

DOES FOREIGN FINANCIAL RESOURCES PROMOTE ECONOMIC GROWTH IN SAARC COUNTRIES? A PANEL COINTEGRATION ANALYSIS

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Abstract

The study was conducted to investigate the impact of foreign debt financing and foreign direct investment on economic growth for South Asian Association of Regional Cooperation. The study was conducted using two models. The findings of dynamic ordinary least square (DOLS) for model 1 suggests that total foreign inflows has negative and significant effect on economic growth. The findings of fully modified ordinary least square (FMOLS) of model 2 suggests that external debt financing and foreign direct investment has positive and significant effect on economic growth. The reason for negative effect of total foreign inflow could be caused by inefficient use of resources. Whereas in the second model the positive effect of external debt financing and foreign direct investment suggests that external debt is used for debt servicing and balance of payment corrections. Foreign direct investment effect is low in the long run because of higher budget deficit and low investment in infrastructure.

Key Words: External Debt, Foreign Direct Investment, Total Foreign Inflows, Economic Growth, SAARC Countries

JEL Codes: O47, E22, H63

1. Introduction

Developing countries are economically growing as shown in figure 1, even then there are many issues that forces them to take help from external sources. The first reason is that there is a lack of domestic investment and saving in their countries. In order to boost economic activities, they take external loans and inject the economy with resources

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which they need to grow or function. The second reason is the budget deficit, where government expenditures are more than its revenues and the government is forced to take external loans in order to keep the economy running. The third reason for external debt is the balance of payment adjustments. The reason ascends when the country imports are greater than its exports, which are due to the fact that developing countries, even though they do export goods and services but those goods are low value goods and services as compare to their imports which the high value goods and services. When this happens, the country is end up paying more foreign currency which discourages domestic exporter and as the host country currency has devalued in the international market consumers will prefer foreign goods over domestic goods as they are cheaper and high in quality, which reduces economic growth. On the other hand, foreign direct investment is important for any developing countries because they bring resources in the form of foreign currency, investments in host country, create job opportunities, bring new technologies and skills. The flow of these resources from foreign direct investment in any country can help to create domestic revenues, capital formation and increase the per capita income, which can help developing countries to pay back there external debt and should increase economic growth.

The reason why developing countries take external debt is because these countries have less saving and investment (Malik and Hayat, 2010). The developing countries take external loans from other developed countries and international institutions, so that their economic growth can be boosted. Gohar et al. (2012) states that there are many reasons why developing countries take external loans because there gross domestic product is low, there is budget deficit because countries are import oriented. In addition, (Soludo, 2003) emphasized that there are two categories why countries take loan from external sources, for macroeconomic reasons or to temporary finance their balance of payment and to boost their economic growth and decrease poverty in their country. In order to achieve stable economic growth, the developing countries has to take external debt to boost their developmental projects, increase investment and saving. The problem arises when these inflow of resources are not used properly and because of inadequate use of these resources and the rescheduling of interest payments which leads to higher external debt and debt servicing later on in the future. In order to pay back their external debt developing countries take more loans which in return increases their

fiscal deficit which results in cutting off their developmental expenditures and hinders the economic growth.

For developing countries external debt and foreign direct investment are both form of foreign currency but external debt serves is a burden because the foreign debt has to be paid in the same currency. In order to pay its debt, the country has to open up the economy which eventually attracts investment but with increase taxes, increase money supply and increasing inflation and the result is an unstable economy which is not an ideal condition which encourages foreign direct investments in the country. As foreign direct investment provide resources, job opportunities, technology and investments in the host country and external debt provide the necessary funds to boost the economy.

The focus of this paper is to study the impact of external debt and foreign direct investment (external resource flow) on economic growth in six SAARC countries. As developing countries are dependent on capital inflows and their economy is not developed enough to sustain itself, they take external debts or promote foreign investment in their host countries, which can have a increasing or decreasing impact on the economic growth. To investigate the long term impact of foreign capital inflow on economic growth for SAARC countries, study considered following sub-research questions;

1. Does total foreign inflow has any positive or negative impact on gross domestic product for SAARC countries?
2. Does foreign direct investment has any positive or negative impact on gross domestic product for SAARC countries?
3. Does change in external debt has any positive or negative impact on gross domestic product for SAARC countries?

