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Impact of External Debt on Stock Market Performance and Economic Growth: Moderating Role of Capital Formation

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Abstract

The main objective of this study is to ascertain the effect of external debt on economic growth and stock market performance in SAARC countries that included Pakistan, Sri Lanka, Bangladesh and India for the period spanning from 1992 to 2017. This study examines the effect of capital formation as a moderator. Using panel least square recreation analysis, we find a negative and significant association between economic growth and external debts. The inclusion of interaction tea reveals a positive moderation effect of capital formation on the relationship of external debt and economic growth. Our study suggest that the external debt is less favourable for the SAARC countries and that greater emphasis should be increased on capital formulation. Moreover, policies that enhance the national treasury base, increase exports, and make environment conducive for foreign direct investment should be introduced in SAARC countries. The governments of SAARC countries should look for the alternates of external debt for financing the fiscal deficit.

Introduction

We can classify the borrowed money into two categories- internal debts and external debts. Internal debts are the borrowings that are generated from within the country through different sources and external debts are majorly the borrowings from international institutions and other countries. In this study, our focus will remain

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on external debt. To keep the wheels of the economy moving, countries with developing or underdeveloped economies often must seek debts to meet their financial needs. The government in actual takes a loan to finance public goods that improve financial well-being and promote economic growth (Ogunmuyiwa, 2011). Debts play an important role in the economic growth within a country. However, there is a contradiction as to external debt affects the economic activities positively or negatively (Kasidi & Said, 2013). For a long time, Pakistan could not finance its budget by generating enough revenues. As a result, it must look for the other options and to meet the expenditure, the country borrows. The developing countries like Pakistan often look for this foreign debt to meet its financial ends (Rais & Anwar, 2012).

Some may argue that debts are not good and not a healthy or positive sign for the economy, however, the fact is that the effects can be positive or negative as well depending on how these debts are utilized (Ramzan & Ahmad, 2014). Fajana (1993) in his study gives a dimension that debts are not the worst thing, rather, their improper management is. Debts are taken to meet the financial goals and ultimately to improve the economic conditions of a country, but because of poor debt management, it becomes a burden that slows down economic progress. The scenario of Pakistan is rather very interesting as foreign debts have been used in debt servicing in the past few years (Mohamed, 2005), which could have been used otherwise and might have contributed to improving the economy. Economic theories identify that if governments maintain optimum levels of debts, they will supplement the progress of the economy (Kharusi & Ada, 2018). According to Adelman and Chenery (1966), developing countries accumulate so many external debts because there is a lack of saving and investment. Such countries opt for taking loans from other countries and international financial institutions to ease their financial hiccups in the country. Gohar, Bhutto, and Butt (2012) goes a step further in explaining the reason countries amass external debt. Presbitero (2012) added that industrialized countries in using the external debt. Industrialized countries are in a better position to counter the negative effects of external debts such as crowding-out effect, market volatility, and capital flight from the country because of currency depreciation.

Kharusi and Ada ([2018](#)) asserted that the external debt crowds out the private investment within the country making the economic progress slower, thus it can be concluded that the national growth is impeded because of the presence of external debt.

Pakistan is facing debt overhang problems and often has to seek more loans just to pay the interest of previously pending loans. All this justifies a need for evaluating the role of external debt.

This study is conducted to determine the impact of external debt on the stock market and economic growth and to understand the moderating effect of capital formation in this scenario. It has become imperative for us to know if the external debt improves the economic condition of Pakistan in real terms or all this borrowing results from poor debt management.

The primary purpose of our study is to expand the body of knowledge and make it helpful for the think tanks and all the stakeholders to understand the association between foreign debt and stocks and economic growth. The author believes this piece of information would help not only the academic people who want to know the relationship between external debt, economic growth, and stock performance but also the policymakers who are sitting at the helm of affairs and whose decisions matter a lot for the progress of the economy. This study also aims to explore the moderating effect of capital formation on this very relationship between debt and economy. The purpose further extends in understanding the relationship of debt and economic growth from the perspective of SAARC countries to determine if fiscal deficits should be taken care of through debts or otherwise.

2. Theoretical Background and Hypothesis Development

External debt is the debt borrowed from other countries, financial institutions, and International Monetary Fund. These credits, including interest, should be repaid in the currency borrowed. There have been several studies done in this area trying to understand the relationship between external debt and output. However, the ever-changing economic situation calls for a fresh study and application of econometric tools to update the knowledge. Below given summarizes the literature review. Nations' economic-financial

deficiencies, particularly developing ones, get to improve their monetary development. The external debt is obtained to contribute genuinely to the economy, however, the future deficit administration installment represents a danger to financial development. A few analysts have analyzed the impact of external debt on financial development for quite a while.

