

IMPACT OF FDI ON ECONOMY GROWTH: A COMPARISON OF SOUTH ASIAN STATES & CHINA

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Abstract

This paper makes a comparison of the impact of Foreign Direct investment on the economies of South Asian states including Pakistan, India, Bangladesh and Sri Lanka with China. The paper attempts to investigate that what are the differences between the economies of South Asia region and China. For study purpose annual data are used. The variables selected are FDI, External Debt, and Remittances. Analytical tools of OLS test and granger causality test are used to analyze the data. The result confirmed the fast growing economic development of China as compared with states of South Asia. The results confirmed that China is much faster growing economy than South Asia region. In order to attract direct investment into the of South Asian states, there is a need to develop infrastructure, stabilized political environment, law and order situation, healthy economic environment, curtailing on external debt, tax exemption. If these countries give due attention to FDI role in economic development FDI can facilitate human capital formation, domestic investment and technology transfer in the region and they can also develop their economies much like that of China.

Keywords: Economic development, FDI, external debt, remittances, Pakistan, India, Sri Lanka, Bangladesh, China

Introduction

FDI can be defined as a long term investment by a foreign direct investor in an enterprise located in an economy other than in which the foreign investor lives. Foreign investments can be divided into two main parts: Foreign Direct investments and Portfolio Investments. This study focuses on Foreign Direct investment made by foreign investors. FDI can be

either outward or inward. The number of different factors influences inward FDI includes tax, subsidies, interests on loans and various restriction and limitations.

Previously the importance of FDI has been overlooked in the economies but in nineties and twenties it received considerable due attention. Now it is admitted as a significant factor contributing towards economy of host economy especially in developing countries (Khan, 2007). It is admitted that FDI benefits recipient country by making provision of capital, foreign exchange, technology, healthy competition and by providing access to foreign markets (Crespo and Fontura, 2007). The existence of gap between domestic savings and investments and provision of technology from developed states can be bridged by FDI role hence leading towards achieving rapid economic growth in developing states (Khondoker and Mottaleb, 2007). The amount of FDI increased significantly for developing states during the period of 1985-2000. The part of FDI inflows and outflows contributed by the developing countries has increased from 17.4% in 1985-1990 to 26.1% during time period of 1995-2000. The FDI is the most important resource of capital inflows into the developing countries. FDI makes capital flows into the economies and influences the economy in different ways. When FDI inflows into the economy it benefits the economy of host country as it transfers technology, improves skill acquisition, increases market competition, increases employment opportunities and improving living standards of people through enhancing their buying power. FDI also helps to pay external debt and helps to balance current deficit account. It does not only improve human skills but also improves capital stock. FDI inflow increases into the host economy when host economy induces it by offering a good trade market. FDI also benefits from host economy by enjoying economies of scale and reduced cost efficiency as a consequence.

Well there is also evident literature about the negative impacts by FDI on host economy. It can negatively influence the host economy when it will lead towards monopolization of local industries of host economy. When big foreign MNCs monopolize local businesses unemployment increases as a result. It can also cost the host economy when the differences exist between the motives behind international transactions of Multinational Companies and policies of host country government.

This paper attempts to analyze and empirically estimate the role of FDI in economies of South Asian countries and China. The paper also attempts to discover the factors responsible for differences between economies of south Asian states and China. We see a considerable increase in FDI towards developing countries from 1985-2000. China is the most populous state of the world with 1.351 billion and it is also second largest

country by land area located in South Asia. After economic reforms of 1978 China has become fastest growing economy. By 2013th China is the second largest growing economy both by nominal total GDP and Purchasing Power Parity. China has become a regional power in continent of Asia and is supposed to be superpower of future. The region of South Asia covers nearly 10% of the total continent of Asia and it is 4.48 kilo meter square. The 34% of total Asian population live in this area. India is the largest state of the region covering three-fourth of the total area of South Asia. It is also the most populous country of the world. Pakistan is also another prominent state in the region. It is sixth most populous country and fifth largest democracy of the world. Two nuclear powers exist in this region namely India and Pakistan. Despite of this versatility the inhabitants of this area comprise half of the total poor people of the whole world. It is the poorest region of the world after south-Saharan region. According to World Bank more than 40% of the whole populations of south Asia live below the line of poverty. Half of total hungry people all over the world live in this region. India is the largest economy followed by Pakistan the second largest economy. Bangladesh and Sri Lanka rank third and fourth respectively in the region in terms of economy.