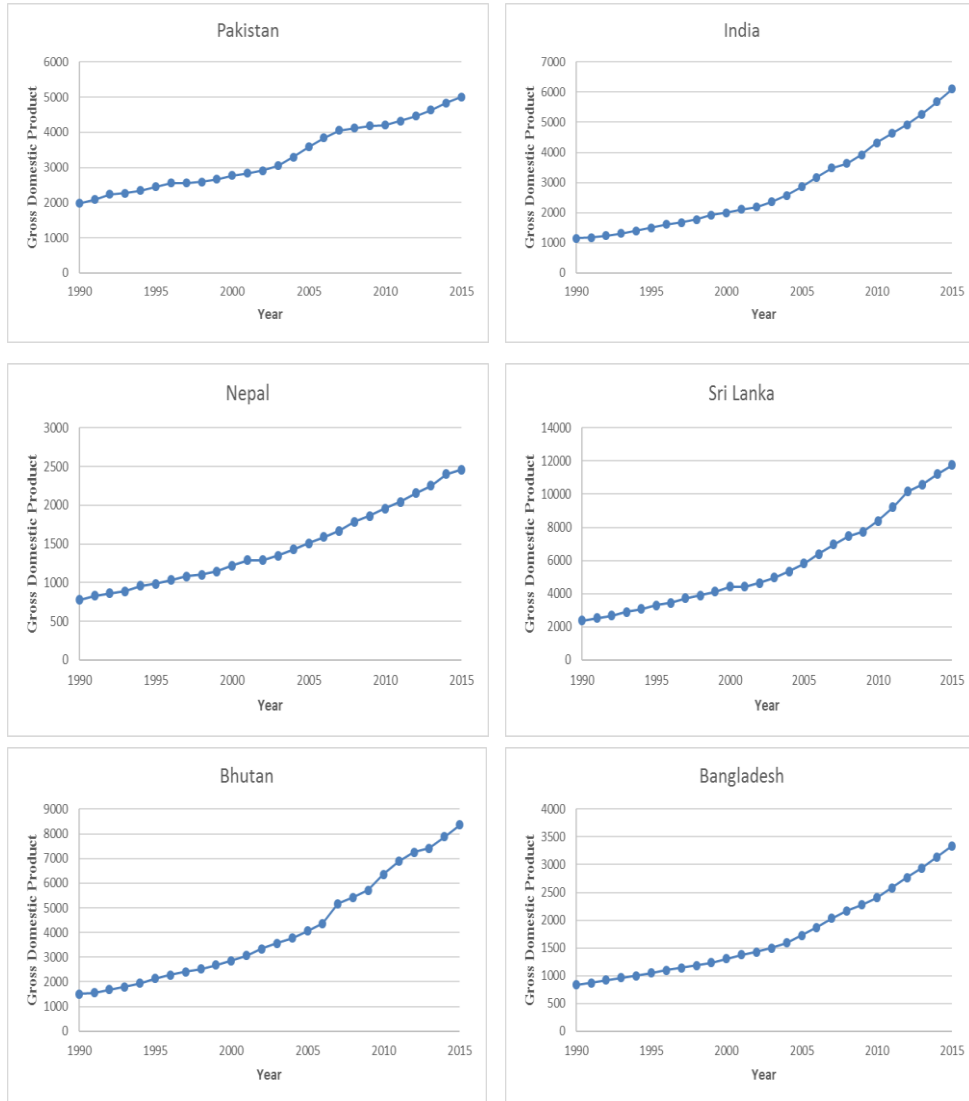
Following hypothesis will be tested;

1. **H₀:** Total foreign inflow has no long run impact on economic growth for SAARC countries.
2. **H₀:** Change in External debt has no positive or negative impact on gross domestic product for SAARC Countries.
3. **H₀:** Foreign direct investment has no positive or negative impact on gross domestic product for SAARC Countries.

This section is a short introduction about what is going to happen further in the research. Chapter 2 of literature review will analyze empirical and theoretical paper. Chapter 3 of methodology consist of methods, research questions, hypothesis, selected models and explanation

of data. Chapter 4 of estimations contain estimated results of explanatory variables and their interpretations. Chapter 5 conclusion consist of conclusion, policy implication and limitations of this study.

Figure 1.1



2. Literature Review

Khemais et al. (2016) conducted a study of external debt and economic growth in Tunisia from 1961 to 2011 using VAR model. The results of the study suggested that in the short run, external debt and debt servicing had no impact of economic growth whereas in the long run, external debt is decreasing economic growth. The issue is that, the more external debt the economy takes, they are end up paying the debt serving from the funds that were supposed to be spend on infrastructure, which in the end discourages economic growth.

