FOREIGN AID AND ECONOMIC GROWTH IN SOUTH ASIA

W.R.D. Weerasingha[1], A.M.M. Mustafa [2]
[1 & 2]Faculty of Management and Commerce
South Eastern University of Sri Lanka
[2]amustafa@seu.ac.lk

ABSTRACT

The main objective of this paper is to investigate the impact of foreign aid on economic growth in South Asia. Still, there is an inconclusive debate in determining the exact relationship between foreign aid and economic growth. Foreign aid basically consists of two types namely grants and loans. Although government doesn't want to repay grants, it needs to repay loan amount and interest payments. High debt burden and political influences make foreign aid less effective. To opposite that opinion, some empirical findings proved that foreign aid is important for increasing the economic growth, assistance for human health, immediate humanitarian assistance in disasters and long term development programs in developing countries. Thus, this paper aims to find out the impact of foreign aid on economic growth and try to suggest recommendation for a better economic status. Panel data of four South Asian countries are used for this analysis from 1977 to 2017. This study basically focuses on the impact of concessional loan and official development assistance on the economies of South Asian countries. Ordinary Least Squares model is used to test the relationship between froing aid and economic growth. The results of the analysis show that foreign aid has a negative impact on economic growth in South Asia during the period of 1977 to 2017. Therefore, it is better not to depend on foreign aid. Because a country has to pay higher proportion of aid repayments from its gross domestic production and it is difficult to allocate resources on development purposes. Thus, developing countries should develop appropriate policies to reduce debt burden and develop a mechanism to maintain a suitable aid level. The government should effectively manage budget in order to avoid unnecessary current expenditure. The tax base should be regulated to enhance government revenue rather than depend on other nations. It is important to empower the transparency and accountability of governing bodies and strengthen public finance management.

Keywords: Foreign Aid, Occasional Loan, Official Development Assistance, Economic Growth, South Asia

Introduction

The relevancy of foreign aid on economic growth has become critical in a country where policy makers have to confront increasing economic imbalance. According to the economic theory, moderate level of foreign aid leads to economic growth considering a typical Keynesian behavior. According to the development theories and empirical evidences regarding developing countries, foreign assistance helps in filling gaps in resources by increasing limited domestic savings, giving extra foreign aid necessary for finance capital requirements as well as imports, helping with human capital development and increasing domestic capacity. Although there are many instances relating to aid effectiveness, as recent examples indicates that expected benefits of foreign aid have not been obtained. In some situation aid is not effective. Aid is ineffective if it is too small or too large which does not match with the real need of the country. If the aid quantity is too small it doesn't give a significant impact on economic growth. If aid flow is too high, it causes some economic problems. It may disturb to the absorptive capacity of the country which leads to inefficiencies and retard regarding aid utilization. In addition to that sometimes large aid inflows lead to economic pathologies like Dutch disease which happens due to aid flows by increasing real exchange rate and so that restrict the extension of exports and income. Other hand corruptions, bad governance, bad policies will discourage the effective utilization of aid. Foreign aid has been increased in recent few decades quantitatively for South Asian countries and we can see mixed growth dynamics in those economies . In this research, the relationship between foreign aid and economic growth is investigated in four selected South Asian countries. India, Pakistan, Sri Lanka and Bangladesh are selected for my research since those countries have the highest foreign aid inflows in South Asian context and it was difficult to take whole South Asian countries due to unavailability of data. Figure 1 represents the evolution of aid to GDP ratio and GDP growth rate in selected South Asian countries. Here, I have taken the summation of Official Development Assistance and concessional loans as a percentage of GDP to measure the impact of aid on economic growth.

Literture review

The donor countries give foreign aid for different purposes. This section analysis the separate aid flows for economic purposes. Aid may be given or economic purposes, reconstruction purposes, social purposes and some other purposes. According to growth effects of the different type of aid inflows, most aid has no impact and only reconstruction aid has significant positive impact on the economy (Barro,2001). Real GDP per capita is used by many researchers in their studies (Daud & Podivinsky ,2014). Still there is an inconclusive situation in determining the exact relationship between foreign aid and economic growth. Since researchers argue that there is a positive relationship while others argue that there is negative or no relationship between foreign aid and economic growth. To support for the positive relationship, there are many research conducted by local and foreign researchers who found that foreign aid helps to enhance economic growth by physical capital investment and human capital investment such as education and health in developing countries. This helps to eliminate the poverty, budget deficit and to achieve economic stability. Some researchers argue that the effectiveness of the foreign aid on economic growth depends on the policies and regulations on the country who receive foreign aid. So they argue that aid can be effectively used in countries where there are better public policies and regulations. They found that aid has a positive relationship with economic growth in developing countries with good fiscal, monetary and trade policies. If there is no good policies, aid has a poor effect on economic growth and development (Burnside & Dollar 1997).