Adesola (2009) research explores the impact of foreign debt on financial growth in Nigeria. According to Audu (2004), external debt has a significant impact on the development, and that study was conducted in Nigeria. In that research work, foreign debt has a negative significant relationship between economic growth and foreign debt.

Capital formation is the addition of capital accumulation within the country during an accounting period. This helps in supporting the economy and to understand its function one must see the Harrod-Domar model which states that in a country where people save more, they are likely to invest more in economic activities, thus profits will increase and ultimately individuals will be in a better position to invest again. In this way, an ever-going cycle will be made which is going to support the economic growth and prosperity in the country. It is said that capital formation augments the development of an economy, the purpose of studying it in this research is to understand the moderating effect of this variable on economic growth and debt.

2.1. External Debt and Economic Growth

Kharusi and Ada (2018) conducted a study on capital formation and external debt impact on the economic growth of the Oman listed firms. They take the data from 1990 to 2015 and this study used the Auto Regressive Distributive Lag approach. The finding of this research work presents the new classical view that exactly presents the negative relationship between foreign debt and economic growth. In that study, capital formation and economic growth have a significant positive relationship.

Sothan (2018) used the autoregressive distributive lag (ARDL) model to show the relationship between external debt that comes from the foreign countries and the economic growth in Cambodia for the period of 1980-2014. Sothan's (2018) findings are that the

foreign debts have a positive impact on economic growth only just for the short run and pose a significant negative one from the perspective of the long run. The investment has a positive impact in the long run and trade operons have a significant positive relation with economic growth in both the short and long run.

Silva, Perera, and Silva (2016) has investigated the relationship between the economic growth of Sri Lanka and the stock market performance of this country. The researcher has collected the quarterly data of both variables ranging from the year 2000 to 2015. The study strongly recommended that there is a positive and significant relationship between the economic growth of the country and its stock exchange performances. Adepoju, Salau, and Obayelu (2007) studied the external debt's impact on economic growth from the perspective of Nigeria, taking the period from 1962 to 2006. Their study found that the public debt of Nigeria had severely affected the economic progress of Nigeria. Karagol (2006) studied rather an interesting association between foreign debt and economic growth in the short and long run in Turkey. They used the Slandered production model and found that external debt has a significant negative relationship with growth in that country in the long run. Based on the above literature, we developed the following hypothesis:

H1*: External debt has a negative relationship with the economic growth of the country.

2.2. External Debt and Stock Market Performance

Sheikh, Faridi, & Tariq (2010) explore the effect of local debt on the financial development of Pakistan for the period 1972-2009 by applying standard least squares (OLS) procedure. The examination finds that local debt positively influences the financial development in Pakistan suggesting that the assets created through residential obtaining have been utilized incompletely to fund those uses of government that add to the development of GDP. The rule is that household just as external debt ought to be spent for long term improvement purposes. Another explanation behind the positive relationship between household debt and monetary development in Pakistan might be that local country debt is attractive. Boopen, Kesseven, and Ramesh (2007) also studies the relationship of

foreign debts and economic growth of the Mauritius state for the period ranging between 1960 and 2004. The results support the fact that public debts are negatively related to the economic performance in both the cases of short-run and long run.

Demirgüç and Levine (1996) contended that this relationship does not infer that the advancement of monetary markets is constantly exogenous to financial development. Tachiwou (2010) found that securities exchange execution decidedly influence the financial development in West African money related association both in the short run and long run utilizing a straight forward two-stage strategy of Engle and Granger with regards to the econometric system. Demirgüç and Levine (1996) found that better working, all the more globally coordinate financial exchanges help monetary development by moving the society's funds into higher return speculations, all else being equivalent. Based on the following literature we developed the following hypothesis:

H2: There is a negative relationship between stock market performance and external debt.

2.3. Moderating Role of Capital Formation

The study of Bakare (2011) is focused on the impact of capital formation on the economic growth of Nigeria. The cointegration method is used to ascertain the relationship between the economic well-being of Nigeria and the capital formation and the results confirmed that there is a presence of a direct relationship between these two variables. The study concluded that capital formation is not only imperative for economic growth, but it also directs a developing country to the optimum usage of natural resources which ultimately helps the economy to grow. Besides that, the increasing population of the developing countries is a serious problem for the economy, so capital formation ensures the increase in industrialization thus creating more jobs for the people and giving a further push to the economy.

The relationship of capital formation and the economic progress of Nigeria is also studied by Ainabor, Shuaib, and Kadiri (2014). In this paper, the Harrod-Domar model was considered to test whether there is a significant relationship or not between capital formation

and the economic growth of Nigeria. The time series method was used to acquire data ranging from 1960 to 2010. The data used for this study was secondary and was taken from the World Bank Development Indicators (WDI). The author used a series of tests including cointegration, stationarity tests, and OLS. Further, the author tried to study the long-term relationship between the said variables using different methods. The findings however supported the Harrod-Domar model and backed the fact that the more a country saves and invests in its economic activity, the more GNP it will have. Given the previous literature we developed the following hypothesis:

H3: Capital formation moderates the relationship between external debt and economic growth.