The four counties of South Asia namely Pakistan, India, Bangladesh, Sri Lanka are selected for comparison with economy of china as these four states are important members of SARC (South Asian Regional Cooperation). The four of them have been emphasizing on active policies to promote exports, increasing men power export and provoking FDI as a contributing factor to economic growth. These states are considered to be labor-intensive countries. But this labor force is mostly unskilled or semi skilled. These states need to concentrate on their infrastructure in order to attract new foreign investments. FDI is one of the significant sources of foreign exchange for countries under study. The states of South Asia are having complex trade policies which are restricting FDI inflow into the economies instead of attracting. These rigid and complex trade policies include high tariffs and tax rates, quotas, bans, licensing requirements. These trade policies have become counter-productive to FDI inward. Though these policies were intended to make revenues but these policies are restricting FDI and resulting in corruption and smuggling. On the other side China is providing cheapest raw material and men power due to which FDI is getting directed towards china at a fast pace.

The paper mainly comprises of four sections. First section describes the literature reviews on the concerned variables. The second section entails methodology selected to analyze the data. The third section describes the results of data analysis. The fourth section explain conclusion finally.

Objectives of Study:

- To identify the major determinants of FDI affecting the economies of South Asian states and china
- To study the relationship between the determinants of FDI and economic growth of these states
- To explore the extent and drift of FDI into the selected states
- To investigate the trends and volume of FDI in the South Asia and China
- To recommend appropriate policies for devising measures to address factors restricting FDI

Literature review

These studies analyze the impact of foreign inflows increase the growth in south Asian countries and China.

Sana et al. (2012) analyzed the declining trend of FDI in Pakistan. They attempted to analyze the causes and measures for this declining trend of FDI. The variables selected for study were FDI and GDP. The study made explained the reasons of declined FDI trend. The reasons were explained in detail with causes and measures were suggestion for erasing them.

R.Atique and K.malik (2012) reviewed the impact of external debt and domestic debt on economic growth of Pakistan. The data was time period of 1980 to 2010. The data analyses techniques of OLS, con integration, unit root test, serial correlation techniques, test for checking heteroskedasticity, and CUSUM test of stability were made to the data. The results were significant. The relationship between external debt and economic growth were found to be negative. The relationship between domestic debt and economic growth was also negative. But the relation of external debt was more stronger than domestic debt on economic growth.

Atique et al, (2004) attempted to evaluate the impact of foreign direct investment on economic growth of Pakistan. The variables selected for study include FDI, GDP, gross capital formation taken as percentage of GDP, ratio of total merchandise trade to GDP, and education expenditure. The methodology used for data analysis is Eangle Granger and Hansen Methods. Data covers the time period of 1970-2001 and findings of data analysis express that FDI make more influence on economy than export of the state. The study concluded the significant role of FDI in economic growth of Pakistan.

Falki, (2009) examined the impact of FDI on economic growth of Pakistan. The data was taken for the time period of 1980 to 2006. The data was analyzed by using Ordinary Least Square methodology. The variables selected are foreign aid, capital labor force, and domestic capital. The data

analysis show insignificant results and negative relationship between FDI and GDP. These results show that FDI does not contribute during this time period as compared to other variables. The negative relationship can also be explained by the fact that the FDI was on a downward trend during the period under study. Some recommendations are made to provide an attractive and favorable environment for foreign investors to induce more investments into the country.

Muzna et al. (2010) attempted to analyze the impact of debt servicing on the economic growth and development of developing countries. The six variables were selected for study purpose. The selected variables include growth, external debt servicing, interest rates, savings, net exports, and FDI. The relationship of these variables with only dependent variable of GDP was studied. The data was annual panel data and for time period of 1990 to 2008. The total thirty six developing countries were selected for the study. The analysis technique of OLS was applied to the data. The results were statistically significant. FDI and net exports showed negative relationship with economic growth while other variables showed negative relationship. The concluding results were made that debt servicing is a burden to developing countries so external debts should be erased as soon as possible.

Carcovic and Levin, (2000) investigate the FDI impact on economic growth of 72 countries. Time series data of 1960-1995 was used for the purpose of study. The methodology of Ordinary Least Square is used for data analysis. The results of data analysis show that FDI does not influence in economic growth.

Chakerborty and Nunnenkamp, (2006) attempted to analyze the impact of FDI on economic growth of India. The methods of granger causality and panel co integration in specific industry are used. These findings shows FDI effects sector wise and shows casual relationship in primary sector whereas transitory effect of FDI was initiate in service sector.

F.Mahboob at el. (2011) attempted to investigate the impact of FDI on economic growth of Pakistan. The data for study purpose covers time period of 1985-2010. The variables were FDI, foreign portfolio investment, foreign aid and remittances. Multiple regression techniques were applied to the data for purpose of analysis. The FDI, FPI and remittances showed significant and positive relationships with economic growth. Foreign aid showed significant but negative relationship with the economic growth.