Aid contributes to reduce the poverty of a country and increase the wellbeing of the citizens which indirectly affect to the economic growth. Reducing poverty is not the most important factor to increase the growth. But it can influence to the growth to a considerable amount. Actual allocation of aid is radically different from the poverty efficient allocation. Appropriate allocation of funds is distributed disproportionately on countries with higher poverty and adequate policies (Collier & Dollar 2001). According to the Collier and Dollar there is a conflict between finance for poverty reduction and choice to finance for public reform. Traditionally the main objective of aid is to improve the performance and economic growth. But donors have different purposes time to time. Sometimes it may be more important to increasing the welfare of poor rather than economic growth (World Bank 2001). Gomanee & Morrissey (2002) has suggested that aid that enhance the growth reduces the income poverty indirectly reduces the poverty, aid that focus on alleviate poverty may not have an impact on growth. Aid enhances the economic growth meanwhile increasing poverty relevant variables and poverty will be higher when aid is absent (McGillivray & Ahmed 1990). Although researchers argue that there is a positive relationship sometimes there is an inverse relationship between aid and growth. It says that after a certain limit aid will not positively relate with economic growth. Aid and policy do not have a direct effect upon conflict risk, but they directly affect to the economic growth and primary exports. So this indirect effect affects to the risk of conflict (Collier & Hoeffler 2002).The exact relationship between foreign aid and economic growth is still inconclusive. Different researches have proven different relationship between these two variables. Some reseachers empirically proved that there is a positive relationship while others say there is negative or norelatonship between foreign aid and economic growth.

Methodology

This study is expected to investigate whether there is an impact of foreign aid on economic growth of 04 South Asian Countries. Neoclassical growth model is used as the analytical framework to this analysis and suppose the output level of the economy is determined according to the factors of production and technology used. So the production function (function 1) can be presented as;

Y= ƒ (K, L),

Where Y is the aggregate output (Which can be measured by GDP growth rate), K being the capital which is measured by gross capital as a percentage of GDP and L is the labour force of the country which is measured based on population growth in this research. Assuming technology is constant, any increase of capital or labour will increase the total output level of the economy. Ordinary Least Squire Regression, panel model with random effects and panel model with fixed effects are the three basic panel data models which can be used for analytical purposes. Considering the augmented production function, the evaluation of random effect model can be presented as follows:

$Y_{it} = \beta_0 + \beta_1(Capital_{it}) + \beta_2(Population_{it}) + \beta_3(FDI_{it}) + \beta_4(Trade\ Openness_{it}) + \beta_5(Human\ Capital_{it}) + \beta_6(Foreign\ Aid_{it}) + \beta_7(Government\ Debt_{it}) + \beta_8(inflation_{it}) + \beta_9(D1_{it}) + \beta_{10}(D2_{it}) + \varepsilon it$

Here i is the country and t is the time period while Ɛ is the error term which is vary according to the time and country. The conceptual framework can be developed based on the review of the existing literature. Check the multicollinearity problem of the selected variables of the model, Variance Inflation Factor test is used. Since all the VIF values of the independent variables are less than 5, it reveals that there isn't a multicollinearity problem in the model. The mean VIF value is 1.17. Since it is less than 5, it proves that there is no multicollinearity problem. Furthermore, this result has been proven by the results of the correlation matrix Variables are added to the models from highest value to lowest value by considering the values of the coefficients of the variables in correlation matrix. Variables are added according to the value of the variables to avoid the multicollinearity issues. Along with adding variables one by one to the model, it needs check the change in sign of the coefficient of the variables. In present study, there is no multicollinearity problem within variable because there is no change in sign of coefficients although selected variables are added to the model.

