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Managing External Debt for Economic Growth: Evidence from South Asia Region

ABSTRACT

The burden of foreign debt is a recurrent phenomenon in the fiscal landscape of economies, and it is a key challenge that developing nations frequently face. Every economy uses external debt as a source of finance for capital formation. Previous studies on the relationship between economic growth and external debt lack a nuanced examination of the diverse economic structures and policy frameworks but contribution of current study is focused on the economic structures and policy frameworks, across South Asia Regions. The primary goal of this research is to examine the effect of foreign debt on economic growth. To identify connections between variables, this study utilized a fixed-effect regression model. The predicted variable of this study is economic growth while the predictor variables are external debt, inflation, gross national expenditure, and population growth rate. This study collected data from the world development indicators for the South Asia Region from 1990 to 2019. Ricardo's public debt theory and the debt overhang theory serve as theoretical frameworks for investigating the influence of foreign debt on economic growth. The diagnostic test showed the problem of heteroscedasticity and autocorrelation in the estimated model, therefore, robust estimation is carried out. The government should transparently manage the entire loan phase, including project identification, evaluation permits, and loan negotiations and contracting loan distribution, completion of the project monitoring and assessment, and repayment of loans. The government ought to develop a framework of credible policies to foster an environment that will promote confidence among investors, both domestic and foreign, to make investments in the nation.

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Author's contribution in the article: 1- Conceived and designed the analysis, 2- Reviewed and compiled the literature, 3- Collected the data, 4- Contributed data or analysis tools, 5- Performed the analysis, 6- Wrote the paper, 7- Financial support for the conduct of the study, 8-Other

1. INTRODUCTION

One frequent feature of the fiscal sector of economies is the foreign debt load, which is a well-known problem for emerging nations. Economies typically borrow money from outside sources to stabilize economic growth if the rate of national savings is low. Every economy uses external debt as a source of finance for capital formation. It has been suggested that developing countries with current account deficits are looking to borrow money not only from rich countries but also from the international community to stimulate economic growth. Gohar et al. (2012) suggest that countries may resort to external borrowing due to many factors such as low incomes, budget deficits, and insufficient investment. Furthermore, according to Soludo (2003), countries borrow money mainly for two reasons: either to correct short-term imbalances in the balance of payments or for macroeconomic reasons, to promote economic growth and reduce poverty. External debt is defined by the World Bank (2015) as amounts owed by non-residents that are repaid in foreign currency, products, or services. External debt includes both short-term debt such as commercial debt and International Monetary Fund (IMF) loans and long-term debt such as public and state-guaranteed debt as well as unsecured private debt. The term "economic development" describes an increase in the market value of the goods and services produced by a country or a percentage growth in real GDP.

In general, the terms economic development and growth are often used synonymously. But in reality, economic development means improving a country's overall quality of life, while economic growth often leads to an increase in family income or per capita income. Understanding the dynamics of public debt and its relationship to economic growth is essential. Whether used domestically or abroad, public debt is viewed as a tool for financing government deficits and achieving its social and economic goals. This is especially important when it comes to minimizing the gap between investments and savings.

Due to the accompanying macroeconomic instability, previous debt crises in emerging countries such as South Asia have attracted a lot of attention. The financial structure of any economy is based on a combination of fundamental factors such as low income and productivity, lack of savings, and foreign debt. These factors are essential for the formation of insufficient internal capital in emerging South Asian countries.

Significant effects were caused by incidents like the global financial crisis of 2007–2008 and the European debt crisis of 2008 (Ahmad & Majeed, 2021). Rich economies wind up heavily indebted due to hefty stabilization expenses, and the unnatural rise in public debt during these kinds of crises might obstruct economic growth (Law et al., 2021; Iqbal et al., 2021a, Iqbal et al., 2021b). Furthermore, governments in emerging nations are anticipated to be impacted by the debt crisis and prioritize debt control as industrialized nations become more financially stable.

Rostow (1960) developed an economic development model in research. The paradigm is based on five stages: conventional civilization, takeoff, maturity, preconditions for takeoff, and the era of high mass spending. Rostow's model is considered the most important model for economic growth. The relationship between national debt and economic growth has not yet been elucidated. Economists cannot credibly dispute that using external debt to finance public expenditures is a good, bad, or impartial way to fund investment and conditional growth.

According to the traditional economist, governmental debt depresses investment over time and burdens society. While Ricardian viewpoints view government debt as equal to future taxes, neoclassical economists contend that public debt impedes economic progress (Barrow, 1974). According to Todaro (2012), emerging countries' foreign debt was comparatively modest before the early 1970s. The primary lenders during that time were foreign governments and international financial institutions, who gave loans for a range of development initiatives.