E.Wamboye (2012) reviewed the impact of FDI, trade and external debt on economic growth of least developed countries. The economic development was studied in long term. The data was taken for 40 least developed countries. The data used was unbalanced panel data covering time period of 1975 to 2010. Three categories of data were used for studying impact on economic growth. These categories include domestic factors,

global factors, and dummy variables. Data analysis technique of Arellano-Bond SGMM was applied to the data. The results concluded that high external debt burdens economy of least developed countries.

Matiur Rehman (2007) reviewed the impact of FDI, exports and remittances on economies of Bangladesh, India, Pakistan and Sri Lanka. Annual data for time period of 1976-2006 was used for study purpose. The autoregressive distributed lag (ARDL) was used for co integration of variables with different orders of integration. The results of India and Bangladesh were similar in short run and long run. The results for Sri Lanka and Pakistan were also similar in short run but their results were different in long run.

Funkhouser(1992) investigate the remittance increase self employment and decrease labor supply while Admas in(1998) shows results remittance not effect in Pakistan. It is the major source of inflow from previous decade it raise from one billion to twelve billion ad during 2006-2007 remittance is higher than FDI.

M. Azam and L. Lukman (2010) examined to various economic factors on economic growth effects on FDI of Pakistan, India and Indonesia. The data covers the time period 1971 to 2005. The techniques of OLS and Log Linear Regression Model were applied to the data. The results revealed the important determinants of market size, external debt, domestic investment, trade openness, and physical infrastructure. The results for Pakistan and India were much similar excluding two variables (trade openness and government consumption) while the results of Indonesia do not match with the results of determinants of FDI India and Pakistan.

Imran Ali Meerza (2009) investigated the relationships between trade, FDI and economic growth of Bangladesh. The data covered the time period of 1973 to 2008. Johansen co integration test and granger causality test were applied to the data. The results revealed long run equilibrium relationship among the variables. Granger causality test showed causal relationship between the variables.

Mohamed & Sidiropoulos, (2010) analyzed the impact of remittances on economic growth by using time series data for time period of 1975-2006 of MENA countries. The experiment is used for fixed and random models. The result of data analysis shows that remittances influence economic growth of any country directly and indirectly through financial institutions.

Yousaf et al, (2008) attempted to investigate the impact of FDI on economic growth of Pakistan. He attempted to analyze the impact of FDI on exports and imports of Pakistan. The techniques used for data analysis are co integration techniques to check the relationship of variables in long run. Error correction model was also used for the purpose of further analyzing data. The data for study purpose was for a time period of 1973-2002. The

results of data analysis show that FDI influences economy in long run as well as short run. In case of export there is negative relationship in short run whereas in long run positive relationship exists between the variables of exports and FDI. The study concluded that FDI shows positive relationship with imports in short run as well as in long run.

Malik et al, (2010) attempted to analyze the relationship of growth rate of Pakistan and external debt for the time period of 1972-2005 by using Ordinary Least Square methodology were used to analyze the data and findings by this study confirmed that there is negative relationship between external debt and economic growth.

Tiwari and Mutasque (2011) examined the relationship between FDI and GDP of Asian countries by using panel data approach of 23 countries for the time period of 1986-2008. The results of study showed that FDI and export increased growth of economy. Labor and capital also increased economic growth.

Marta Bengoa, B.S.Robles (2002), examined the relationship of FDI and economic growth. The study was conducted on data of 18 Latin American countries for the period of 1970-1999. The techniques of panel data approach were used to study the impact of FDI on economic growth of host countries. The findings said that FDI express a positive relationship with economic growth of host country but host country requires big markets size, developed human capital and economic stability for long run benefits from capital flow.

Duasa, (2007) investigated the impact of FDI on economic growth in Malaysia. He used 1990-2002 quarterly data. The analysis techniques of GARCH and causality approach were applied to the data. This study does not find any casual relationship between economic growth and FDI. Moreover flow of FDI is less volatile in economic growth and findings show that there is no cause and effect relationship between these variables in Malaysia.

Mohamed & Sidiropoulos, (2010) analyzed the role of workers' remittance in Pakistan growth. He used MENA countries data ranging for the time period of 1975-2006. The results show that remittances directly and indirectly influence economic growth through financial institutions. Moreover the remittances can boost up economic growth.

M. Dritsaki, C. Dritsaki and A. Adamopoulos (2004) attempted to measure the relationship between Gross Domestic Product, Foreign Direct Investment and Exports for the time period of 1960 to 2002 in Greece. The method of co integration method among the variables was used for analyzing the data. The results of analysis show long run equilibrium relationship exist between the variables. Granger causality test is also applied in the study. The

technique of Granger Causality Test shows existence of casual relationship among the variables.