Discussion and conclusion

Multicollinearity problem of the selected variables of the model, Variance Inflation Factor test is used. Since all the VIF values of the independent variables are less than 5, it reveals that there isn't a multicollinearity problem in the model. The mean VIF value is 1.17 . Since it is less than 5, it proves that there is no multicollinearity problem.Furthermore this result has been proven by the results of the correlation matrix Variables are added to the models from highest value to lowest value by considering the values of the coefficients of the variables in correlation matrix. Variables are added according to the value of the variables to avoid the multicollinearity issues. Along with adding variables one by one to the model, it needs check the change in sign of the coefficient of the variables. In present study, there is no multicollinearity problem within variable because there is no change in sign of coefficients although selected variables are added to the model.

Fixed effect technique, random effect technique and Ordinary Least Squares model is used to do the panel data analysis. To select a model from Fixed Effect Model and Random Effect Model, Hausman test is needed to be performed. The estimated results of these three models are shown in table 4. The result of random effect model is presented in equation 01 and the result of fixed effect model is presented in equation 2 while the result of OLS model is presented in equation . To choose the most appropriate technique for the model, Hausman test is performed. According to the results of Hausman test, the probability is 0.55 which is not lower than 0.5. So the test rejects the suitability of the fixed effect technique to the model and accepts random effect technique. So, Random Effect Model is selected for the analysis of this research according to the Hausman test. To select an appropriate model from random effect model and ordinary least square model, Breusch and Pagan Lagrangian multiplier test is performed . Since the probability is higher than 0.05 it proves that ordinary least square model is suitable for the analysis. Furthermore, the finding of ordinary square model is adjusted to "robust" to solve the heteroskedasticity problem and the result of that model. According to the results of the analysis, the outcomes of the Wald test and F test have been significant at 1% level of significance. Based on Hauseman test results, we do not reject the null hypothesis that states there is no correlation between growth determinants and unobserved individual effects. This result proves that Random Effect Model is more suitable for this analysis.

Investigating the relationship between foreign aid and economic growth is the main objective of this research. To check the stationary of the variable, unit root test is used. According to the results of the Unit root test GDP growth rate, gross capital formation as a percentage of GDP, foreign aid as a percentage of GDP was stationary without taking differences. Trade openness, FDI, external debt, population growth rate and inflation rate was stationary at first difference while Human Development Indicator was stationary at second difference.