According to Chenery and Strout (1996), the primary objective of foreign debt in developing countries is to close the investment and savings gap. Foreign debt affects investment as well as the expansion of the economy as a whole. Research already in existence suggests that foreign debt has harmed emerging nations' economic trajectories in addition to addressing the savings-investment gap. Donor agency restrictions are mostly to blame for this negative outcome. External Debt Distress in South Asia.

There are many different ethnic groups, languages, and cultures represented in the vast and diversified population of the South Asian region. With developing markets like Bangladesh and India, the area has enormous economic potential. The demographic dividend—a comparatively youthful population—offers a chance for a strong and vibrant labor force that may spur innovation and economic progress. South Asia occupies a critical geopolitical position as the link between the Southeast Asian region, the Near East, and Central Asia. As such, it has significant influence over regional and global international affairs, impacting trade routes, geopolitical behavior, and relationships across borders.

Even though South Asia is one of the world's fastest-growing areas, millions of people there still live in extreme poverty and lack the necessities of a decent life. Impressive growth rates in Bangladesh and India (which have since dramatically dropped) influence regional growth, whereas Pakistan and Sri Lanka saw poor and fluctuating economic development rates. This section examines the impact of foreign debt on gross domestic product to investigate the degree of external debt distress in five chosen South Asian nations.

Figure 1: External Debt of South Asia Region

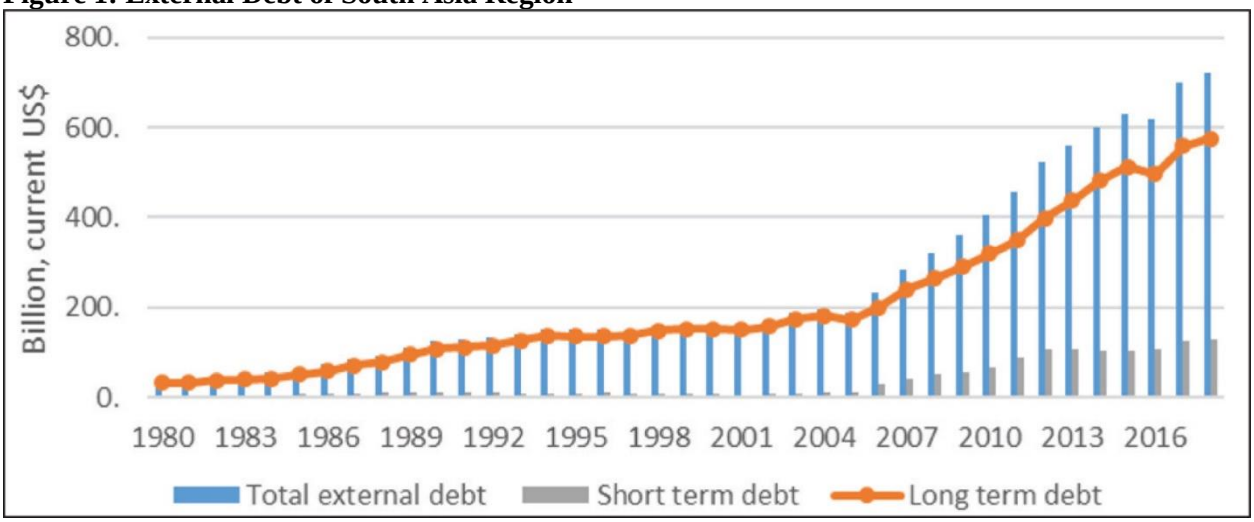

Figure 1 shows that South Asia's total external debt was US$ 36.51 billion in 1980. Over the course of three decades, this debt grew significantly to US$ 722.58 billion in 2018. There are two sorts of external debt: short-term debt and long-term debt. Payables and short-term borrowings account for the majority of short-term debt, which has a maturity date of one year or less. Between 2008 and 2018, there was a remarkable surge in short-term debt, rising from US$ 2.45 billion to US$ 129.94 billion. On the other hand, long-term debt is often taken out for development and has an initial maturity of more than a year. In a few chosen South Asian nations, long-term external debt accounts for the bulk of the total, having grown significantly from US$ 31.52 billion in 1980 to US$ 576.59 billion in 2018.

The main reasons for the growing external debt crisis in some South Asian countries are persistently high current account and fiscal imbalances, as well as limited capital resources being diverted from spending large sums of money on military expenditures and urban infrastructure. This means that the government is wasting money on low-productivity public spending, such as investment. Furthermore, the costs of urbanization increased external borrowing and put pressure on foreign exchange reserves. The literature

describes various methods for calculating external debt and its impact on exports of goods and services and domestic production.

Currently, there is limited research on economic growth and external debt in the South Asia region. More than 50% of the world's population is living in the South Asia region. External debt and economic growth are important macroeconomic indicators. The research gap exists about the macroeconomic determinants of external debt and economic growth. However, there has been limited empirical investigation for policy formulation conducted on external debt and economic growth in South Asia Regions.