H4: Capital formation moderates the relationship between external debt and stock market performance.

3. Research Design

3.1. Sample Description

This study includes data from the SAARC region (Pakistan, India, Bangladesh, and Sri Lanka). The data regarding debts of countries is taken from the Asian Development Bank, World Bank, and IMF database. The GDP is taken from the World Bank database. Stock market data is taken from the Bloomberg database. The data is taken yearly and the period is from 1992 to 2017.

3.2. Variables Definitions

3.2.1. Dependent variables. There are two dependent variables, economic growth, and stock performance. We will be checking the impact of external debt (independent variable) on economic growth (dependent variable) by using the proxy for economic growth as GNI Growth (annual %). For the next independent variable which is stock market performance, we will be using the stock markets closing prices returns as the proxy for this variable.

3.2.2. Independent variables. External debt is our independent variable and we are using External debt stock as % of GNI as a proxy to study this variable.

3.2.3. Control variables. Some variables affect the dependent variable indirectly thus disturbing the relationship between the actual dependent and independent variables under study. Such variables can be classified as a control variable, these are included in the study to understand the relationship better between the explanatory and explained variable. We have also incorporated the control variables in our study to make sure that we understand the relationship in a better way.

Inflation is a rise in the price level in the economy. The inflation affects the spending behavior of the individuals and collectively the actions of individuals that shape the spending behaviors of the economy so large that the inflation factor affects economic growth. So, we are taking this as a control variable in our study. The proxy used for this variable is the CPI consumer price index (2010 constant).

Probably the most commonly known definition of interest is the aggregate that is paid by the customer in excess to the outstanding principal amount. The interest rate also governs the loan taking and saving behavior of the individual of the economy. So, it can greatly affect the economic growth of a country thus rationalizing the need for it to be taken as a control variable. The proxy used for the interest rate is the real interest rate.

Trade openness is the tendency of an economy to accept new technological advancement through trade with the advanced countries. Trade does not only bring the monetary goodness to a country but also the better and improved ways to develop the goods and services sector within the receiving country. So, the country which is trading with the advanced countries there is a likelihood that the advanced country will share its technical expertise with the less developed countries and the economic growth pace of the less developed country will increase. So, this trade openness can cause a disturbance in the relationship between the dependent and independent variables. We are taking this as a control variable to understand the relationship between our variables in a better way. The proxy used for trade openness is Trade as a percentage of GDP.

3.2.4. Moderating variables. Our moderating variable in this study is Capital formation. It will be examined in this study that how

this moderating variable affects the strength of the relationship between independent and dependent variables. This would either leave a multiplier effect on this relationship or would be affecting it otherwise. The proxy used for the capital formation is *Gross Fixed Capital Formation* (current US $) and we are taking the log of gross fixed capital formation.
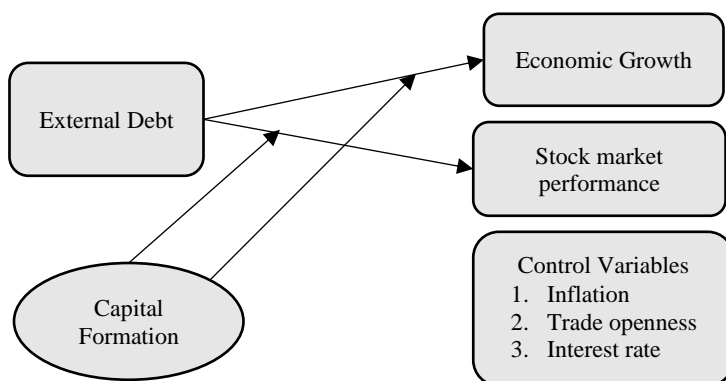

Figure 1. Capital formation as moderating variable

3.3. Methodology

Equation 1

Economic growth = α + β1(external debt) + β2(capital formation) + β3(external debt*capital   formation) + β4(interest rate) + β5(interest rate) + β6(trade openness) + ε

$$Y_{it} = \alpha + \beta_1 x_{1it} + \beta_2 x_{2it} + \beta_3 x_{3it} + \beta_4 x_{4_{it}} + \varepsilon$$

Y=GNI Growth (annual %), X1=External debt stock (% of GNI),X2=interest rate (control variable) X3=inflation (control variable),X4=trade openness (control variable)

Equation 2

Stock Market Performance = α + β1(external debt) + β2(capital formation) + β3(external debt*capital formation) + β4(interest rate) + β5(inflation) + β6(trade openness) + ε

$$Y_{it} = \alpha + \beta_1 z_{1it} + \beta_2 z_{2it} + \beta_3 z_{1it} z_{2it} + \beta_4 z_{3it} + \beta_5 z_{4it} + \beta_6 z_{5it} + \varepsilon_{it}$$