Correlation matrix and VIF test is used to check the multicollinearity issues and it proved that there is no correlation among the variables of the model. Fixed effect model, random effect model and ordinary least square method are used for panel data analysis. To test the most appropriate test from fixed effect model and random effect model, Hausman test is performed. Since the probability of the test is greater than 0.5, random effect model is selected as most suitable test from these two models. Breuch and Lagrangian multiplier test was tested for select the most suitable model from earlier selected random effect model and OLS model. Since the probability is greater than 0.05, ordinary least squares model is selected as the most suitable model for the analysis. The result of the model is adjusted to 'robust' in order to avoid heteroskedasticity issues.
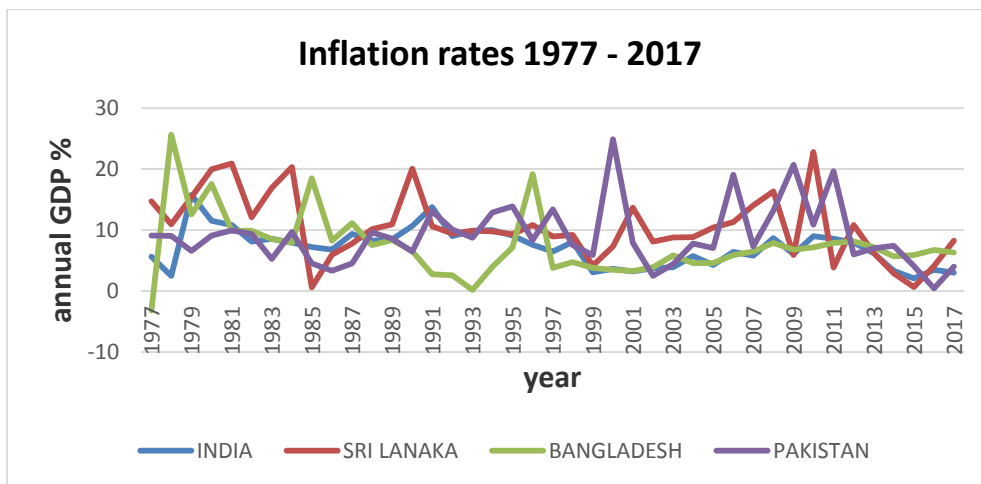
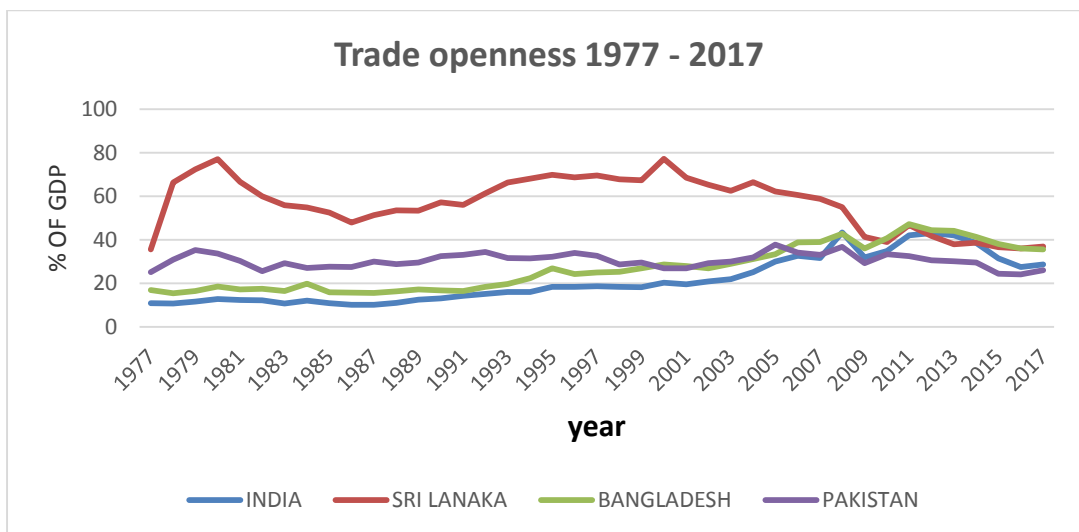Foreign aid and Economic growth in south Asian countries