The relationship between economic growth and export is analyzed by Tyler (1981); Balassa (1978, 1985); Kavoussi (1984); Heitger (1987); Ram (1987); Fosu (1990); Lussier (1993). They scrutinized the relationship of export and growth output by using OLS method within neoclassical framework. These studies concluded that export plays important role in enhancing the growth. Kravis (1970); Michaely (1977); Bhagwati (1978) found the relationship between economic growth and export by using the spearman rank correlation test. While in (1990) Colombatto sample of 70 countries was used and the export-led growth hypothesis was rejected by using the results of OLS techniques. All these studies are cross sectional so growth differ from country to country so the results which concluded by these studies are susceptible to criticism. Furthermore, these analyses move relationship between variables within country so growth and export cannot be studied by using cross sectional analysis

Methodology

Source of Data:

The secondary data is used for the study. The data are taken from sources of Index Mundi and Economic Surveys of respective states. The data are taken from Economic Survey of Pakistan (various issues), Economic Survey of India (various issues), World Investment Report (various issues), Economic Survey of China (various issues) and World Development Indicator (various issues) respectively. The data is taken from time period of 1976 to 2011.

Measuring Variables:

Dependent Variables:

Gross Domestic Product (GDP)

Gross domestic Product measures the total output made by a country. This includes all goods produced by people and companies of the people. It is also understood to be an indicator of standard of living of that country. It is a best way to understand a country's economy by looking at GDP produced by that country. Investors look at the GDP of a country to assess its economy. Most investors invest in the countries with higher GDP. They also prefer to purchase shares of companies of rapidly growing economies.

Independent Variables:

Foreign Direct Investment (FDI)

The net inflow of FDI describes investments made by foreign investors to obtain a lasting management interest in an enterprise located in

an economy other than that in which the foreign investor lives. The forms of FDI are usually participation in management of enterprises, joint ventures, technology transfer and expertise. The foreign direct investment made by foreign investor can be an individual or a group of related individuals, an entity, a public or private company, a government body, an estate, trust or a social organization. The investment can be made either through incorporating a company in host country, obtaining shares in a company of host country, or making participation in equity joint venture.

External Debt (ED)

External debt is increasing steadily for developing states in recent decades. It is confirmed that external debt can be an important source of funding in low income economies with low domestic savings (Avramovic, 1964). However, the domestic savings should increase in order to enable the country to repay the external debt in its first stage of development. But it is viewed that many of the developing countries failed to make adequate development in the first stage of debt cycle as external debt increased but domestic savings did not increase to the desired level and were still low. The external debt has played significant role in economies of South Asia in recent decades as many of these states have enjoyed the benefits of external debts in recent years. This external debt can be obtained either from Capital Markets or FDI. If funds obtained from external debt are applied to economic parts where efficiency is higher than loan interest rates then this debt can put economy on the road to development. No doubt the South Asian economies are heavily indebted but If this external debt funds are used wisely than it can help the economies not only to come out of crises but it will also help them to grow.

Remittances (Rem)

Remittances play vital role in development of states especially developing countries. The strong increase in remittances makes them the most important source of foreign exchange after exports. The selected region is under developing countries so remittances are of far off value for these states. For remittances role in economy of a country the factors of, trends in volumes and destination of migrant workers, sources and volume of remittances, are considered to be significant. Remittances are an important and growing source of foreign exchange for the region of South Asia. Remittances households are better off than non-remittances households. However remittances can bring poverty and inequality in the region when there is unequal distribution of wealth.

Statistical Tools

- Granger Casualty Test
- Ordinary Least Square Method
- Co Integration Test

Model:

The model built for the purpose of testing hypotheses is as follow

$$Y = \alpha + \beta_1(FDI) + \beta_2(ED) + \beta_3(Rem) + \epsilon$$

Where as

Y = Gross Domestic Product

FDI= Foreign Direct investment

ED= External Debt

Rem= Remittances

α = Intercept

β = Coefficient

ϵ = Error Term

β_1 , β_2 , β_3 are the coefficients of respective variables. In the specified model Y (Gross Domestic Product) is dependent variable while FDI, external debt, and Remittances are used as controlled or independent variables.

Hypotheses

H1: FDI has positive relationship with Economic Growth

H2: External Debt has positive relationship with Economic Growth

H3: Remittances has positive relationship with Economic Growth

Data Analysis

Stationary test:

The stationary test is applied to check whether data is stationary. For reliability of results data should be non-stationary. If data is stationary then the results will be invalid. The hypotheses formed for unit root test are

If $t^* > ADF$ critical value, \implies unit root exists. Or data is stationary

If $t^* < ADF$ critical value, \implies unit root does not exist. Or data does not stationary

All countries data is non stationary because ADF critical value is greater than t-state values. All data is stationary at level 0 and intercept.

**Unit Root Tests
Sri Lanka**

Null Hypothesis: ED has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.223624	0.6503
Test critical values: 1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

India

Null Hypothesis: ED has a unit root

Exogenous: Constant

Lag Length: 4 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	1.478019	0.9987
Test critical values: 1% level	-3.724070	
5% level	-2.986225	
10% level	-2.632604	

*MacKinnon (1996) one-sided p-values.