Y=stock indices, Z1=External debt stock (% of GNI), Z2=capital formation (moderating variable)

Z3=interest rate (control variable), Z4=inflation (control variable), Z5=trade openness (control variable)

4. Empirical Findings

Table 1
Descriptive Tests of the Variables

	GNI	INDEX	INFL	INTER-EST	LGCAP-FORM	TRADE OP
Mean	5.509	0.152	75.356	10.080	24.023	42.740
Median	5.248	0.113	60.450	9.820	23.782	37.899
Maximum	10.195	1.044	161.136	18.917	27.330	88.636
Minimum	-1.471	-0.438	18.103	1.640	21.549	18.633
Std. Dev.	1.978	0.310	41.382	2.693	1.503	17.723

The table shows the descriptive tests of the variables used in the study. In this section, we will be explaining all the variables statistics. First of all, the mean value of INDEX is 6784.019. Next, we will be discussing GNI, the mean value of GNI is 5. 508730. Then we will be discussing INFLATION, the mean value of INFLATION is 75.35646. The minimum value of INFLATION is 18.10267 and the maximum value of INFLATION is 147. Next, we will be discussing INTEREST, the mean value of INTEREST is 10.07977. Next, we will be discussing LGCAPFORM, the mean value of LGCAPFORM is 23. 93034. Next, we will be discussing TRADE OPENNESS, the mean value of TRADE OPENNESS is 43.10996.

Table 2
Correlation Analysis

	DEBTRATIO	GNI	INDEX	INFL
DEBTRATIO	1.0000			
GNI	-0.4112	1.0000		
INDEX	-0.0713	0.2807	1.0000	
INFL	-0.4317	0.1841	0.0122	1.0000
INTEREST	-0.1489	-0.0994	-0.3781	-0.1007

	INTEREST	TRADE OP	LGCAP FORM	
TRADEOP	0.5741	0.0158	-0.0711	-0.0787
LGCAPFORM	-0.7713	0.4422	-0.0161	0.5085

	INTEREST	TRADE OP	LGCAP FORM
DEBTRATIO			
GNI			
INDEX			
INFL			
INTEREST	1.0000		
TRADEOP	-0.0796	1.0000	
LGCAPFORM	0.3365	-0.3338	1.0000

Table 2 shows the correlation results between the variables. It is to note that the highest positive value of correlation is between CAPITAL FORMATION and INFLATION 0.508 and the lowest positive value is between GNI and TRADE OPENNESS and that is 0.015. The maximum negative value is between INTEREST and INDEX which is -0.37.

The table shows the unit root test results. We have checked the stationarity of every variable at the level and first difference. Some of the variables are stationary at the first difference (*DEBTRATIO, INDEX, INFLATION, LG (CAPITAL FORMATION), and TRADE OPENNESS*) and others are stationary at level (*GNI and INTEREST*). For checking the stationarity of the variables, we are using Levin, Lin & Chu t* test. The null hypothesis for the test is that there is a unit root (the data is non-stationary).

Table 3
Regression Results

Variable	Coefficient	t-Statistic	Prob.
External Debt	-0.0908	-5.6679	0.0000
Inflation	-0.0065	-1.3247	0.1883
Trade openness	0.0426	3.5284	0.0006
Interest	-0.1118	-1.7158	0.0893

In table 3, the GNI is the dependent variable and it is regressed with DEBTRATIO. It is found that there is a negative relationship between GNI and DEBTRATIO and the coefficient of DEBTRATIO is -0.090 and this relationship is significant at 1% confidence interval since the value of probability is less than 1%. Next, the

relationship of TRADEOP with GNI is positive and the coefficient value of TRADEOP is 0.042 and this relationship is significant at a 1 % confidence interval, considering the value of probability as 0.6 %. After this, the relationship of INFL is considered with GNI, which is found to be insignificant and the coefficient is found to be -0.006. Next is the relationship of INTEREST and GNI which is found to be significant with the beta value of -0.111. Further, this table goes on to tell the F-statistics of this relationship which is 0.00002 and the Durbin-Watson statistics is 1.514. The results suggest that there exists a negative relationship between GNI and Debt Ratio which are our proxies for economic growth and external debt respectively. So, let's talk about this negative relationship; the relationship is significant at a 1% confidence interval. This value suggests that the external debt is not favorable for the recipient countries rather it is behaving negatively. In the literature, some researchers found that there is a negative relationship between external debt and economic growth like Sothan (2018), Malik, Hayat, and Hayat (2010). These papers' findings support our findings. But in the review of literature as we have found that there exists also a positive relationship between external debt and economic growth as depicted by the findings of Ijirshar, Joseph, and Goddo (2016). The possible reasons for this reversal of relationships are sound governmental economic policies, better utilization of external debt, transparency in the audit, and accounts of country and better control over corrupt elements. Recommendations based on the above empirical results are that the governments of SAARC countries should rely lesser on the external debt and look for options beyond the external debt. The countries should be welcoming towards accepting modern technology and better and improved ways of production so they add to the pace of economic growth. From the literature review, we have found that industrialized countries are more likely to make the best use of external debt and at the same time can dilute the side effects of external debt. Presbitero (2012) and Bakare (2011) empirically tested that the industrialized countries make use of external debt more efficiently. So, the SAARC countries should focus on industrialization if they want to minimize the side effects of external debt. Apart from this, a country should make sound economic policies to move from dependencies on external debt towards financial independence.