FD

ECONOMIC GROWTH

physical capital 1977 - 2017
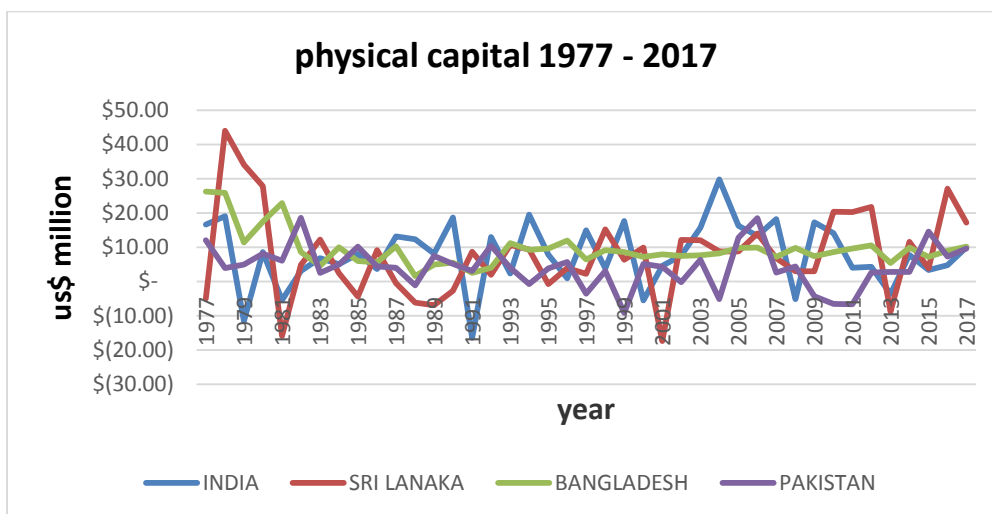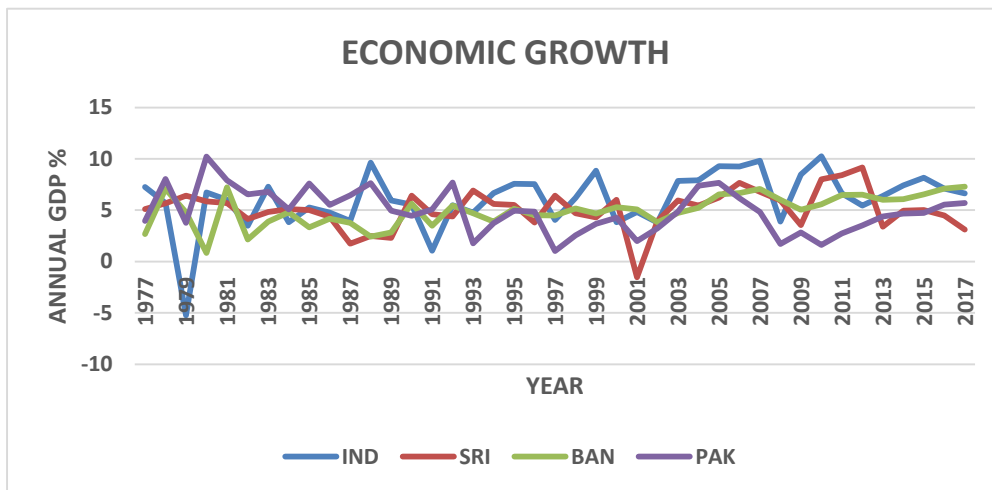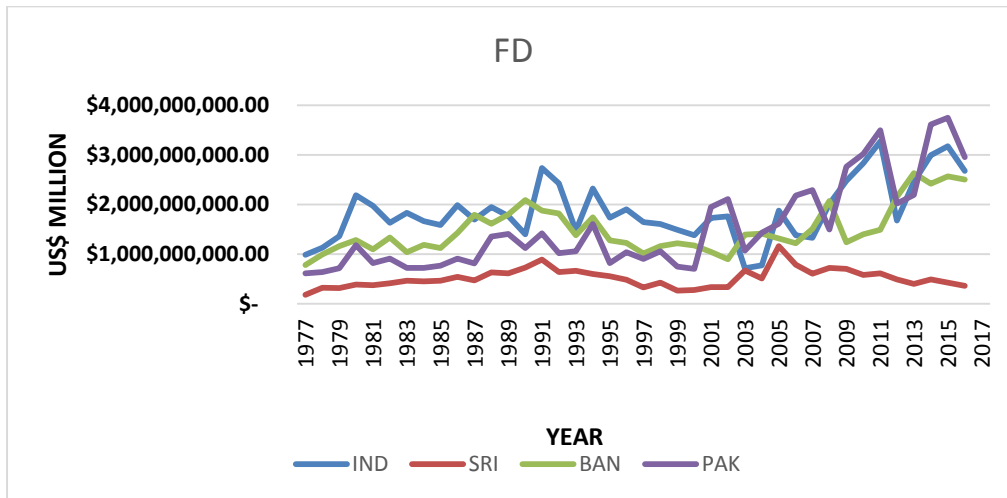