There is a noticeable research gap in understanding how specific factors, such as external debt, inflation, population growth, and gross national expenditure are influenced by economic growth in the context of the South Asia Region. Previous studies on the relationship between economic growth and external debt lack a nuanced examination of the diverse economic structures and policy frameworks but contribution of current study is focused on the economic structures and policy frameworks, across South Asia Regions. A nuanced understanding of these interactions will be crucial for formulating effective policy recommendations tailored to the unique economic landscapes of South Asia nations.

The overall objective of the study is to investigate the impact of external debt on economic growth and suggest policy guidelines for the control of external debt.

2. LITERATURE REVIEW

A review of the literature is a significant component of the research process. Because we will be answering new inquiries each time, we must first understand the context of the topic, such as how much work has already been carried out on it, what conclusions have been drawn, and what methodologies were employed in those studies. All of these facts were acquired through the literature. Without knowledge of earlier efforts, one cannot go ahead and declare that their contribution is relevant in a certain sector.

Chaudhary et al. (2000) examined the effect of foreign debt on the growth of the economies of South Asian countries (Bhutan, Bangladesh, India, Nepal, Sri Lanka, Maldives, and Pakistan). According to the analysis, the rate at which these South Asian nations are accruing foreign debt is unsustainable. Additionally, the study showed that foreign debt has a negative impact on economic development.

Kraay and Nehru (2006) have worked with 93 low- and middle-income nations in total. They made use of indicators including real GDP growth, real exchange rate fluctuations, and total debt. According to the findings, many low-income nations currently have high rates of debt distress, and these rates are projected to rise significantly if the massive amounts of development funding needed to accomplish the MDGs are given in the form of historically low-interest loans.

In their research, Jayaraman and Lau (2009) examine the relationship between the Pacific nations' economic development and external debt. The unit root test was carried out by the panel. A Granger causality study was then performed. There is no long-term correlation between external debt and growth, but empirical research indicates that exports, the budget deficit, and foreign debt are additional short-term causal links. A short-term dual causal relationship between economic growth and external debt was discovered.

The analysis by Greenidge et al. (2010) was based on the CARICOM nations' external borrowing. The results of this article also suggest that, given the stated parameters, some of the periods needed to reach this aim are excessively long. However, it is anticipated that this period may be significantly shortened with increased fiscal effort and production growth.

Akram (2011) investigated the impact of debt on Pakistan's economy using data from 1992 to 2006, including statistics on external debt stock, exports, imports, investments, and openness. The study used ARDL, VECM, and ADF unit root tests. The results showed that there is a negative long-term and short-term correlation between Pakistan's per capita GDP and external debt.

The countries studied by Muhanji and Ojha (2011) include Ivory Coast, Ghana, Kenya, Malawi, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe. Their study examined many factors such as external debt, imports, inflation, imports for consumption, interest rates, exchange rates, exports, and production. According to the study, both shocks to global interest rates and commodity prices have influenced the rise in external debt in most African countries. In particular, shocks to global commodity prices tend to increase external debt, while shocks to global interest rates tend to reduce accumulated external debt.

Butts et al. (2012) investigated the impact of short-term external debt on economic growth using real GDP growth data and short-term external debt from 1970 to 2003. In this situation, Granger causality analysis, ARDL limit test, ADF and PP unit root test were performed. This result suggests that the impact of economic short-term external debt on consumption exhibits indirect Granger causality. There is evidence that foreign exchange reserves and economic exchange rates influence short-term external debt.

Doğan and Bilgili (2014) investigated the impact of external debt on Turkey's economic development using data from 1974 to 2009. The factors included in this study were an investment, human capital, openness, population growth, GDP growth rate, and the ratio of private and public external debt to GDP. The results show that major growth factors such as investment and human capital have a positive impact on growth. Therefore, growth factors and economic growth were not linear.

Debt and economic development in the Indian economy has been studied by Bal and Rath (2014). The study includes variables such as total factor productivity, exports, debt service, domestic and external debt, and economic growth. The results of the ARDL model in their study suggest that the variables are in a long-run equilibrium relationship. According to the error correction model (ECM), all variables influence short-term economic development, and these results are consistent with expectations.

Siddique et al. (2016) investigated the highly indebted economies of 40 countries. After conducting six different panel unit root tests, we used the ARDL test to examine how external factors affect economic growth. The methodology shows that while debt has fallen since 2000, GDP and goods export growth have increased at their fastest pace since that year. First, the estimation results show that the GDP share of capital creation has a positive impact on the GDP of the HIPC in the long and short term. Second, the debt-to-GDP ratio has negative effects both in the short and long term. Third, merchandise trade has a positive impact on GDP in the long run.