Siddiqui and Malik (2001) conducted a study on South Asian countries which include Sri Lanka, Pakistan and India using growth model. The study used panel data from 1975 to 1998 using Ordinary Least Square and Fixed Effect model and found that for the case of Pakistan, debt has increased greatly in the 1990s; for Sri Lanka, the debt to export ratio has not reached the critical levels and for India, the debt to export ratio is declining. The increase in debt for the case of Pakistan is the mishandling and inefficient allocation of resources and its dependence on foreign aid. The policy suggested is to reduce dependence on foreign aid and promote self-sustainability, for some time to promote saving and investing in the private sectors with low capital to output ratio.

Were (2001) found the impact of external debt on economic growth in Kenya using time series data from 1970 to 1995 and used model used by (Elbadawi et al., 1996) model. The study used growth and investment equation. The results of estimation suggested that in growth equation, the long term and short term collection of debt discourages economic growth. In the investment equation, the study found that current debt inflows encourages investment whereas collection of debt discourages investment, so it is concluded that external debt can effect economic growth even if investment is not affected.

Adamu and Rasiah (2016) conducted a study on the external debt and economic growth in Nigeria and used dataset from 1970 to 2013. The study used ARDL test, to find out the long run relationship and the result suggested that external debt has a decreasing effect on economic growth but the effect was weaken in 2006 because of the debt relief. The study suggested that in order for Nigerian economy to protect itself from further debt traps, it needs to take loans on concessional terms. Furthermore, the policy makers should cut down unnecessary expenditures and invest in

projects with high rate of return and the government should also promote and recover non-oil sector to promote domestic exports.

Malik et al. (2010) conducted a study on external debt and economic growth in Pakistan using dataset from 1975 to 2005. The model used in the study consist of two explanatory variables, external debt and debt servicing, one independent variable which is gross domestic product and estimated results were generated using Augmented Dickey Fuller test and Ordinary Least Square. The findings of this study suggested that external debt and debt servicing has decreasing effect on economic growth and the reason behind this decline in economic growth is inefficient allocation of resources and reliance of the country on external debt which creates negative balance of payment.

Siddique et al. (2016) conducted a study on external debt and economic growth on heavily indebted poor countries (HIPC's) which consisted of dataset from 1970 to 2007 for 40 HIPC's and used Unit root test and Panel ARDL test. The estimated results suggested that external debt has decreasing effect on economic growth which explains the hypothesis that countries experience debt overhang when large amount of domestic resources are used for the repayments of debt. The policy suggested in the study is that, there should be export led growth, sustainable monetary policies, investment in profitable projects and population growth rate should not be encouraged.

A study conducted by (Kasidi and Said, 2013) on external debt and economic growth in Tanzania. The study used dataset from 1990 to 2010 and used model suggested by (Malik et al., 2010). The study used Unit Root test, Ordinary Least Square (OLS) test, Augmented Dickey Fuller (ADF) test and Johansen Co-integration test for estimation of the model. The results of estimation suggested that there external debt is increasing economic growth and debt servicing is decreasing economic growth whereas in the long run, there is no relationship of external debt on economic growth as it takes long time for capital formation to affect productivity.

Kurtishi-Kastrati (2016) conducted a study in the republic of Macedonia on the effect of foreign direct investment on economic growth. The study used time series data from 1994 to 2008 and used Co-integration test, Error Correction Model, Vector Auto Regression and Granger causality test to find out the relationship between FDI and GDP. The results of Granger causality suggested no relationship between FDI

and GDP which may be due to some other institutional and economic factors.

Saiyed (2012) conducted a study between foreign direct investment and economic growth in India and found positive relationship between them. The study used dataset from 1990 to 2012 and applied Autoregressive model. The regression results suggested a positive relationship and causality test suggested unidirectional causality between FDI and GDP. The FDI policy makers should make policies that attracts foreign investors to invest in the country and also investments in the priority sectors, so that the government can earn revenue from such investments.

Li and Liu (2005) conducted a panel study on foreign direct investment and economic growth in 84 countries. The study used panel dataset from 1970 to 1999 which consist of 2 groups of countries, 21 develop countries and 63 developing countries. The study used Durbin-Wu-Hausman test, Unit Root test, Random Effect model for estimation. The estimated results suggested that there is positive and significant effect of foreign direct investment on economic growth for both developing and develop countries.