Bangladesh

Null Hypothesis: ED has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-1.492893	0.5229
Test critical values: 1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

Unit Root Test of Pakistan

Null Hypothesis: ED has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	5.633073	1.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

China

Null Hypothesis: GDP has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic based on SIC, MAXLAG=7)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	13.06350	1.0000
Test critical values:		
1% level	-3.679322	
5% level	-2.967767	
10% level	-2.622989	

*MacKinnon (1996) one-sided p-values.

OLS Tests Sri Lanka

Dependent Variable: GDP

Method: Least Squares

Date: 09/06/13 Time: 09:50

Sample: 1982 2011

Included observations: 30

Newey-West HAC Standard Errors & Covariance (lag truncation=3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.2709	3.7408	3.403281	0.0022
ED	0.398230	0.063823	6.239558	0.0000
FDI	6.156673	1.662884	3.702407	0.0010
REM	9.076588	0.318224	28.52264	0.0000
R-squared	0.997258	Mean dependent var		1.79E+10
Adjusted R-squared	0.996942	S.D. dependent var		1.40E+10
S.E. of regression	7.75E+08	Akaike info criterion		43.89829
Sum squared resid	1.56E+19	Schwarz criterion		44.08511
Log likelihood	-654.4743	Hannan-Quinn criter.		43.95805
F-statistic	3151.980	Durbin-Watson stat		1.367671
Prob(F-statistic)	0.000000			

In this table economic growth is dependent variable and external debt foreign direct investment and remittance is are independent variables. In this table the R square is coefficient of determination and it shows model fitness or model adequacy. If the R square value is 65% it shows that model is moderately adequate and if it is more than 80% it shows that accuracy of model is very good here. In Sri Lanka OLS table R square value is 99% it shows that model is accurate. The p value of external debt is 0.000 which is less than 0.05 it shows its significance for our model. The p value of FDI is 0.001 it is also less than 0.05 so it is also reject our null hypotheses and shows its significance level. In case of remittance the p value is 0.000 is also less than 0.05 it also shows its significance. The beta value shows the variable relationship with model if beta values are positive it shows positive relationship of independent variable with its dependent variable. Here in Sri Lanka economy all the independent variable have positive and significant relationship with growth.

$$EG = \alpha + \beta_1 REM + \beta_2 FDI + \beta_3 ED + \epsilon$$

$$EG = 1.2709 + 9.0765 (REM) + 6.1566 (FDI) + 0.3982 (ED)$$

1.2709 is the value of constant and beta value of remittance is 9.0765 which is positive it describes if the remittance value increase than growth of Sri Lanka also increase and in case of FDI the beta value of FDI is positive it shows growth of Sri Lanka also increase due to increase of foreign direct investment and in case of external debt the beta value is also positive its means debt is used for economical purpose debt doesn't affect negatively in the economic growth of Sri Lanka.

India

Dependent Variable: GDP

Method: Least Squares

Date: 09/06/13 Time: 10:02

Sample: 1982 2011

Included observations: 30

Newey-West HAC Standard Errors & Covariance (lag truncation=3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.3810	4.5810	1.174663	0.2508
ED	36.81345	5.307474	6.936154	0.0000
FDI	-7.437898	7.787955	-0.955051	0.3483
REM	27.56147	5.524337	4.989100	0.0000
R-squared	0.975250	Mean dependent var		5.8811
Adjusted R-squared	0.972395	S.D. dependent var		4.5711
S.E. of regression	7.5910	Akaike info criterion		53.06727
Sum squared resid	1.5023	Schwarz criterion		53.25410
Log likelihood	-792.0091	Hannan-Quinn criter.		53.12704
F-statistic	341.5064	Durbin-Watson stat		1.297350
Prob(F-statistic)	0.000000			

In case of india the relationship of external debt with its economic growth is positive and its p value is also significant 0.000 which is less than 0.05. the beta value of FDI is negative and its p value is also insignificant which accept our null hypotheses its p value is 0.3483 which is greater than 0.05 and in case of third variable which is remittance its relationship with economic growth is positive and its p value is 0.000 which is less than 0.05 and shows its significance. In this model R square is 97% which shows model is good accurate.