Mousa and Shawawreh (2017) examined how debt affected Jordan's economic expansion. In particular, the study examined the effects of governmental debt, external debt, domestic debt, and debt servicing on GDP. Since the study examines secondary time series data covering fifteen years, a quantitative research technique was adopted (2000-2015). Regression modeling and the least squares method were used to analyze the study's data. The study's conclusions showed that governmental debt in general and external debt in particular had a negative effect on economic growth. These findings led the study team to recommend that countries should lessen their reliance on foreign debt and instead concentrate on making use of their resources.

Vu et al. (2018) examined if there was a threshold impact on the growth-external debt connection using data from ten different nations between 2005 and 2015. According to their research, 33.17% is the ideal level of external debt as a percentage of GDP. Below this level, they discovered a positive correlation

between growth and foreign debt. Beyond this point, though, a 1% rise in external debt results in a 0.02% decline in GDP growth.

Gövdeli (2019) used data from 1970 to 2016 to examine the effects of openness, consumer price index, and foreign debt on economic development. The results of the ARDL method study conducted in Turkey indicate that foreign debt positively affects economic development. Didia and Ayokunle (2020) investigate the impact of external debt and domestic debt on economic growth. A time series analysis was used for this purpose. The period of this study was used from 1980-2016. The dependent variable was economic growth. The explanatory variables were FDI, external effect, domestic debt, and government expenditure. ADF test was used for the unit rest test. OLS method of estimation was used to find out the association between variables. The results indicate that there is a positive association between them.

Mohsin et al. (2021) explore the effects of debt from abroad on economic growth. A nation from South Asia has been selected as an example. This study's predicted variable was economic growth, with predictor factors including external debt, trade liberalization, capital creation, and current account deficits. The panel OLS, fixed effect regression model, quantile regression, and robust estimation were used to determine the association between variables. The findings suggest that foreign debt has a detrimental influence on economic growth.

According to Gnangnon (2021), agency costs between debtors and shareholders minimize the lack of investment and keep reducing firms from adding to equity, resulting in more investment. Shareholders are averse to investing in such businesses (Bruns & Ioannidis, 2020). However, Arvin et al. (2021) argue that high debt levels stimulate economic development. Debt reduces economic growth, whereas external stock increases it (Agyekum et al., 2021; Zhang et al., 2021). A one percentage point rise in total foreign debt results in an additional 36 percent in national production, suggesting an unbalanced link between debt and growth.

Manasseh et.al. (2022) looked at the influence of external debt on economic development. Furthermore, the connections between the effects of leadership, external debt, and external debt volatility were investigated, with a focus on the collaborative impact of governance as measured by Kaufmann (2007) quality governance determines such as government effectiveness, political stability, voice and accountability, regulatory quality, and corruption control on economic growth. The study used yearly time series data from thirty Sub-Saharan African (SSA) nations from 1997 to 2020. The Dynamic System Generalized Method of Moments estimate approach was used to adjust for traditional causes of economic development. The study's empirical findings show that foreign debt and its volatility have a negative and considerable influence on economic growth in sub-Saharan Africa.

Ale et al. (2023) investigated time series regression approaches that were commonly utilized in research that investigates how foreign debt influences economic growth. This paper develops a Time series econometric technique for the period 1980-2020, which is commonly used in studies analyzing how foreign debt influences economic development. This study generates a panel dataset of five South Asian states from 1980 to 2020 and investigates the relationship between external debt and economic development. Pesaran's (2007) Cross-sectionally Augmented Panel Unit Root Test results demonstrate that all variables are integrated in the order I(1). The Cross-Sectional Dependence Autoregressive Distributed Lag (CS-ARDL) approach is used in this study to better comprehend the error-correcting mechanism that governs the short-run dynamic character of foreign debt and economic development. In South Asia, there is a considerable negative relationship between external debt and economic development, both in the short and the long term. Because growing foreign debt is connected with weaker economic development, the study suggests that South Asian countries increase national savings and make investments to reduce their dependency on external debt.

The previous literature study found discrepancies in conclusions about the influence of foreign debt on economic development. Even though some research demonstrates a positive association between external debt and growth, implying that taking on loans can encourage investments and boost business activity, some researchers have discovered adverse effects which include debt overhanging, servicing credit difficulties, and overcrowded out small-scale investment. For many years, economists and policymakers have been interested in the link between external debt and economic development. It has grown critical, especially since the 1980s global debt crisis. The current study varies because of the usage of many countries, approaches, periods, and techniques. Most research investigated the link at the national level, mostly utilizing time series data and methodologies. However, this study utilizes the panel data techniques. The impact of managing debt strategies, such as debt sustainability assessments, restructuring loans, and debt alleviation measures, on the link between foreign debt and economic development is yet undetermined. It is critical to investigate the effectiveness of various managing debt solutions in terms of risk mitigation and improving the economic effect on external loans.