Exports should be encouraged by supporting small and medium-sized enterprises because contributing to huge volumes can be proved as the backbone of the economy.

Table 4

Regression Results

Variable	Coefficient	t-Statistic	Prob.
C	0.738480	4.954693	0.0000
External Debt	-0.002203	-0.926961	0.3563
Trade Openness	-0.000734	-0.363089	0.7173
Interest	-0.048084	-4.201888	0.0001

In table 4, the relationship of INDEX is checked with the DEBTRATIO, TRADEOP, and INTEREST. First of all, the relationship of INDEX is checked with DEBTRATIO which is found as negative with the coefficient value of 0.0022 and insignificant. The next is the relationship of INDEX and TRADEOP which is found to be insignificant having a coefficient value of 0.0007. There is an insignificant relationship between the external debt and stock market performance found in the above results. This is rather interesting as theoretically economic growth and stock market performance are interlinked and positively related as found by (Tachiwou, 2010), and (Silva, Silva, & Perera, 2018) in their respective studies. In our case, the external debt is found to be insignificantly related to the stock market performance. This relationship suggests that the stock market performance is indifferent to the borrowings by the country from external sources. It helps us understand that external debt is not a factor that is influencing the stock market performance. One of the many reasons for this indifference is that the external debt is not being used in the economic activities so to influence the stock market performance and majorly external debt is used in debt servicing and other non-productive activities. It further shows us a direction that other factors influence the stock marke performance but not the external debt and it may include foreign direct investment, other private investments, political stability, and so on. Recommendations from these findings are that the government should focus on improving stock market performance because it is linked with economic growth. It can be done by introducing lucrative policies for attracting investment from within the country and also from the

outside of the country in the form of FDI and also to encourage foreign remittance. There is a possibility that stock market performance is influenced by the other half of the public debt which is internal debt. So, there is a need to replicate the study to check the stock market relationship with internal debt. The possible reasons for this negative relationship between the stock market performance and external debt are political destabilization in the country in the period of the sample and destabilization of political regimes. Other reasons may include the investment behavior of the investor in a way that they preferred to invest in other sectors than in financial markets. Like in the last decade, there has been a significant increase in the real estate market. These are the possible reasons that try to explain this insignificant impact of external debt on the stock market performance.

Table 5
Regression Results

Variable	Coefficient	t-Statistic	Prob.
External debt	-0.485913	-2.986417	0.0036
DEBTRATIO*LGCAPFORM	0.018057	2.439785	0.0165
Inflation	-0.013782	-2.448295	0.0161
Trade openness	0.053717	4.253352	0.0000
Interest	-0.168849	-2.492834	0.0143

Table 5 illustrates the relationship between GNI (dependent) and DEBTRATIO, INFL, TRADEOP, and (DEBTRATIO*LGCAPFORM). First things first, the relationship of GNI is checked with the DEBTRATIO. This relationship is negative in nature with the beta value of -0.48 and this relationship is also significant at a 1% confidence interval. The relationship between INFL and GNI is negative with the coefficient value of -0.013 and significant at a confidence level of 5%. Next is the relationship between TRADEOP and GNI, the coefficient of this relationship is positive 0.053 and significant at a 1% confidence interval level. The important thing to note here is that the interaction term (DEBTRATIO*LGCAPFORM) that is introduced in this run has a positive relationship with the GNI bearing a coefficient of 0.018 and having the probability value of 1.65 showing that this relationship is significant at 5% confidence interval level. This fact supports the

idea that there is a moderation effect of capital formation in the relationship between GNI and DEBTRATIO. The F-statistics of this run of pooled regression is 0.00, whereas the Durbin-Watson statistics 1. 584. The above table results include the GNI as a dependent variable and external debt as independent and the moderation effect is also checked. There exists a negative and significant relationship between the external debt and GNI as also shown in the results of Table 3, the new thing here is the interaction term (moderation effect of capital formation) and it is revealed by the results that there exists a positive and significant moderation of capital formation between the relationship of external debt and economic growth. It suggests that the presence of capital formation in the country can improve economic conditions. To understand the importance of capital formation, we must acknowledge the Harrod-Domar model. It tells us that the greater the savings within the country, the greater are the economic returns as a whole in the society and this cause and effect relationship is basically in the cyclic form making it an on-going process. The above results suggest that capital formation is going to affect the economic scenario in a better way and countries should look at capital formation as it flourishes economic growth. The capital formation supports and boosts the economic growth as already found in the work of (Shuaib & Ndidi, 2015) and also endorsed by (Adenike, 2015) in their study.