Qamar *et al.*, (2016) found positive effect of foreign direct investment on economic growth in Pakistan. The study used dataset from 1963 to 2014 and applied Unit Root test and Johansen Co-integration test and Vector Error Correction model. The estimated results suggested that there is positive effect of foreign direct investment and economic growth in short run and long run. The policy makers should use more efficient and effective resources for development to promote foreign direct investment.

Agbloyor *et al.*, (2016) conducted a study on Sub Saharan Africa countries. The study used dataset from 1996 to 2010 but the data was further divided into 5 dataset with 3 averages, from 1996 to 1998, 1999 to 2001, 2002 to 2004, 2005 to 2007 and 2008 to 2010. For estimation the study used SGMM two step estimator with Windmeijer corrected standard error and orthogonal deviations. The findings of estimation results suggested that there is no relationship between foreign direct investment and economic growth and between institution and economic growth. The reason for this is that, the countries with low natural resources, foreign direct investment and institutions are enough to promote economic growth but it depends on what kind of foreign direct investment those countries attract.

Jugurnath (2016) investigated in Sub Saharan Africa, the effect of foreign direct investment on economic growth. The dataset used for 32 Sub Saharan African countries consist of panel data from 2008 to 2014. The estimated results suggested that FDI has positive and significant impact on economic growth and the FDI is contributing more than domestic investment.

From the above mentioned literature, it is clear that there is negative impact of external debt on economic growth and positive impact of foreign direct investment on economic growth whereas a lot of studies has been conducted on developing and developed countries, no such study has been conducted using South Asian Association of Regional Cooperation (SAARC) and study will also use two models and will investigate the impact of both external debt and foreign direct investment on economic growth and impact of total foreign inflow (which is a sum of external debt and foreign direct investment). As SAARC countries are developing countries with different geographical differences, population size, religious differences and political instabilities, the study should give the same results are the literature suggests but different results can also be expected as there are few panel studies conducted on these variables all together.

3. Methodology

This section consist of methods used for this study. First, the data consist of six SAARC countries which include, Pakistan, India, Sri Lanka, Bhutan, Bangladesh and Nepal from 1990 to 2015. Second, the study will use two models, in the first model the study will investigate the impact of total foreign inflows (TFI) (which is the sum of change in external debt (CED) and foreign direct investments (FDI) as explanatory variable on gross domestic product (GDP) as dependent variable and using labor force (LF), gross capital formation (GCF) and Trade (TR) as control. In the second model, the study will investigate the impact of foreign direct investment (FDI) and Change in external debt (CED) as explanatory variable on gross domestic product (GDP) as dependent variable and using labor force (LF), gross capital formation (GCF) and Trade (TR) as control variable. As data consist of time series data and cross section data, the study will use panel data technique and data is collected from database of World Development Indicator of World Bank. This study uses two model and the reason is that external debt is a stock variable meaning the values of the past are added. In order to see the impact of the added value in

CED, the study is using the change in ED (ED of current minus ED of previous) and foreign direct investment as explanatory variable to see impact of each inflows on GDP in the second model and in the first model the study is using TFI (sum of FDI and change in ED) as explanatory variable to see the overall impact of inflows on GDP. As study is investigating impact on GDP, the study will use LF, GCF and TR as control variable as these variables have indirect impact on GDP. As data consist of more time series and less cross section, it will have same problems of time series model which will be tasted later in the study.

The first objective of this study is to investigate the impact of total foreign inflows (TFI) on gross domestic product on economic growth for SAARC countries. Second, to investigate the impact of change in external debt (CED) and foreign direct investment (FDI) on gross domestic product for SAARC countries.

4: Estimations

This section of the paper discuss on the normality of the data and the correlation between dependent and explanatory variables which are shown in the tables below.

The normality of model 1 is tested by using the values of Skewness which are near to zero, Kurtosis which are near to 3 and the probability value of Jarque-Bera which are significant for all the variables. Therefore, it is concluded that the dataset is normally distributed in table 1. The normality of model 2 is tested by using the values of Skewness which are near to zero, Kurtosis which are near to 3 and probability value of Jarque-Bera which are significant for all the variables except for LNCED and LNFDI. As majority of variables are significant; therefore, it is also concluded that the dataset is normally distributed for table 2.