3. ECONOMETRIC METHODOLOGY

3.1 Theoretical background

We briefly discussed some economic theories relating to external debt in the following: -

3.1.1 The Debt Overhang Theory

Krugman (1988) created this idea. According to the hypothesis, there exists a scenario in which the nation's debt surpasses its potential for future repayment. This idea is better suited for underdeveloped nations. This idea states that if the amount of external debt is so high, all income will be used to settle current debt rather than supporting new investments within the debtor nation. The underutilization of resources in the debtor nation or the production gap are often the root causes of such a predicament. Krugman (1988) argues that while relief from debt may benefit both creditor and debtor economies, a higher debt stock modifies the benefits for each. Restructuring the terms of the loan to provide some kind of respite to the indebted country is known as debt relief. This can include taking steps to lessen the burden on the debtor nation, such as lowering the loan's interest rate, principal balance, and loan conditions.

3.1.2 The Ricardo's Theory of Public Debt

Ricardo developed the notion in 1819. The author claims that government spending, whether planned or unplanned, consists of payments made to maintain economic equilibrium even though a sizable fraction of the labor force in the economy is inefficient. Ricardo argued that public expenditure was an inefficient economic activity undertaken by the state in a 1986 letter to McCulloch. After the identification of this fiscal imbalance, Ricardo's theory concentrated on the mounting social cost that results from wasteful state spending. According to Ricardo’s theory of public debt, it may be beneficial to finance public spending by obtaining money from industries and communities that have an abundance of financial resources to lessen inequality. He said that this is because, despite the high levels of taxes and public debt, giving one sector priority over another when allocating public spending has a negative effect on economic growth (Ricardo, 1819). Instead, it makes the state poorer. In a similar vein, the author contended that paying interest on debt impoverishes the state by extorting a sizable portion of society's income to a separate economy. This means that to increase economic growth, governments must take on productive debt, according to Okoye (2013).

3.2 Econometric Optimization

A pooled OLS, fixed effect, and random effect model was used to examine the link between foreign debt and economic growth, inflation, and other control variables (for example, population growth and gross national spending). In our study, multiple observations (T) exceed the number of cross sections (N), resulting in extended panel data. Many scholars employed panel data to investigate the relationship between

external debt and economic development (Muhanji & Ojah, 2011; Chaudhary et al. 2001). On panel data one can estimate the following three models.

- Pooled OLS model
- Fixed effect model
- Random effect model

The econometric model of this study is given below:

$$Y_{it} = \beta_0 + X'_{it}\beta + Z'_{it}\alpha + U_{it} \quad (1)$$

In the above equation, Y_{it} is the economic growth and is the dependent variable of this study, while the x indicates the vector of core variables such as external, and gross national expenditure. The Z indicates the vector of control variables such as the inflation and population growth.

4. RESULTS AND DISCUSSION

Data for each variable were collected from 1990 to 2019. The statistics for macroeconomic variables (i.e. GDP per capita, foreign debt, population growth, and gross national spending) were obtained from World Development Indicators.

A given national currency is used to calculate the annual growth rate of GDP per capita. Divide the GDP by the mid-year populace to get GDP per capita. The total value added by all local manufacturers in the nation, after deducting consumption taxes and excluding funding not involved in the product valuation, is GDP at buyers' prices. This calculation subtracts depreciation of constructed assets and does not take into account exhaustion and deterioration of environmental assets. Studies like Mousa and Shawawreh (2017); Serrao (2016); and Egbetunde (2012) used economic growth as the dependent variable.

One measure of the total amount of external debt is the foreign debt to GNP- ratio. Amounts due to nonresidents that can be paid with money, products, or services are included in the total amount of external debt. This covers the use of IMF finance as well as short-term and long-term debt, which can be provided, guaranteed, or not guaranteed by the government. All commitments having an initial short-term maturity are considered short-term debt, including past-due interest on long-term debt. Goods and Services Tax (GNI), formerly known as GNP, is the total value created by all local producers. Together with net foreign primary income receipts, it includes any product taxes (apart from subsidies) that were not previously factored into the production valuation. These receipts cover both property revenue and employee remuneration. Studies like Serrao (2016); Siddique et al. (2016); Egbetunde (2012) used external debt as the independent variable.