Table 6

Regression Results

Variable	Coefficient	t-Statistic	Prob.
External debt	0.004308	0.179458	0.8580
DEBTRATIO*LGCAPFORM	-0.000306	-0.272589	0.7858
Trade openness	-0.000851	-0.409724	0.6829
Interest	-0.047402	-4.028125	0.0001

In table 6, the variable INDEX (dependent) is regressed with the independent variables (DEBTRATIO, TRADEOP, INTEREST and there is also the inclusion of interaction term (DEBTRATIO*LGCAPFORM) to check the moderation effect of capital formation. From the results of regression, it is found that the relationship between INDEX and DEBTRATIO is insignificant with

a coefficient of 0.004. The next thing to note here is that the relationship between the INDEX and interaction term (DEBTRATIO*LGCAPFORM) is also insignificant having a negative coefficient of -0. 0003. The INDEX variable is negatively related to the TRADEOP bearing beta coefficient of-0.00085 and the value of probability is 0.68 which makes it insignificant. The INDEX and INTEREST are negatively related and insignificant as well. The results suggest that the interaction term is insignificant just like the case was with the external debt and stock market performance. A possible reason for this kind of relationship is justified by the fact that external debt is not being used in the economic activities that should give a boost to the stock market indicators instead of this the external debt is utilized majorly in paying the interest of already taken loans and principal payments in some cases as well. So, the bottom line is that the stock market is generally indifferent to the external debt levels prevailing within the countries.

In the case of the moderator, table 7 is given below:

Table 7
Regression Results

Variable	Coefficient	t-Statistic	Prob.
External debt	-0.047815	-2.292687	0.0240
LGCAPFORM	0.623465	3.050822	0.0029
Inflation	-0.012238	-2.420384	0.0173
Trade Openness	0.037088	3.162688	0.0021
Interest	-0.206686	-2.958046	0.0039

In table 7, the relationship of GNI is checked with the LGCAPFORM taken as an independent variable along with the other independent variables DEBTRATIO, INFL, TRADEOP, INTEREST. It is found that LGCAPFORM has a positive and significant relationship with the GNI. The variable LGCAPFORM has a coefficient of 0.62 and bearing the probability of 0.0029.

The above results show that external debt has a negative relationship with economic growth that means if the external debt increases the economic growth will reduce. This fact is contrary to some of the studies and in alliance with the others. Studies which

support the fact that the relationship between external debt and economic growth are Sawada (1994), Afxentiou (1993), Deshpande (1997), Cunningham (1993), Rockerbie (1994), Geiger (1990), Cohen (1993), and Were (2001). There exists a significant and positive relationship when capital formation is regressed with economic performance as an independent variable. This means that with an increase in capital formation, there is an increase seen in economic growth as well.

Table 8
Regression Results

Variable	Coefficient	t-Statistic	Prob.
Log (CAPFORM)	0.020861	0.958921	0.3400
Trade openness	-0.001253	-0.712773	0.4777
Interest	-0.050544	-4.204800	0.0001

In table 8, the relationship of INDEX is checked with the LGCAPFORM taken as an independent variable along with the other independent variables TRADEOP, INTEREST. It is found that LGCAPFORM has a positive and significant relationship with the INDEX. The variable LGCAPFORM has a coefficient of 0.02 and bearing the probability of 0.34 which means this relationship is insignificant. In the above table, we took capital formation as an independent variable to check its relationship with the stock market performance. It is interesting to note here that there exists an insignificant relationship between the stock market performance and capital formation. This suggests that other variables are affecting the performance of stock market performance and the stock market is not explained by capital formation. Possible reasons for this fact could be the interest of investors in investing sectors other than the financial markets.

In this study, we have also tried to check the relationship between the variables under study by considering the dummy effect for the countries. We have taken four countries in our study thus, we are taking four dummies to check the countries individually in the above-said relationships. The relationship of the individual country with effective from their external debt impact on economic growth and stock performance.