	LNGDP	LNTFI	LNGCF	LNLFP	LNTR
Std. Dev.	0.591	0.714	0.362	0.170	0.475
Skewness	0.225	-0.084	0.570	0.166	0.174
Kurtosis	2.359	2.015	2.723	1.826	2.404
Jarque-Bera	3.321	5.406	7.463	8.059	2.581
Probability	0.190***	0.067**	0.024*	0.018*	0.275***
*,**,*** represent 99, 95, 90 percent level of significance					

Table 2 Descriptive Statistics of Model 2

	LNGDP	LNCED	LNFDI	LNLFP	LNTR	LNGCF
Std. Dev.	0.593	2.121	2.294	0.166	0.481	0.368
Skewness	0.170	-0.723	-3.216	0.197	0.207	0.552
Kurtosis	2.355	3.427	15.852	1.871	2.378	2.645
Jarque-Bera	2.765	11.830	1075.763	7.450	2.910	6.994
Probability	0.251***	0.003	0.000	0.024*	0.233***	0.030*

*, **, *** represent 99, 95, 90 percent level of significance

The estimated results of correlation in tables 3.3 suggests that there is weak but positive correlation between LNGDP and LNTFI, LNGDP and LNGCF, strong negative correlation between LNGDP and LNLFP; whereas strong positive correlation exist between LNGDP and LNTR in model 1. The estimated results correlation in tables 3.4 suggests that there is weak but positive correlation between LNGDP and LNCED, LNGDP and LNGCF. Whereas, strong positive correlation between LNGDP and LNFDI, LNGDP and LNTR and strong negative correlation between LNGDP and LNLFP exist in model 2.

Table 3 Correlation Matrix of Model 1

	LNGDP	LNTFI	LNGCF	LNLFP	LNTR
LNGDP	1.000				
LNTFI	0.210	1.000			
LNGCF	0.375	0.112	1.000		
LNLFP	-0.486	0.033	0.288	1.000	
LNTR	0.550	0.432	0.697	0.144	1.000

Table 3.4 Correlation Matrix of Model 2

	LNGDP	LNCED	LNFDI	LNLFP	LNTR	LNGCF
LNGDP	1.000					
LNCED	0.117	1.000				
LNFDI	0.486	0.448	1.000			
LNLFP	-0.462	-0.473	-0.286	1.000		
LNTR	0.571	-0.547	0.083	0.140	1.000	
LNGCF	0.372	-0.428	-0.044	0.319	0.702	1.000

Model 1: In this section of the study, the study will use 2 models because there are 2 approaches to this study which requires 2 models and the study will run Ordinary Least Square (OLS) on these equations.

Model 1: $LNGDP_{it} = \beta_0 + \beta_1 LNTFI_{it} + \beta_2 LNGCF_{it} + \beta_3 LNLFP_{it} + \beta_4 LNTR_{it} + \epsilon_{it}$ (1)

Model 2: $LNGDP_{ti} = \beta_0 + \beta_1 LNF_{DI_{ti}} + \beta_2 LNCED_{ti} + \beta_3 LNGCF_{ti} + \beta_4 LNLFP_{ti} + \beta_5 LNTR_{ti} + \epsilon_{ti}$ (2)

Whereas, ‘i’ represents number of countries which include: India, Nepal, Pakistan, Bhutan, Bangladesh and Sri Lanka. ‘t’ consist of number of years from 1990 to 2014. Natural log of all the variables are taken to convert the data in percentage form and to make the data normally distributed.

LNGDP= Log of Gross Domestic Product LNCED= Change in External Debt

LNLFP= Log of Labor Force Participation LNFDI= Foreign Direct Investment

LNGCF= Gross Capital Formation LNTR= Log of Trade

LNTFI= Total Foreign Inflow

The study will use panel OLS estimation and our assumption will be that there does not exist problem of autocorrelation, heteroscedasticity, multicollinearity and non-linearity in the model. If panel OLS is not applicable then the study will use appropriate techniques for estimation.

