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FDI, FOREIGN DEBT, AND ECONOMIC GROWTH: THE SOUTH ASIAN PERSPECTIVE (1980-2020)

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ABSTRACT

The present study examines the intricate relationship between foreign direct investment (FDI), foreign debt, and economic growth over the period of 1980 to 2020 in the following countries: India, Pakistan, Sri Lanka, Bangladesh, Nepal, Maldives, and Bhutan. The analysis utilizes data obtained from the World Bank, with productive projects, improved technology and expertise, technological transfer, foreign direct investment (FDI), export, import, and productive projects serving as independent variables. GDP growth is considered as the dependent variable. The model is subjected to rigorous testing procedures, which include the Fisher-Type ADF (for panel unit root), co-integration tests, histogram-based normality assessment, White test for heteroscedasticity, VIF (variance inflation factor) test for multicollinearity, and F-test for parameter significance. These procedures are implemented to ensure the model's robustness. Subsequent analysis is guided by the Hausman test's preference for the Fixed Effects (FE) model over the Random Effects (RE) model. It is worth noting that in both the FE and RE models, a negative correlation is observed between foreign debt and economic growth. The foreign direct investment (FDI) growth rate is inversely proportional to the growth rate of economic output (0.025 percent) and foreign debt (0.117 percent), according to the FE model. The interdependence of foreign direct investment (FDI) and foreign debt underscores the criticality for developing countries to effectively manage their foreign debt while facilitating FDI inflow. The research emphasizes that policy frameworks in these nations must reduce foreign debt in order to create an environment that is favorable for greater foreign direct investment.

KEYWORDS

Panel data analysis; FDI; Foreign debt; Economic Growth; South Asia.

1. INTRODUCTION

Developing countries do not receive sufficient funding from their domestic resources, but they must use foreign exchange to close the gap between savings and investment. All countries in the developing world are constantly striving for high economic growth. Therefore, these countries pay a lot of attention to foreign investment, such as foreign debt and foreign direct investment, which are the most important sources of foreign investment.

Foreign direct investment (FDI) is a cash inflow and outflow source within the host country. In the World Investment Report (2019) due to foreign investment such as foreign direct investment in most developed countries of the world, economic growth has increased significantly. In addition, the share of foreign direct investment in world GDP has increased fivefold since the 1990s.

International companies can exchange foreign direct investment instead of recipients. Foreign debt is a significant source of external finance that helps developing countries flourish. Foreign debt is part of the total public debt to be paid to the beneficiary's economy. It is believed that foreign debt decisions on investment and development projects may be beneficial to countries. Only when a foreign investment project is profitable do the benefits outweigh the costs. Developing countries face limited financial institutions, but industrial economies such as the World Bank and the International Monetary Fund external debt; bring hope to countries without funding.

Previous studies have highlighted the impact of foreign debt on emerging economic growth, dividing it into two categories. The first group of studies focused on traditional theories that borrowing from external sources is closely linked to economic growth in developing countries. In addition, the slowdown in underdeveloped economies is due to declining domestic savings and foreign exchange earnings. One group is going to reduce its savings and consider the loss of foreign exchange earnings (financial and trade deficit) together.

Various studies have concluded that these interests have encouraged developing countries to focus on attracting foreign direct investment. Other studies to increase the impact of foreign direct investment and external debt have been conducted to examine whether such benefits are available. However, theoretical, and literary texts provide a mixed interpretation of the impact of foreign debt and external direct investment on the economic growth of developing countries. Foreign Direct Investment and Foreign Debt can be used as two important sources of funds that can help in the growth of the economy of any country, especially developing countries. However, there is a problem that foreign direct investment has been ignored by developing countries and foreign debt is generally perceived as a negative entity for the economic growth of developing countries by a specific school of thought. There is another problem that there is a lack of existing literature to identify that what was the impact of FDI and Foreign debt on EG in developing countries in the past. Explaining this impact

can help substantiate the claims that are being made in favor of FDI and Foreign debt as a game-changer for developing economies as well as the region.

The world is now a global market, and international businesses are competing globally. Many countries and organizations invest in foreign and other firms to establish economic and technological ties. Due to FDI and the issues that may affect it, scientists are always vigilant in determining what is important for economic development. This paper investigates FDI and foreign debt since these two factors have a greater impact on economic growth in developing nations.

This selects seven developing South Asian countries for research because these countries have the same problems with debt and FDI as well as economic growth. Their cultures are more likely to be similar to each other, and their way of life, expenditure, and so on are also similar. The study's overall goal is to assess the influence of foreign debt and FDI on the economic growth of chosen developing nations over a particular period. The south Asian developing countries mostly depend on foreign debt to overcome their economic crises. Foreign direct investment (FDI) plays an important role in boosting economic growth in these nations. We took these seven South Asian developing countries because these countries have the same economic problems. The study's overall goal is to assess the influence of foreign debt and FDI on the economic growth of chosen developing nations over a particular period. The south Asian developing countries mostly depend on foreign debt to overcome their economic crises. Foreign direct investment (FDI) plays an important role in boosting economic growth in these nations. We took these seven South Asian developing countries because these countries have the same economic problems.