We have taken CDi, a dummy for India where all the other countries are zero and India is 1. Likewise, CDp is a dummy variable for Pakistan, CDb is a dummy variable for Bangladesh and CDs is a dummy variable for Sri Lanka. Following are the tables showing regression results for the dummy variables of countries under study:

Table 9

Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Dummy India	1.861563	0.518105	3.593022	0.0005
Dummy Pakistan	-1.167670	0.427771	-2.729660	0.0075
Dummy Sri Lanka	2.341923	0.874638	2.677591	0.0087
Dummy Bangladesh	-0.625098	0.448278	-1.394442	0.1663

In the above regression, a dummy for India is taken, the effect of other countries is ignored, the results show that the dummy India variable is having a positive coefficient and it is significant as well. This result interprets that the relationship of external debt with economic growth is different from the perspective of India when compared to the rest of the countries taken as a group. In the context of the Indian economy, our results are opposite to the study of Choong, Lau, Liew, and Puah (2010) who find that the external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study also opposes the results of Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic growth and external debt has a negative relationship with economic growth. Our results are similar to Sulaiman and Azeez (2012); they find that external debt has a positive relationship with economic growth in Nigeria. They also conclude that if government control other factors like political conditions and economical condition in hand and also acquire foreign debt in economic reason then the external debt is beneficiary for the country economic development.

Further, if we see the dummy effect of Pakistan, it is also found significant though negative, which suggests that the perspective of Pakistan is different from the rest. Our results are similar to Malik et al. (2010) whose finding was that external debt has a significant negative relationship with economic growth in Pakistan. Our results are similar to the study of Choong et al. (2010) who find that the

external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study is also similar to Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic growth and external debt has a negative relationship with economic growth.

The coefficient of Sri Lanka dummy is positive and significant, so it can be safely interpreted that the relationship of external debt and economic growth is different in the case of Sri Lanka from that of the rest of the panel. In the context of the Sri Lankan economy, our results are like Sulaiman and Azeez (2012); they find that external debt has a positive relationship with economic growth in Nigeria. They also conclude that if government control other factors like political conditions and economical condition in hand and also acquire foreign debt in economic reason then the external debt is beneficiary for the country's economic development.

The coefficient of Bangladesh is negative and insignificant. It suggests that the behavior of external debt and economic growth is not different from the rest of the group. As we see that there exist mixed results when we apply the dummy effect in regression. Some of the countries are found bearing the same relationship between the variables while others are found to be having a different relationship. In the context of the Bangladesh economy, our results are similar to Malik et al. (2010) who found that external debt has a significant and negative relationship with economic growth in Pakistan. Our results are similar to the study of Choong et al. (2010) who find that the external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study also has a similar result with Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic growth and external debt has a negative relationship with economic growth.

5. Discussion and Conclusion

5.1. Discussion of Results and Theoretical Contribution

The objective of the current study is to examine the relationship between economic growth and external debt and stock market performance. Literature shows that an ample amount of research

work is done on this subject. Our study goes forward by checking the moderating effect of capital formation on these above-stated relationships. The results show that there exists a negative relationship between the external debt and economic growth, which is contradictory to some existing studies and in alliance with the others. Since there exists a difference of opinion regarding the external debt relationship with economic growth, both sides of opinion are supported by the empirical evidence. In the case of SAARC countries (Pakistan, India, Sri Lanka, Bangladesh), it is found that external debt is not playing a positive role in the economic prosperity of the countries rather the relationship is negative. So these countries should switch the external debt with other options to meet their fiscal deficits. Tax reforms should be made to increase the tax base, in this way, the revenues will be increased for the country making the country economically stable. Generating enough revenues through the exchequer of the country is perhaps the safest and easiest option but this also repels the foreign direct investments and also the investing behaviors of the firms within the country. Since enhancing the tax is not seen as a favorable move by the investors so there is always a fear of capital flight from the country. When countries accumulate tax debt, the overhang effect is created, and in this situation, the investor anticipates a higher future tax thus finds himself reluctant towards investing in such a country. Trade is another great opportunity to meet the fiscal gap. Exports should be encouraged by making the business environment conducive for export. Trade openness is the key to success as we have already seen the positive and significant impact of trade openness on the economic growth, so it has been statistically proved that there is a need to add the trade openness in the to-do list for the countries who want to rely less on the external debt. Today, in this world of technology, all the information is available online, the use of the internet has made it easy to offer skilled services even beyond the borders of the country. Offering services to the other parts of the world are bringing in big revenues for the countries like the ones in SAARC. But unfortunately, not all the countries have paid heed to this sector of services. It is a fact that this online services sector has already grown to billions of dollars industry, and this is on the grow, so now is the time for the countries like us and other SAARC countries to develop the favorable policies

and educate their youth in this field to tap the true potential of this sector. Such policies and the likes of it can significantly reduce the reliance of developing countries on the external debt as the means of meeting their financial ends.