Table 1: Variables and its descriptions

Variables	Symbols	Measurement	Source
Gross Domestic Product	GDPP	Per capita growth annual %	WDI
External Debt	EXT DEBT	% of GNI	WDI
Inflation	INF	Consumer price index	WDI
Population Growth	POP	Annual %	WDI
Gross national expenditure	GNE	% age of GDP	WDI

The middle-of-the-year population expansion exponential rate over period t-1 to period t, expressed as a proportion, produces the yearly increase in the population during period t. Population projections are based on the real description, encompassing all citizens and immigrants. Gross local expenditure (also referred to

as local absorption is the total of household final consumption (which used to be recognized as individual consumption), the public sector is the final consumption (which used to be referred to be overall government consumption), and gross generation of capital (originally referred to be gross local investment).

The yearly percentage variation in the usual consumer's rate for a predetermined consumption bundle is used by the consumer price index. This basket might stay the same or could alter regularly, like once a year. The Laspeyres formula is often used in the computation.

5. RESULTS AND DISCUSSION

This section highlights a study's major findings, interpretations its findings for readers, and discusses their importance. It also includes the findings of diagnostic procedures, such as the Wald test for heteroskedasticity and the Wooldridge test for autocorrelation, as well as the outcomes from robust estimations as an appropriate correction of heteroskedasticity and autocorrelation.

According to the descriptive statistics, Bhutan has the highest percentage of GDP per capita growth (annual %). There are several reasons behind Bhutan's strong GDP per capita growth. The nation's emphasis on Gross National Happiness (GNH), which prioritizes overall well-being over just economic metrics, is one important component. Bhutan's economy is also growing as a result of exporting hydroelectric power, adopting sustainable development methods, and gradually opening up to tourists. Nevertheless, Iran exhibits the lowest GDP per capita growth among selected economies when analyzed in comparison. This can be attributed primarily to geographic conflicts, economic sanctions, and heavy dependence on oil exports, all of which significantly hinder Iran's economic development. The country's GDP per capita growth rate is further affected by political instability and international isolation, collectively impeding overall economic progress.

Outcomes of descriptive statistics revealed that Iran has the lowest external debt as compared to other selected nations. Iran is a major oil exporter, and its oil export earnings have traditionally been a sizable source of cash. The nation has been able to satisfy its financial demands thanks to this cash stream without having to rely as much on borrowing from outside.

Results of descriptive statistics show that Pakistan has the highest inflation rate than other South Asia countries. Pakistan has had difficulties in the energy industry, such as problems with the availability and cost of energy supplies. Price swings in energy, especially for gasoline and electricity, can have a domino impact on the economy as a whole. On the other hand, Sri Lanka has a low inflation rate as compared to other selected economies. Inflation can be contained by the Central Bank of Sri Lanka implementing a stable and well-managed monetary policy. Effective control of interest rates, the money supply, and other monetary instruments may be necessary for this. Sri Lanka's economy is growing steadily without becoming too hot. It lessens the possibility of pressures leading to inflation.

According to descriptive statistics, Iran has the fastest rate of population increase. Larger families have always been supported by pro-natalist policies in Iran. The goal of these strategies was to boost population growth to solve demographic issues and promote economic development. Bangladesh's population growth rate is the lowest because the country has successfully developed family planning programs that give access to contraception and education. The decrease in birth rates has been attributed to these initiatives.

Results of descriptive statistics show that Bhutan has the highest gross national expenditure as compared to other nations. Bhutan is increasing its level of expenditure by investing heavily in development and infrastructure projects. This includes transportation-related initiatives. Healthcare, energy, and education. However, when compared to other economies, Iran's gross national spending is the lowest. Economic

restrictions imposed on Iran may limit its capacity to deploy resources and raise total spending. Sanctions have the potential to restrict access to foreign financial institutions and markets.

Table 2: Descriptive Statistics

Countries	**Variables**	**Mean**	**Standrad Deviatiation**	**Minimum**	**Maximum**
Pakistan	GDPP	1.83826	1.9474	-1.9127	5.4478
	EXT DEBT	38.8898	10.74311	24.39	55.897
	INF	2.3097	0.6379	1.2040	3,2974
	POP	8.40	4.0706	2.5293	20.28612
	GNE	105.25	3.075	100.32	110.5973
Nepal					
	GDPP	3.22	1.977	-1.3663	7.7312
	EXT DEBT	37.3070	15.69	16.5353	60.00
	INF	1.3648	0.8053	0.1859	2.7986
	POP	7.5152	3.5922	2.2692	17.149
	GNE	116.37	6.1330	106.87	126.81
Sri-Lanka					
	GDPP	4.33	2.190	-2.2942	7.818
	EXT DEBT	56.086	9.7416	37.374	73.7268
	INF	0.831	0.2491	0.3788	1.2488
	POP	9.0489	5.0755	2.1350	22.5645
	GNE	107.5297	2.1916	103.64	113.6861
India					
	GDPP	4.50	2.008	-1.045	7.0131
	EXT DEBT	22.1648	4.6128	14.880	33.157
	INF	1.6149	0.3443	1.0253	2.1411
	POP	7.2897	3.220	3.3281	13.870
	GNE	103.36	2.563	97.6453	107.5734
Bangladesh					
	GDPP	4.034	1.3908	1.5004	6.6876
	EXT DEBT	27.3494	8.466	14.971	44.4817
	INF	1.5204	0.3757	0.8800	2.1260
	POP	6.1263	2.2773	2.0071	11.395
	GNE	104.7683	1.5009	100.55	107.038
Iran					
	GDPP	1.712	3.9225	-4.968	9.2198
	EXT DEBT	8.3047	8.664	1.154	36.6870
	INF	1.5950	0.740	0.3846	3.9276
	POP	19.690	10.060	7.245	49.6559
	GNE	98.07	6.144	89.021	114.85
Bhutan					
	GDPP	5.3095	3.3149	-2.033	16.9102
	EXT DEBT	71.5058	26.9315	31.0423	117.2454
	INF	1.1458	1.644	-4.7077	2.80057
	POP	6.8453	3.377	2.4545	15.9752
	GNE	120.54	8.090	104.76	136.605