$$EG = \alpha + \beta_1 \text{ REM} + \beta_2 \text{ FDI} + \beta_3 \text{ ED} + \varepsilon$$

$$EG = 5.3810+ 27.561 (\text{REM}) -7.4378 (\text{FDI}) +36.813(\text{ED})$$

Bangladesh

Dependent Variable: GDP

Method: Least Squares

Date: 09/06/13 Time: 10:08

Sample: 1982 2011

Included observations: 30

Newey-West HAC Standard Errors & Covariance (lag truncation=3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.0909	2.1009	3.853783	0.0007
ED	1.533224	0.246331	6.224230	0.0000
FDI	-3.722564	5.351332	-0.695633	0.4928
REM	5.261332	0.898926	5.852907	0.0000
R-squared	0.973039	Mean dependent var		4.5510
Adjusted R-squared	0.969928	S.D. dependent var		2.4410
S.E. of regression	4.2409	Akaike info criterion		47.29523
Sum squared resid	4.6720	Schwarz criterion		47.48205
Log likelihood	-705.4284	Hannan-Quinn criter.		47.35499
F-statistic	312.7832	Durbin-Watson stat		0.776565
Prob(F-statistic)	0.000000			

In case of Bangladesh external debt values have positive relationship with its dependent variable of GDP its p value is 0.000 which is less than 0.05 and it shows its significance. FDI have negative relation with GDP and its p value is also insignificant which is equivalent to 0.4928 because it is greater than 5%. Remittances have positive relationship with GDP and its p value is 0.000 which is less than 5% and it shows its significance. Model adequacy is good which 97% is.

$$EG = \alpha + \beta_1 \text{REM} + \beta_2 \text{FDI} + \beta_3 \text{ED} + \varepsilon$$

$$EG = 8.0909 + 5.2613(\text{REM}) - 3.7225(\text{FDI}) + 1.5332(\text{ED})$$

Pakistan

Dependent Variable: GDP

Method: Least Squares

Date: 09/06/13 Time: 10:27

Sample: 1982 2011

Included observations: 30

Newey-West HAC Standard Errors & Covariance (lag truncation=3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.4809	3.3709	1.625860	0.1160
ED	0.241680	0.118553	2.038584	0.0518
FDI	-5.811046	1.971522	-2.947493	0.0067
REM	3.934296	3.487944	1.127970	0.2696
R-squared	0.908904	Mean dependent var		2.9710
Adjusted R-squared	0.898392	S.D. dependent var		1.2910
S.E. of regression	4.1209	Akaike info criterion		47.23896
Sum squared resid	4.4120	Schwarz criterion		47.42579
Log likelihood	-704.5845	Hannan-Quinn criter.		47.29873
F-statistic	86.47064	Durbin-Watson stat		0.341068
Prob(F-statistic)	0.000000			

In this table economic growth is dependent variable and external debt foreign direct investment and remittances are independent variables. In this table the R square is coefficient of determination and it shows model fitness or model adequacy. If the R square value is 65% it shows model is moderately adequate and if it is more than 80% it shows that model accuracy is very good here in Sri Lanka OLS table R square value is 90% it shows model is accurate. The p value of external debt is 0.05 which is equal to 0.05 so it shows its significance and its beta value is also positive which is 0.2416 . The p value of FDI is 0.006 it is also less than 0.05 and shows its significance value. But its beta value shows negative relationship in Pakistan growth which is -5.81 so there is need to policy makers to find why in Pakistan FDI have negative effect there is need to find its conditions. Remittance have positive beta which is 3.93 and its p value is insignificant which 0.26 which is greater than 0.05 is.

$$EG = \alpha + \beta_1 \text{ REM} + \beta_2 \text{ FDI} + \beta_3 \text{ ED} + \varepsilon$$

$$EG = 5.48 + 3.934(\text{REM}) - 5.811(\text{FDI}) + 0.241(\text{ED})$$

In Sri Lanka FDI have positive effect on economy of while in Pakistan FDI effects negatively there is need to find the reasons for negative impact of FDI on economy.

China

Dependent Variable: GDP

Method: Least Squares

Date: 09/05/13 Time: 12:37

Sample: 1982 2011

Included observations: 30

Newey-West HAC Standard Errors & Covariance (lag truncation=3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.7411	8.6410	2.015333	0.0543
ED	-0.643155	2.266310	-0.283789	0.7788
FDI	13.68725	5.946727	2.301645	0.0296
REM	91.78516	31.16188	2.945431	0.0067
R-squared	0.972785	Mean dependent var		1.5912
Adjusted R-squared	0.969645	S.D. dependent var		1.8612
S.E. of regression	3.2411	Akaike info criterion		55.96976
Sum squared resid	2.7324	Schwarz criterion		56.15658
Log likelihood	-835.5463	Hannan-Quinn criter.		56.02952
F-statistic	309.7824	Durbin-Watson stat		2.042793
Prob(F-statistic)	0.000000			

in this analysis external debt , FDI and remittance are independent variable and GDP is dependent variable. In china, external debt beta value is -0.643155 which shows negative effect on china economy and its p value is also insignificant which is 0.77 and foreign direct investment have positive effect on economy which beta value is 13.68725 and its p value is significant which is 0.02 which is less than 0.05. in china remittance have also positive effect on economy its beta value is 91.78516 and its p value is 0.00 which is less than 0.05 it also shows its significant level. R-square value is 97% it also shows that model is accurate.