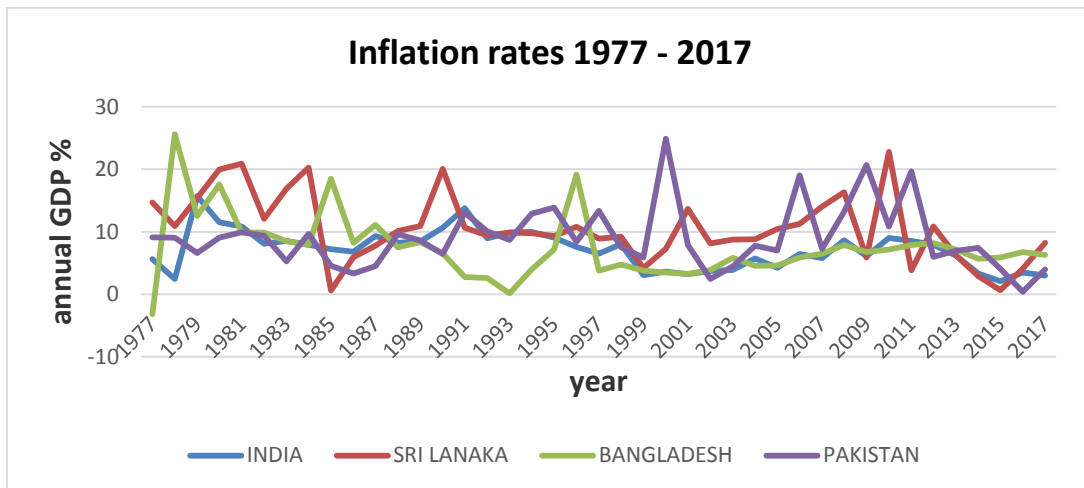Total aid and GDP growth rate in Sri Lanka
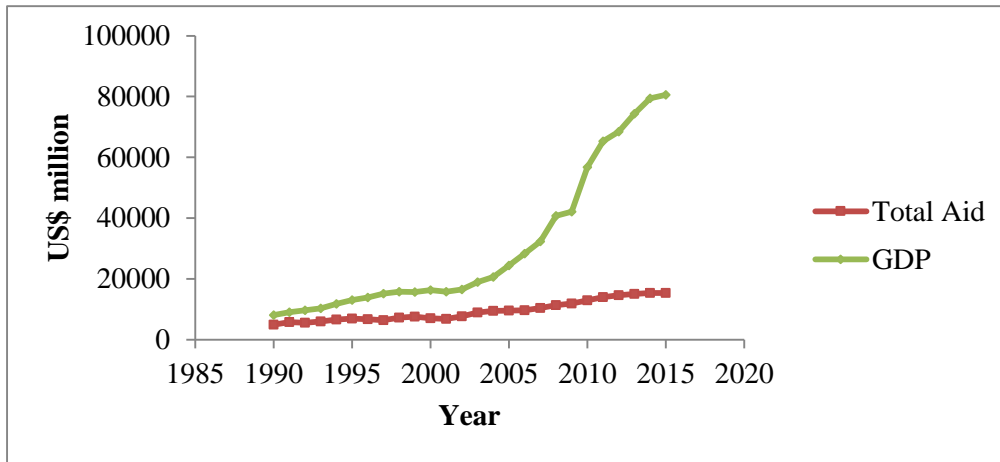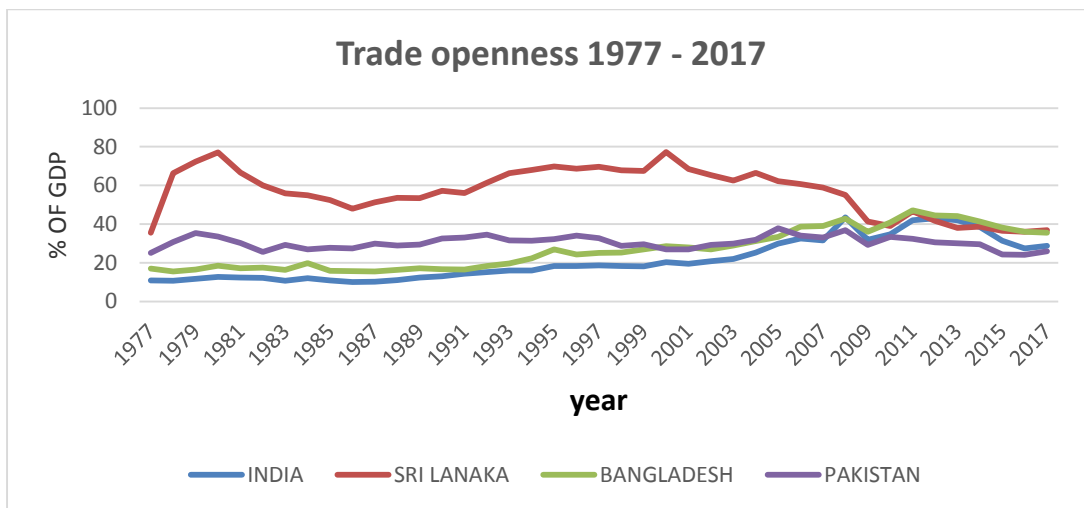