To find out the role of selected macroeconomic variables on economic growth and external debt, first of all, pooled regression model is estimated.

Table 3: Results for Pooled OLS Regression

Variables	Coefficients	Standard Error	t-value
EXT DEBT	-0.0036	0.0085	-0.86
POP	-0.7561***	0.2019	-3.74
INF	-1.464***	0.028	-5.13
GNE	0.0493**	0.024	1.99
Constant	0.918	2.73	0.34
R-Square	0.225		
Adjusted R-Square	0.2098		
Prob > F	0.000		

'*', '**', '***' demonstrates that variables are significant at a 10%, 5%, and 1% level of significance, respectively.

Table 4: Results of Fixed Effect Regression Model

Variables	Coefficients	Standard Error	t-value
EXT DEBT	-0.02272*	0.0128	-1.77
INF	-0.127***	0.2448	-1.98
POP	-0.48336*	0.0397	-3.20
GNE	0.0467	0.038	1.22
Dpak	-3.0433***	1.01	-3.01
Dnepal	-2.66***	0.783	-3.40
dsri-lanka	-0.99	0.835	-1.19
Dindia	-1.15	1.143	-1.01
dBangladesh	-1.75	1.06	-1.64
Diran	-2.838*	1.462	-1.94
Constant	3.63	4.74	0.77
R-Square	0.3133		
Adjusted R-Square	0.2775		
Prob > F	0.000		

'*', '**', '***' demonstrates that variables are significant at a 10%, 5%, and 1% level of significance, respectively.

In the present research, the F value is used to distinguish across pooled and fixed-effect models. The tabular value is 2.02, but the computed value is 0.53. Since the estimated number was smaller compared to the tabulated value, we did not reject the null hypothesis. The findings suggest that the least squares dummy variable model is suitable.

5.1 Diagnostic Test

5.1.1 Modified Wald Test

The Modified Wald test is a method to determine heteroskedasticity. The findings show that χ^2 is equivalent to 275.23, and Prob > χ^2 = 0.000. Because the p-value is below 0.05, one may reject a null hypothesis (H0), indicating that it indicates an issue with heteroskedasticity.

5.2.2 Wooldridge Test

The Wooldridge correlation test is used to discover autocorrelations. The determined value of the F statistic is 42.150, with a probability greater than F of 0.0006. As a result, the p-value is below than 0.05, allowing us to reject the null hypothesis (H0) and support the alternative hypothesis, indicating a serial correlation problem. Robust standard errors are estimated to obtain unbiased results under heteroskedasticity and autocorrelation.

Table 5: Robust Fixed Effect Regression Model Results

Variables	Coefficients	Standard Error	t-value
EXT DEBT	-0.02272*	0.0128	-1.77
INF	-0.127***	0.2448	-1.98
POP	-0.48336*	0.0397	-3.20
GNE	0.0467	0.038	1.22
Dpak	-3.0433***	1.01	-3.01
Dnepal	-2.66***	0.783	-3.40
dsri-lanka	-0.99	0.835	-1.19
Dindia	-1.15	1.143	-1.01
dBangladesh	-1.75	1.06	-1.64
Diran	-2.838*	1.462	-1.94
Constant	3.63	4.74	0.77
R-Square	0.3133		
Root MSE	2.3587		
Prob > F	0.000		

'*', '**', '***' demonstrates that variables are significant at a 10%, 5%, and 1% level of significance, respectively.

