagnostic Tests for Disaggregated Models				
Statistics	**Prob**	**Decision**	**Statistics**	**Prob**	**Decision**
1. Breusch Pagan LM Test					
0	1	Panel OLS	0	1	Panel OLS

2. Pesaran's Test of Cross Sectional Independence					
0.846	0.398	No Cross Sectional Dependence	0.886	0.376	No Cross Sectional Dependence

NOTE: Statistical Significance: *1 % level & **5 % level
Prepared by: Authors

Overall analysis in both the composite models is the same with one exception that sign of government effectiveness is different in the two. However, in both cases government effectiveness is proved to be statistically insignificant, therefore, no need of further elaborations.

CONCLUSION AND POLICY OPTIONS

This study utilizes panel dataset for five South Asian economies from 2008 to 2016 to discover determinants of inward FDI comprehensively by segregate and composite analysis of economic factors while considering intervening role of non-economic (social and institutional) factors attracting FDI. In segregate analysis impact of economic and non-economic factors is explored separately. The composite analysis investigates role of economic factors in the presence of non-economic factors. After presenting results and comprehensive discussions above now conclusions are generalized specifically for South Asian region in the followings, however, generalizations could also be helpful for developing countries.

Economic determinants in isolation are found to be most important for attracting FDI. Market size has the force to convince international investors for entering into the market. However in presence of inflationary pressure and depreciating host country's currency the investors avoid investing. Regularized credit markets are also proved to create positive environment for international investment in shape of FDI.

Social determinants consider those elements which are specifically related to household sector of the economy. When social determinants for inward FDI are analyzed in separation then no certain factor is found to be effective for attracting international investors towards host economies. Human development, legal structures, property rights, political rights and civil liberties, all, show no considerable impact on inward FDI. It is concluded that social factors in a society has no force to attract inward FDI.

Segregate analysis of institutional factors takes into consideration the factors which are specifically associated with performance of governmental institutions i.e. government effectiveness, rule of law, regulatory quality and control of corruption. Remarkable role of governance for inward FDI is established in this study. Rule of law and regulatory quality have negative impact while government effectiveness is found to play a positive role for inward FDI.

Composite analysis explores intervening role of social and institutional factors in the relationship between economic factors and inward FDI. This study concludes that social and institutional factors have no considerable impact on this relationship and core economic factors are sufficient to attract FDI. Market size, inflation, and financial market are found to be important factors in this regard. Increased market size having good financial market with no inflationary pressure is the core characteristic of economic environment as recognized in this study for attracting FDI. It is also evident in the study that governance in form of rule of law is not attractive quality for inward FDI.

In this background this study suggests that South Asian economies should focus on economic management for attracting FDI. The role of institutional factors in South Asia is not helpful in this regard. However, one of the implication out of this scenario is that South Asian countries should specifically focus on institutional factors too if the objective is not just attracting FDI but also the prudent utilization of FDI.

References

Asiedu, E. (2002). On the determinants of foreign direct investment to developing countries: is Africa different? *World development, 30*(1), 107-119.

Athukorala, P.-C. (2009). Trends and patterns of foreign direct investments in Asia: A comparative perspective. *Margin: The Journal of Applied Economic Research, 3*(4), 365-408.

Barro, R. J., & Sala-i-Martin, X. (1999). *Economic Growth*: MIT Press, Cambridge

Basu, P., & Guariglia, A. (2007). Foreign direct investment, inequality, and growth. *Journal of Macroeconomics, 29*(4), 824-839.

Bermejo Carbonell, J., & Werner, R. A. (2018). Does foreign direct investment generate economic growth? A new empirical approach applied to Spain. *Economic Geography, 94*(4), 425-456.

Blomstrom, M., Kokko, A., & Zejan, M. (2000). *Foreign Direct Investment*: Palgrave Macmillan, UK.

Busse, M. (2004). Transnational corporations and repression of political rights and civil liberties: An empirical analysis. *Kyklos, 57*(1), 45-65.

Büthe, T., & Milner, H. V. (2008). The politics of foreign direct investment into developing countries: increasing FDI through international trade agreements? *American journal of political science, 52*(4), 741-762.

Carkovic, M., & Levine, R. (2002). Does foreign investment accelerate economic growth. *Finance Department, University of Minnesota*.

Demekas, D. G., Horváth, B., Ribakova, E., & Wu, Y. (2007). Foreign direct investment in European transition economies—The role of policies. *Journal of comparative economics, 35*(2), 369-386.

Domar, E. D. (1947). Expansion and employment. *The American Economic Review, 37*(1), 34-55.

Du, J., Lu, Y., & Tao, Z. (2012). Institutions and FDI location choice: The role of cultural distances. *Journal of Asian Economics, 23*(3), 210-223.

Durham, J. B. (2004). Absorptive Capacity and The Effects of Foreign Direct Investment and Equity Foreign Portfolio Investment on Economic Growth. *European Economic Review, 48*(2), 285-306.