Table 5 Variance Inflation Factor of Model 1

	LNGDP	LNTFI	LNGCF	LNLFP	LNTR
LNGDP	-				
LNTFI	1.046	-			
LNGCF	1.164	1.013	-		
LNLFP	1.309	1.001	1.090	-	
LNTR	1.434	1.229	1.945	1.021	-

Table 6 Variance Inflation Factor of Model 2

	LNGDP	LNCED	LNFDI	LNLFP	LNTR	LNGCF
LNGDP	-					
LNCED	1.014	-				
LNFDI	1.309	1.251	-			
LNLFP	1.271	1.288	1.089	-		
LNTR	1.484	1.427	1.007	1.020	-	
LNGCF	1.161	1.224	1.002	1.113	1.972	-

The estimated results of variance inflation factor in table 5 and 6 are generated to confirm whether there is problem of multicollinearity in the model 1 and 2 and as there does not exist any value greater than 10;

therefore, there is no problem of multicollinearity in the model 1 and 2 (Gujrati, 2004).

In the estimation section, the study will check whether there exist long run and short run relationship in the model 1 and 2 using Cointegration method and Unit Root test.

Table 7: Unit Root Test for Model 1				
At Level				
	ADF Fisher		PP Fisher	
	Calculated Value	Probability Value	Calculated Value	Probability Value
LNGDP	0.394	1.000	0.409	1.000
LNTFI	2.691	0.988	116.029	0.000
LNGCF	17.456	0.133	15.298	0.226
LNLFP	17.863	0.120	15.316	0.225
LNTR	16.966	0.151	16.645	0.164

Table 8: Unit Root Test for Model 2				
At Level				
	ADF Fisher		PP Fisher	
	Calculated Value	Probability Value	Calculated Value	Probability Value
LNGDP	0.394	1.000	0.409	1.000
LNCED	11.892	0.292	81.286	0.000
LNFDI	50.658	0.000	28.561	0.005
LNLFP	17.863	0.120	15.316	0.225
LNTR	16.966	0.151	16.645	0.164
LNGCF	17.456	0.133	15.298	0.226

In the estimation first the study will check whether there is problem of unit root in both models or not. To check this, the table 7 estimates are generated and the values of unit root at level in PP Fisher are significant which suggests that there is no problem of unit root in the model 1 and there is mixed level of cointegration in the model 1 and for model 2, the values of unit root in table 8 for both the test are significant which suggests that there is mixed level of cointegration in the model. Now, the study can proceed further and check whether there is long run relationship in both the models.

Table 9: Kao Residual Cointegration Test for Model 1		
	T-Test	Prob.
Augmented Dickey Fuller	-1.782423	0.0373**
*** 10%, **5% and *1% level of significance		
Table 10 Kao Residual Cointegration Test for Model 2		
	T-Test	Prob.
Augmented Dickey Fuller	-1.689588	0.0456**
*** 10%, **5% and *1% level of significance		

Augmented Dickey Fuller (ADF) is used to check whether there exist long run relationship between the variables and the estimated values of table 9 for model 1 is significant at 5 percent level of significance whereas the estimated values of table 10 for model 2 are also significant at 5 percent level of significance, which means that there exist long run relationship between the variable for both the models (Kao, 1999)

Table 11: Dynamic Ordinary Least Test (DOLS) for Model 1				
Dependent Variable: GDP				
Variable	TFI	GCF	LFP	TR
Coefficient	-0.243456	0.786798	6.194715	1.167683
Prob.	0.0194**	0.0004*	0.0000*	0.0000*
R-squared	0.977654			
*** 10%, **5% and *1% level of significance				

The results of table 11 of DOLS for model 1 shows that there is long run relationship between the variables. The value of total foreign inflow is significant at 0.05 critical value and if increased by 1 percent, it will decrease gross domestic product by -0.243 percent in the long run.

Table 12 Fully Modified Ordinary Least Test (FMOLS) for Model 2					
Dependent Variable: GDP					
Variable	CED	FDI	GCF	LFP	TR
Coefficient	0.168339	0.018343	0.680704	2.2859	0.6555
Prob.	0.0000*	0.0049*	0.0000*	0.0000*	0.0000*
R-squared	0.870525				
*** 10%, **5% and *1% level of significance					

The results of table 12 of FMOLS for model 2 shows that there exist long run relationship of explanatory variables on dependent variable. The value of change in external debt is significant at 1 percent level of significance and if increased by 1 percent, it will increase gross domestic product by +0.168 percent in the long run. Also, the value of foreign direct investment is significant at 1 percent level of significant and if increase by

1 percent, will increase gross domestic product by 0.018 percent in the long run.