Inflation rates in south Asian countries

Total Trade openness in south Asian countries

Inflation rates in south Asian countries

Total Trade openness in south Asian countries

Recomendataion

In this present study, basically the impact of foreign aid on economic growth is investigated for selected South Asian countries. Furthermore, the impacts of other selected variables for economic growth are investigated in this research. Based on the findings of the research, different policy implications can be recommended. First recommendation is that selected countries should not highly depend on foreign aid. Because high foreign aid including high concessional loans doesn't influence on economic growth since it discourages the investment in the country. If a country has to pay higher proportion from its GDP as aid repayments, aid doesn't make an impact on economic growth. Although grants don't need to repay, countries should repay its concessional proportion. So developing countries should develop policies in order to reduce debt burden and develop a mechanism to maintain a sustainable aid level which won't create crowding out effect or overhang effect.

Rather than depend on other nations, it is better to have an efficient policy reform. At present, most of the development projects and government expenditure are financed through foreign grants and loans. It is better to reduce concessional loans. Fiscal deficit should be financed by tax revenue. Since those countries are developing countries government can broaden the tax base averagely up to 15-16 percent of GDP. As well as they can rationalize the tax system while minimizing irrational tax exceptions and tax holidays. Furthermore, they can strengthen the public financial management and financial planning while increasing transparency and accountability of governing enterprises.Furthermore, government should effectively allocate funds for current expenditure while increasing capital expenditure. To take additional resources government should not depend on external resources. To expand resources, government can expand their tax system, increase non-tax income and regulate the tax administration rather than depends on other nations.

According to the results, Gross Capital Formation reflects a significant impact on increasing economic growth. In most of the developing countries, government allocates more resources as current expenditure rather than capital expenditure. It is needed to invest in effective development projects in order to enhance the growth. It is important to have an advanced resource base. So government should upgrade physical capital. Advanced technologies which create comparative advantage should be adopted in order to done a revolutionary change in industry sector.In that study, Human Capital plays a significant role in achieving economic growth. Countries should more focus on education development projects, ensure secondary education and allocate sufficient funds for the development of human capital.

References

Adelakum & Johnson, O 2011, 'Human development and economic growth in Nigeria', European Journal of Business and Management, vol. 3, no. 9, pp. 2222-2839.

Adelman, I & Chernery, HB 1966, 'The foreign aid and Economic development', The review of Economics and Statistics, vol. 48, no. 1, pp. 1-19.

Afonso, A & Jalles, JT 2013, 'Growth and productivity: the role of government debt', International Review of Economics and Finance, pp. 384-407.

Akram, N 2013, 'Empirical examination of debt and growth nexus in South Asian countries', Asia-Pacific Development Journal, vol. 20, no. 2, pp. 29-52

Arndt, C, Jones, S & Tarp, F 2015, 'What is the aggregate economic rate of return to foreign aid?', The World Bank Economic Review, vol. 30, no. 3, pp. 446-474.

Bal, DP & Rath, BN 2014, 'Public debt and economic growth in India, Economic Analysis and Policy, pp. 292-300.

Barro, RJ 1995, 'Inflation and economic growth', NBER Working Paper, pp. 1-36.

Barro, RJ 1998, 'Determinants of economic growth: a cross country empirical study', NBER Working Paper, pp. 1-70.

Barro, RJ 2001, 'Human capital and growth', The American Economic Review, vol. 91, no. 2, pp.12-17.

Burnside, C & Dollar, D 1997, 'Aid, policies, and growth', Policy Research Working Paper, pp.1-48.

Collier, P & Dollar, D 2001, 'Can the world cut poverty in half? How policy reform and effective aid can meet international development goals', Elsevier, vol. 29, no. 11, pp. 1787-1802.

Collier, P & Hoeffler, A 2002, 'Aid, policy and peace: reducing the risks of civil conflict, Defense and Peace Economics, vol. 13, no.6, pp. 435-450.

McGillivray, M & Ahmed, A 1999, 'Aid, adjustment and public sector fiscal behavior in the Philippines', Journal of the Asia Pacific Economy, vol. 4, no. 2, pp. 381-391.

Daud, SNM & Podivinsky, J 2014, 'Government debt and economic growth in Malaysia: the role of institutional quality', Applied Economics Letters, vol. 21, no. 17, pp. 1179-1183.