Dutta, N., & Osei-Yeboah, K. (2013). A new dimension to the relationship between foreign direct investment and human capital: The role of political and civil rights. *Journal of International Development, 25*(2), 160-179.

Economou, F., Hassapis, C., Philippas, N., & Tsionas, M. (2017). Foreign direct investment determinants in OECD and developing countries. *Review of Development Economics, 21*(3), 527-542.

Filippaios, F., Annan-Diab, F., & Hermidas, A. (2017). Civil and Political Liberties and FDI: An Evaluation of Emerging and Developing Economies *Growth Frontiers in International Business* (pp. 237-256): Springer.

Gastanaga, V. M., Nugent, J. B., & Pashamova, B. (1998). Host country reforms and FDI inflows: How much difference do they make? *World development, 26*(7), 1299-1314.

Gourinchas, P.-O., & Jeanne, O. (2013). Capital flows to developing countries: The allocation puzzle. *Review of Economic Studies, 80*(4), 1484-1515.

Griffin, K. (1970). Foreign Capital, Domestic Savings and Economic Development. *Oxford Bulletin of Economics and Statistics, 32*(2), 99-112.

Haddad, M., & Harrison, A. E. (1993). Are their Positive Spillovers from Foreign Direct Investment? *Journal of Development Economics, 42*, 51-74.

Hakro, A. N., & Ghumro, I. A. (2011). Determinants of foreign direct investment flows to Pakistan. *The Journal of Developing Areas*, 217-242.

Harrod, R. F. (1939). An essay in dynamic theory. *The economic journal, 49*(193), 14-33.

Hayakawa, K., Lee, H.-H., & Park, D. (2013). The role of home and host country characteristics in FDI: firm-level evidence from Japan, Korea and Taiwan. *Global Economic Review, 42*(2), 99-112.

Kayalvizhi, P., & Thenmozhi, M. (2018). Does quality of innovation, culture and governance drive FDI?: Evidence from emerging markets. *Emerging Markets Review, 34*, 175-191.

Kok, R., & Acikgoz Ersoy, B. (2009). Analyses of FDI determinants in developing countries. *International Journal of Social Economics, 36*(1/2), 105-123.

Li, Q., & Resnick, A. (2003). Reversal of fortunes: Democratic institutions and foreign direct investment inflows to developing countries. *International organization, 57*(1), 175-211.

Najaf, R., & Najaf, K. (2006). Impact of political stability on the macroeconomic variables and FDI of Pakistan. *World, 2007*(2008), 2009.

Noorbakhsh, F., Paloni, A., & Youssef, A. (2001). Human capital and FDI inflows to developing countries: New empirical evidence. *World development, 29*(9), 1593-1610.

Pearson, D., Nyonna, D., & Kim, K.-J. (2012). The relationship between economic freedom, state growth and foreign direct investment in US states. *International Journal of Economics and Finance, 4*(10), 1-7.

Riedl, A. (2010). Location factors of FDI and the growing services economy 1: Evidence for transition countries. *Economics of Transition, 18*(4), 741-761.

Rosentein-Rodan, P. N. (1961). International Aid for Underdeveloped Countries. *The Review of Economics and Statistics, 43*(2), 107-138.

Rostow, W. W. (1959). The stages of economic growth. *The economic history review, 12*(1), 1-16.

Sahoo, P. (2006). Foreign direct investment in South Asia: Policy, trends, impact and determinants.

Shah, S. H., Ahmad, M. H., & Ahmed, Q. M. (2016). The nexus between sectoral FDI and institutional quality: Empirical evidence from Pakistan. *Applied Economics, 48*(17), 1591-1601.

Tarzi, S. (2005). Foreign direct investment flows into developing countries: Impact of location and government policy. *The Journal of social, political, and economic studies, 30*(4), 497.

UNCTAD. (1998). World Investment Report 1998 Trends and Determinants. New York and Geneva United Nations.

UNCTAD. (2003). *Investment Policy Review of Nepal*: United Nations, New York.

Wint, A. G., & Williams, D. A. (2002). Attracting FDI to developing countries: A changing role for government? *International Journal of Public Sector Management, 15*(5), 361-374.