Table 13 Short Run OLS Estimates of Model 1						
Dependent Variable: D(GDP)						
Variable	D(TFI(-1))	D(GCF)	D(LFP)	D(TR)	ECM(-1)	C
Coefficient	0.010491	0.052150	0.248968	-0.02636	-0.02808	0.054248
Prob.	0.2441	0.0077	0.3384	0.2448	0.0094*	0.0000
R-squared	0.683080		Durbin-Watson stat		1.945939	
F-statistic	5.075557		Prob. (F-statistic)		0.000000	
*** 10%, **5% and *1% level of significance						

Table 14 Short Run OLS Estimates of Model 2							
Dependent Variable: D(GDP)							
Variable	D(CED)	D(FDI)	D(GCF)	D(LFP)	D(TR)	ECM(-1)	C
Coefficient	0.0105	0.0522	0.249	-0.0264	-0.0281	0.0543	0.058
Prob.	0.2441	0.0077	0.3384	0.245	0.001*	0.000	0.000
R-squared	0.736540			Durbin-Watson stat		1.978710	
F-statistic	5.675993			Prob. (F-statistic)		0.000000	
*** 10%, **5% and *1% level of significance							

The estimated results of table 13 and 14 are used to find convergence by using error correction model (ECM) in both the models. The results of both tables suggest that ECM is negative and significant in both models, which means that both models are converging back to equilibrium in the long run (Bannerjee *et al.*, 1998).

5. Conclusion

The reason why developing countries take external debt is because these countries have less saving and investment (Malik and Hayat, 2010). The developing countries take external loans from other developed countries and international institutions, so that their economic growth can be boosted. Gohar *et al.* (2012) states that there are many reasons why developing countries take external loans because their gross domestic product is low, there is budget deficit because countries are import oriented. In addition, (Soludo, 2003) emphasized that there are two categories why countries take loan from external sources, for macroeconomic reasons or to temporarily finance their balance of payment and to boost their economic growth and decrease poverty in their country.

For developing countries external debt and foreign direct investment are both form of foreign currency but external debt serves is a burden because the foreign debt has to be paid in the same currency. In order to pay its debt, the country has to open up the economy which eventually attracts investment but with increase taxes, increase money supply and increasing inflation and the result is an unstable economy which is not an ideal condition which encourages foreign direct investments in the country. As foreign direct investment provide resources, job opportunities, technology and investments in the host country and external debt provide the necessary funds to boost the economy.

From literature review, the study concluded that external debt should decreases gross domestic product whereas foreign direct investment should increases gross domestic product but it was also concluded that there are very few panel data studies have been conducted on the impact of external debt and foreign direct investment on gross domestic product and as the dataset in this study consist of more time series and less cross sections data, so the data will behave more like time series data. Therefore, there is a possibility that the study get different results as proposed by different studies in literature review.

The estimated results of dynamic ordinary least square (DOLS) of model 1 suggests that total foreign inflow (TFI) is decreasing gross domestic product (GDP) in the long run and 1 percent increase in TFI will decrease GDP by -0.243 percent in the long run whereas the estimated results of fully modified ordinary least square (FMOLS) of model 2 suggests that change in external debt (CED) and foreign direct investment (FDI) has positive impact on gross domestic product (GDP) in the long run. 1 percent increase in CED will increase GDP by 0.168 percent in the long run whereas 1 percent increase in FDI will increase GDP by 0.012 percent in the long run. The impact of external debt on economic growth are positive and are similar to the results proposed by Siddiqui and Malik (2001) and Kasidi and Said (2013) whereas the results of foreign direct investment on economic growth are positive and are similar to the results proposed by past empirical papers in literature review.

The result of study suggests some possible policies for the study. External debt can increase gross domestic product but it can decrease economic growth in the long run, when the debt is used for repayment purposes because of its inefficient use in the economy. Therefore, developing countries should use external debt for infrastructure and on projects that has long term positive impact on the economy. Foreign

inflows should also be used for development projects and for promoting gross capital formations and attracting foreign direct investment which can decrease the reliance on foreign debt in the long run. Debt bases financing for balance of payment and repayment should be discouraged by investing on domestic investors and take economy towards more export-oriented industrialization.

The limitations in this study was that when data was collected for eight SAARC countries, when data was collected, it was only available for six countries and the study had to be conducted on six countries except for Maldives and Afghanistan. Also, if a study is conducted on the effect of tax revenue and foreign direct investment on external debt, then a more clear understanding could be developed for developing countries for the use of external debt.

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