Now we will discuss the findings of country-wise dummy regression and see how they are different from combined analysis. When we take four countries combined analysis then we see that there is a significant and negative relationship between external debt and economic growth which means that economic growth is affected by the burden of the foreign debt. In the above regression, a dummy for India is taken, the effect of other countries is ignored, and the results show that the dummy India variable is having a positive coefficient and it is significant as well. This result interprets that the relationship of external debt with economic growth is different from the perspective of India when compared to the rest of the countries taken as a group. In the context of the Indian economy, our results are opposite to the study of Choong et al. (2010) who find that the external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study is also opposite to the result of Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic growth and external debt has a negative relationship with economic growth. Our results are like Sulaiman and Azeez (2012) study; they find that external debt has a positive relationship with economic growth in Nigeria. They also conclude that if the government controls other factors like political conditions and economical conditions in hand and also acquire foreign debt in economic reason then the external debt is beneficiary for the country's economic development. Further, if we see the dummy effect of Pakistan, it is also found significant though negative, which suggests that the perspective of Pakistan is different from the rest while. Our results are similar to Malik et al. (2010) whose findings are that external debt has a significant negative relationship with economic growth in Pakistan. Our results are also like the study of Choong et al. (2010) who find that the external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study is also similar to Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic

growth and external debt has a negative relationship with economic growth. The coefficient of Sri Lanka dummy is positive and significant, so it can be safely interpreted that the relationship of external debt and economic growth is different is the case of Sri Lanka from that of the rest of the panel. In the context of the Sri Lankan economy, our results are like Sulaiman and Azeez (2012) study; they find that external debt has a positive relationship with economic growth in Nigeria. They also conclude that the inclusion of government favorable policies that ensure the better utilization of external debts, the economic results could be different than adverse, and the external debt would pose a contribution in the economic might of the country.

The coefficient of Bangladesh is negative and insignificant. It suggests that the behavior of external debt and economic growth is not different from the rest of the group. As we see that there exist mixed results when we apply the dummy effect in regression. Some of the countries are found bearing the same relationship between the variables while others are found to be having a different relationship. In the context of the Bangladesh economy, our results are similar to Malik et al. (2010) whose findings are that external debt has a significant negative relationship with economic growth in Pakistan. Our results are similar to the study of Choong et al. (2010) who find that the external debt has a negative relationship with the long-term economic growth which is conducted in Malaysia. Our study is also similar to Mohamed (2005) study conducted in Sudan stating that export earning has a positive relationship with economic growth and external debt has a negative relationship with economic growth. The results of India and Sri Lanka are significant and positive when taken separately. Analysis of them concluded that some other factors influence the economy of those countries bearing similar political and economic conditions that should be controlled by the government of those countries and beneficial utilization of their external debt is a very important concern. If the external debt is financed for better economic aspects, economic growth will increase automatically.

This study investigates the relationship of external debt on economic growth and stock market performance and checks the moderation of capital formation on these relationships. Proxies used

for external debt is external debt stock as % of GNI, for stock market performance stock indices return is used, for economic growth GNI growth is used and for the capital formation, Gross Fixed Capital Formation is used. The data is panel data and the regression technique used for this is panel least squares. The results conclude that there is a dire need for the subject countries to look for other options while financing their financial needs and not to rely on external debt, since it is not doing any good to their economic well-being. The government should incorporate sound economic policies in its line of actions. Beyond this, the government should also encourage investments both from inside and outside of the country to foster economic growth, for this, a lucrative policy can be introduced to catch the investment at international fronts. The ease of business in the country ensures a lot of investments both indigenous and exogenous. The countries should focus on exports and imports with the developed countries as it is a way of sharing technological advancement and expertise which ultimately contributes to the economic growth in the country. Industrialization is also another great source of enhancing economic growth as it helps in both ways; increasing the revenues for the country by increasing exports and also reducing the side effects of external debt thus making it less of a burden and more of economic help to the receiving country.

Political stability is a must thing to have to ensure stable economic progress. Because the stable political setup fosters the stock market performance by attracting more investments, thus making it an addition to the factors supporting the economic prosperity within a country. The positive moderation of capital formation on the relationship between external debt and economy is a significant point to understand here. It gives us a direction for increasing capital formation within a country to further boost economic growth.

5.2. Limitations and Future Directions for Research

Like all the other studies, this one also has a few limitations. First of all, the scope of this study is limited to SAARC countries only, so it cannot be generalized to the other parts of the world. Unavailability of the data has further reduced it to four countries

(Pakistan, India, Sri Lanka, and Bangladesh). This is a limitation of the study. To understand why the relationship between external debt and economic well-being is negative in the context of developing countries, a comparative kind of study can be conducted in the future. In such a study, the developed countries and developing counties should be compared and figure out the causes which make the external debt a burden in the case of developing countries rather than a blessing. Now let's talk about the limitations of the research. First is the time constraint; the study's scope is from 1992 to 2017, it does not include all the political fluctuations and other potential changes that occurred before that period. Next, the psychological aspect of the investor's behavior is not included in the study which should be incorporated in future studies to understand the variables' relationship better. In the next studies, it is also advised to take the internal debt of nations into account to investigate the relationship between debt and economic performance and also add the psychological behavior of the investors as a variable to conduct the study.

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