5.2 Regression Results of Robust Standard Error Model

The estimated model indicates that ceteris paribus, a 1% increase in external debt will lead to a decrease the 0.022% in economic growth. External debt has a negative significant impact on economic growth at 10% significant level. Muhanji and Ojah (2011), Serrao (2016), Siddique et al. (2016), and Kraay and Nehru (2006) also found similar outcomes and showed that external debt has a significant impact on economic growth. A nation's ability to devote more resources to profitable investments and development projects is one way that low external debt might support economic growth. A government that has minimal debt has more financial room to spend on infrastructure, healthcare, and education, which promotes economic growth. Lower debt loads also enhance investor confidence and make it easier to get financing, all of which contribute to financial stability. This in turn may encourage innovation and activity in the private sector, therefore bolstering general economic growth.

Results indicate that ceteris paribus, a 1% increase in inflation will lead to a decrease of 3.04% in economic growth. Inflation has a negative significant impact at a 1% significant level. Muhanji and Ojah (2011) also found similar results. A lower rate of inflation indicates better stability in the currency's buying power. People are more willing to spend and invest, boosting the economy, when they believe their money will appreciate over time. The cost of living is usually steadier when there is less inflation. When the rate of price increases is slower, consumers could feel more confident about their financial circumstances. An important factor in economic growth is more consumer spending, which might be a result of this confidence. Estimated results revealed that ceteris paribus, a 1% increase in population growth rate will lead to a decrease the 0.48% in economic growth. Population growth has a negative significant impact at a 1% significant level. Doğan and Bilgili (2014) also found similar results. The environmental stresses brought on by fast urbanization and resource use may be lessened by a slower pace of population expansion. Long-term economic growth may result from more sustainable economic practices as a result of this. Economic planning is possible with lower population growth rates. To meet the demands of a more steady population, businesses and governments may more precisely plan their investments in infrastructure, healthcare, and education.

Estimated results revealed that ceteris paribus, a 1% increase in gross national expenditure will lead to an increase the 0.0467% in economic growth. Godwin et al. (2016) also found similar results. Increased job prospects and greater wages can result from larger national spending. People's purchasing power rises with

income, which fuels demand and economic expansion. A multiplier impact on the economy might result from increased national expenditure. For instance, increasing consumer or government expenditure might result in higher revenue and output. Increased income leads to increased spending by businesses and families, which amplifies the original rise in expenditure by a chain reaction.

6. CONCLUSION AND POLICY IMPLICATIONS

Maintaining a low level of foreign debt is essential to fostering an atmosphere that supports economic expansion. In addition to preserving economic sovereignty, it guarantees interest rate stability, lowers susceptibility to external shocks, improves creditworthiness, allows governments to invest in important industries, and cultivates investor trust for long-term, inclusive economic growth.

There are many different ethnic groups, languages, and cultures represented in the vast and diversified population of the South Asian region. With developing markets like Bangladesh and India, the area has enormous economic potential. The demographic dividend—a comparatively youthful population—offers a chance for a strong and vibrant labor force that may spur innovation and economic progress. South Asia occupies a critical geopolitical position as the link between the Southeast Asian region, the Near East, and Central Asia. As such, it has significant influence over regional and global international affairs, impacting trade routes, geopolitical behavior, and relationships across borders.

The main aim of this study is to analyze the impact of external debt on economic growth. This study used a fixed effect regression model to point out the associations between variables. The predicted variable of this study is economic growth while the predictor variables are external debt, inflation, gross national expenditure, and population growth rate. This study collected data from the world development indicators for the South Asia Region from 1990 to 2019.

In this study, external debt has a negative significant impact on economic growth at a 10% significant level. Estimated results revealed that ceteris paribus, a 1% increase in gross national expenditure will lead to an increase the 0.0467% in economic growth. Estimated results revealed that ceteris paribus, a 1% increase in population growth rate will lead to a decrease the 0.48% in economic growth. Lastly, Results indicate that ceteris paribus, a 1% increase in inflation will lead to a decrease of 3.04% in economic growth. Inflation has a negative significant impact at a 1% significant level.

In consideration of the estimated outcomes, the following recommendations are put forward.

- In the present investigation, it is noted that external debt has a negative influence on economic growth. The government should transparently manage the entire loan phase, including project identification, evaluation permits, loan negotiations and contracting loan distribution, completion of the project monitoring and assessment, and repayment of loans. The government ought to develop a framework of credible policies to foster an environment that will promote confidence among investors, both domestic and foreign, to make investments in the nation.
- In the current study, gross national expenditure has a positive impact on economic growth. The administration should spend more money on rural transportation and power since doing so will boost productivity and improve the living conditions of South Asian people. A plan of action like this might result in the best use of resources and raise a nation's standard of life.
- In the present study, inflation has negatively contributed to economic growth. Therefore, the study suggests that the monetary authorities should make a more practical effort to aggressively control inflation to avert its negative impacts by maintaining a manageable rate that would promote economic growth in the South Asia Region.

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