$$EG = \alpha + \beta_1 REM + \beta_2 FDI + \beta_3 ED + \varepsilon$$

$$EG = 1.741 + 91.785(REM) + 13.6872(FDI) - 0.6431(ED)$$

Granger Causality Tests Sri Lanka

Pairwise Granger Causality Tests

Date: 09/06/13 Time: 09:56

Sample: 1982 2011

Lags: 7

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause ED	23	2.49586	0.1117
ED does not Granger Cause FDI		3.15800	0.0647
GDP does not Granger Cause ED	23	12.9995	0.0008
ED does not Granger Cause GDP		2.78196	0.0875
REM does not Granger Cause ED	23	9.82444	0.0022
ED does not Granger Cause REM		1.60968	0.2591
GDP does not Granger Cause FDI	23	1.81945	0.2098
FDI does not Granger Cause GDP		2.59865	0.1022
REM does not Granger Cause FDI	23	2.52956	0.1085
FDI does not Granger Cause REM		0.96723	0.5110
REM does not Granger Cause GDP	23	4.22769	0.0303
GDP does not Granger Cause REM		0.68068	0.6873

India

Pairwise Granger Causality Tests

Date: 09/06/13 Time: 10:04

Sample: 1982 2011

Lags: 7

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause ED	23	27.7178	5.E-05
ED does not Granger Cause FDI		1.41592	0.3168
GDP does not Granger Cause ED	23	7.87298	0.0046
ED does not Granger Cause GDP		0.78849	0.6165

REM does not Granger Cause ED	23	4.07150	0.0336
ED does not Granger Cause REM		0.99033	0.4985
GDP does not Granger Cause FDI	23	8.27428	0.0039
FDI does not Granger Cause GDP		0.84234	0.5830
REM does not Granger Cause FDI	23	1.88067	0.1976
FDI does not Granger Cause REM		46.1646	8.E-06
REM does not Granger Cause GDP	23	2.44333	0.1170
GDP does not Granger Cause REM		1.82336	0.2090

Remittance does granger cause ED, ED does granger cause GDP, remittance does granger cause FDI, GDP does granger cause on remittance and FDI does granger cause on GDP. And FDI does not granger cause on ED.

Bangladesh

Pairwise Granger Causality Tests

Date: 09/06/13 Time: 10:11

Sample: 1982 2011

Lags: 7

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause ED	23	2.98167	0.0744
ED does not Granger Cause FDI		1.18905	0.4030
GDP does not Granger Cause ED	23	1.98735	0.1782
ED does not Granger Cause GDP		4.43936	0.0264
REM does not Granger Cause ED	23	10.6113	0.0017
ED does not Granger Cause REM		2.55710	0.1059
GDP does not Granger Cause FDI	23	3.23477	0.0610
FDI does not Granger Cause GDP		1.50965	0.2873
REM does not Granger Cause FDI	23	1.29909	0.3584
FDI does not Granger Cause REM		1.15191	0.4193
REM does not Granger Cause GDP	23	10.0120	0.0021
GDP does not Granger Cause REM		0.46181	0.8376

Remittance does granger cause ED, FDI does granger cause on ED, remittance does granger cause on GDP because their p values are less than 0.05 and ED does not granger cause on GDP, FDI does not granger cause remittance and GDP does not granger cause FDI because the p values are more than 0.05.

Pakistan

Pairwise Granger Causality Tests

Date: 09/06/13 Time: 10:32

Sample: 1982 2011

Lags: 7

Null Hypothesis:	Obs	F-Statistic	Prob.
FDI does not Granger Cause ED	23	7.54582	0.0053
ED does not Granger Cause FDI		2.82105	0.0848
GDP does not Granger Cause ED	23	1.84408	0.2048
ED does not Granger Cause GDP		3.49467	0.0502
REM does not Granger Cause ED	23	7.88465	0.0046
ED does not Granger Cause REM		4.75178	0.0218
GDP does not Granger Cause FDI	23	5.77786	0.0123
FDI does not Granger Cause GDP		5.43557	0.0147
REM does not Granger Cause FDI	23	6.17173	0.0100
FDI does not Granger Cause REM		6.14059	0.0102
REM does not Granger Cause GDP	23	4.50270	0.0254
GDP does not Granger Cause REM		3.72231	0.0426

Remittance does granger cause ED. ED does granger cause FDI, ED does granger cause GDP, FDI does granger cause remittance, GDP does granger cause remittance and FDI does granger cause GDP because their p values are less than 0.05. all the variable have causal relationship.