Table 4.2: Correlation Matrix

Variable	lnfdi	Lngdp	lnopen	lnrer	lnbm	Lncmr	lnlspr	lncl	lnpr	lnhdi	lnge	lnrl	lnrq	lncc
Lnfdi	1.000													
Lngdp	0.615	1.000												
Lnopen	0.065	-0.067	1.000											
Lnrer	-0.230	-0.608	-0.095	1.000										
Lnbm	-0.218	0.117	0.182	-0.535	1.000									
Lncmr	0.289	-0.117	0.327	0.302	-0.043	1.000								
Lnlspr	0.251	0.339	0.549	-0.035	0.036	0.180	1.000							
Lncl	-0.292	-0.539	-0.636	0.643	-0.481	-0.062	-0.547	1.000						
Lnpr	-0.360	-0.737	-0.267	0.709	-0.554	-0.016	-0.376	0.795	1.000					
Lnhdi	0.309	0.023	0.492	0.525	-0.491	0.454	0.614	-0.176	0.104	1.000				
Lnge	0.552	0.614	0.371	-0.094	-0.310	0.120	0.756	-0.512	-0.346	0.713	1.000			
Lnrl	0.335	0.443	0.600	-0.055	-0.103	0.172	0.872	-0.634	-0.390	0.741	0.875	1.000		
Lnrq	0.266	0.284	0.333	0.197	-0.336	0.051	0.844	-0.263	-0.075	0.745	0.840	0.816	1.000	
Lncc	0.224	0.189	0.682	0.107	-0.011	0.173	0.836	-0.572	-0.259	0.763	0.720	0.856	0.779	1.000

Figure: 4.1

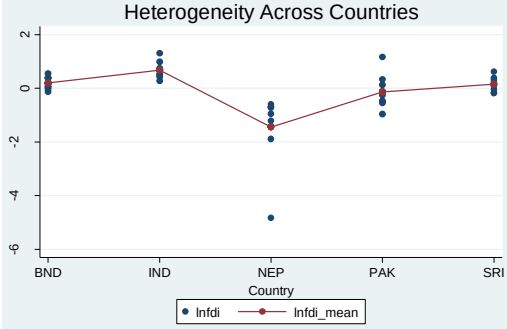
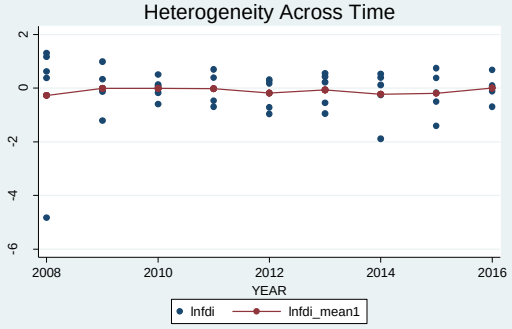


Figure: 4.2



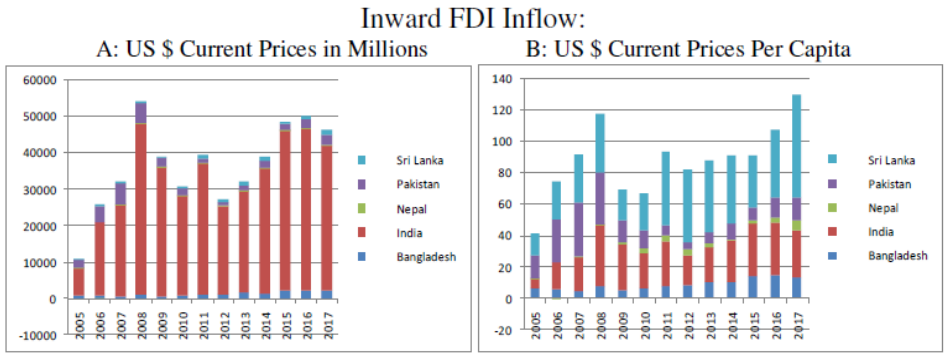


Figure:4.3

Prepared by: Authors

Source: UNCTAD (https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)

Table 4.3: Economic, Social and Institutional Determinants of Foreign Direct Investment in South Asia: Disaggregated Analysis

Economic			**Social**			**Institutional**		
Variable	**Coefficient (Robust)**	**S.E**	**Variable**	**Coefficient (Robust)**	**Coeficient (Simple)**	**Variable**	**Coefficient (Robust)**	**S.E**
Lngdp	0.375*	0.041	**lnlspr**	-0.953	-0.953	**lnge**	3.174*	0.380
Lnopen	0.141	0.391	**lncl**	1.296	1.296	**lnrl**	-1.220*	0.224
Lnrer	-0.594**	0.266	**lnpr**	-2.071	-2.0714*	**lnrq**	-1.786**	0.847
Lnbm	-1.346*	0.120	**lnhdi**	4.136	4.136*	**lncc**	0.224	0.424
Lncmr	8.676**	3.793	**CONS**	4.176	4.176	**CONS**	-1.418*	0.519
CONS	-18.398**	7.409						
Diagnostic Tests for Disaggregated Models								
Statistics	**Prob**	**Decision**	**Statistics**	**Prob**	**Decision**	**Statistics**	**Prob**	**Decision**
1. Breusch Pagan LM Test								
0.000	1.000	Panel OLS	0.000	1.000	Panel OLS	0.000	1.000	Panel OLS
2. Pesaran's Test of Cross Sectional Independence								
0.832	0.406	No Cross Sectional Dependence	0.140	0.889	No Cross Sectional Dependence	-1.329	0.184	No Cross Sectional Dependence

NOTE: Statistical Significance: *1 % level & **5 % level