China

Pairwise Granger Causality Tests

Date: 09/05/13 Time: 12:48

Sample: 1982 2011

Lags: 7

Null Hypothesis:	Obs	F-Statistic	Prob.
REM does not Granger Cause ED	23	2.77501	0.0881
ED does not Granger Cause REM		23.8238	9.05
FDI does not Granger Cause ED	23	3.05954	0.0699
ED does not Granger Cause FDI		1.24789	0.3784
GDP does not Granger Cause ED	23	1.53279	0.2804
ED does not Granger Cause GDP		5.39291	0.0151
FDI does not Granger Cause REM	23	2.18322	0.1481
REM does not Granger Cause FDI		2.33166	0.1293
GDP does not Granger Cause REM	23	3.91429	0.0373
REM does not Granger Cause GDP		9.21210	0.0028
GDP does not Granger Cause FDI	23	5.56562	0.0137
FDI does not Granger Cause GDP		36.1076	2.05

Discussion of Results

OLS test is applied to the annual data for Sri Lanka, India, Bangladesh, Pakistan and China. The results are significant for China as compared with Sri Lanka, India, Bangladesh and Pakistan. But these results are not similar for all the four states. For data analysis of Sri Lanka all variables of FDI, External Debt and Remittances have positive relationships with Dependent variable of Economic Growth. All three hypotheses accepted for Sri Lanka. In case of India the variables of External Debt, Remittances have positive relationship with economic growth but controlled variable of FDI has negative relationship with economic growth. Hypotheses for external debt and remittances are accepted while rejected for FDI. External debt, remittances do have positive relationships with economic development. The results of Bangladesh show that the variables of external debt and remittances have positive relationship with economic growth but FDI has negative relationship with economic growth. Hypotheses for external debt and remittances are accepted while rejected for FDI. Pakistan results are also much closer to India and Bangladesh. The variables of external debt and remittances do have positive relationships with economic growth but FDI shows negative relationship with economic growth. Hypotheses for external debt and remittances are accepted while rejected for FDI. These positive relationships of external debt and remittances with economic growth show

that External Debt and Remittances play significant roles in economic development of countries. The results for China are different as compared with results for South Asian states. In case of China the variable of Economic Growth has positive relationship FDI and Remittances and negative relationship with External Debt. These results show that Chinese economy is growing at a fast pace than states of South Asia. The external debt is not on increase in Chinese economy. FDI shows positive relationship with Economic Growth which means that FDI is promoting Economic Growth in economy of China. On the other hand for South Asia region External Debt provides an immediate role in economic development. Higher current account and fiscal deficits are among major reasons for higher debt burden on these countries. When debt exceeds a specified limit then debt servicing can be a burden for the country.

In India, Bangladesh and Pakistan FDI coefficient is negative which shows that there is a down ward trend of FDI in states of India, Bangladesh and Pakistan. These states are in vicious circle of FDI. The reasons for this negative trend may be infrastructure underdevelopment, energy crises, unskilled work force, tax rates, social and cultural restrictions, little share of private sector in economy, conflicting policies. Well it is quite possible for these states with negative trends to make heaven atmosphere for FDI. These states do not have developed infrastructure needed to attract FDI. Infrastructure is essential for operations of enterprises. Unfortunately these states are lagging behind in infrastructure as compared to China. Besides infrastructure these states have different social and cultural environment from those states making FDI in them. Mostly FDI are being made by MNCs from Western states. These social and cultural restrictions make majority of people to avoid foreign products. These states are labor enriched states but to demise this labor force is mostly unskilled. Law and order situation is also not satisfactory in these states. After 9/11 this region is badly influenced by terrorism attacks. Pakistan is facing severe terrorism after US invasion into Afghanistan. Sri Lanka has also been facing civil war for several years. On the other side two major states of India and Pakistan has fought four wars since 1947 and there are many conflicts existing among them. Kashmir is a burning issue in the region and reason of dispute between these two states. Both of these two states are Nuclear powers so any next war can turn into nuclear war. So the tense situation among states hinders FDI to some extent. The private sector also contributes to a very little extent in the area which expresses low investor interest. Besides all of that corporate tax rates and policies measures are not encouraging to FDI. On the other side china has developed necessary infrastructure which aids economic activities.

Conclusion

For developing states foreign direct investment is the blood of economy where it provides an immediate source of funds and foreign exchange to the host country. South Asian states are still developing states. The importance of FDI to these states is considerable. The results of data analysis show the negative impact of FDI in India, Bangladesh and Pakistan. While FDI shows positive relationship with economic growth This is an alarming situation and emphasizes on immediate steps to make encouraging environment for FDI in these states.

- Encouraging and friendly environment should be provided to the foreign investors in order to attract more FDI into the economy.
- Technology transfer should be encouraged by providing more incentives to foreign investors
- Import-substitution policy can be used to enhance FDI in economies

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