This study adds to the current literature in a number of ways that selected those countries with the same economic problem. This study examined the impact of foreign debt and FDI on EG of the South Asian developing nations (India, Sri Lanka, Pakistan, Maldives, Bangladesh, Nepal, and Bhutan) by using a larger data set that span from 1980 to 2020 and the application of the Fix effect model and Bounds test, which has never been done before. Furthermore, no other study has been conducted in a developing economies context using the combination of variables, which are used in this study. Furthermore, the link between FDI and Foreign debt is also investigated in this study.

As part of the contribution that inspired this research, the paper had to analyze the impact of foreign debt and FDI on economic growth in South Asian countries together, and the data size was also large from 1980 to 2020. The combination of variables in this paper is also different from previous literature reviews. For the first time in South Asian developing countries, we are doing an empirical analysis of FDI and Foreign debt on economic growth together with these two important variables. We are also checking the relationship and effect between FDI and Foreign debt. Above, all the literature did the same work, but differently, they only looked at the impact of foreign debt on economic growth or the impact of FDI on economic growth. So, this work is leading both variables together and also checking these two independent variables' relationships and effects on

each other. The model used in this research is different from the above literature, as well as the variables we include in our research are the most important for economic growth. These variable combinations have never been used before.

The entire findings demonstrated a negative association between Foreign debt and economic growth, based on results from the Fixed Effects and Random Effects Models. Thus, a 1% increase in FDI is associated with a 0.025% increase in economic growth. As well the 1% increase in Foreign debt decreases by 0.117 the economic growth in the FE model. Also, the negative relationship between FDI and Foreign debt. Thus, developing countries should provide a platform for foreign investors for FDI inflow. These developing countries also reduce their foreign debt because of its negative effect on economic growth as well as FDI. These findings support the hypothesis that FDI has a beneficial impact on economic growth and that Foreign debt has a negative impact.

2. LITERATURE REVIEW

Various sorts of econometric approaches and a range of metrics to measure economic growth have been used in several empirical types of research over the last few decades to study the qualitative and quantitative effects of FDI and Foreign debt on economic growth. Both FDI and Foreign debt development have a considerable positive and negative influence on growth, according to these studies.

Badar et al. (2018) Using a wider sample size that includes the years 1970 to 2015, their study explores the influence of Foreign Direct Investment (FDI) and External Debt (ED) on Pakistani Economic Growth (EG). The study model includes three control variables, in addition to the two explanatory variables (FDI and ED). The empirical study is carried out with the Auto Regressive Distributed Lag (ARDL) model, and the long-run influence of these variables is tested using the Bounds test technique of co-integration. The outcomes of this study show that while the FDI influx has a negligible long-term influence on Pakistan's EG, it has a considerable and beneficial impact in the near term. Furthermore, while there is no long-term effect of ED on EG, there is a short-term deleterious impact. This might signify that the success of this endeavor will necessitate a lot of attention. Hidehiko (2022) creates a quantitative small-open-economy model to investigate the drivers of emerging nations' optimal rate of foreign reserve building. Reserve accumulation, in the model, depreciates the real exchange rate and attracts FDI inflows, which boosts productivity development through endogenous business dynamics. The economy is also susceptible to unexpected halts, such as a periodic binding limit on foreign borrowing, and accumulated reserves are utilized to avoid catastrophic economic downturns. The elasticity of the international borrowing spread concerning foreign debt and the entry cost for FDI are the major drivers of the optimal rate of reserve buildup, according to the model. The model implies that these two factors might account for a significant portion of the observed reserve accumulation rate difference among countries.

Nguyen ([2020](#)) researched FDI years from 2000 to 2018, the influence of foreign direct investment (FDI) and international commerce (export and import) on Vietnam's economic growth. The General Statistics Office of Vietnam provided secondary data. The influence of FDI, export, and import on Vietnam's economic development is studied using the ordinary least-square approach. The findings of empirical tests suggest that foreign direct investment and international commerce are linked to Vietnam's economic growth. FDI has a favorable and statistically significant impact on Vietnam's economic growth. Export has a positive and statistically significant impact on economic growth, whereas import has a negative but statistically insignificant impact. Tahir et al. ([2020](#)) have looked at the conflicting effects of significant external inflows on Pakistan's economic growth. He utilized data from 1976 to 2018 to estimate the specified models in order to capture the impact of the spike in foreign inflows that occurred during that time period. To investigate the long run cointegrating connection between the variables, they used the autoregressive distributed lag cointegration technique. Different inflows had a key influence in driving economic growth, according to the data. According to the findings, all inflows, such as foreign direct investment (FDI), debt, government development aid, and remittances, have a significant and favorable impact on economic growth in the long run.

Saswata at el. ([2020](#)) Foreign direct investment (FDI) is seen to be a key predictor of economic growth in developing nations, but its influence differs by country. Other elements (such as domestic investment, inflation, infrastructure, and foreign trade) may help or hinder FDI's potential influence on economic growth. Furthermore, the sectoral mix may have a differential influence on economic development due to the non-homogeneous character of sectoral FDI. As a result, it is vital to identify and quantify the impact of FDI inflows by sector (primary, secondary, and tertiary). This article has taken a comprehensive approach to investigating and assessing the FDI-growth dynamics in South Asian nations in the recent past, examining the nature and behavior of overall and sectoral FDI influx. The study discovered that the sectoral makeup of FDI has an impact on FDI impacts in South Asia.

Sakib et al. ([2021](#)) examined the influence of Chinese FDI on Bangladesh's economic growth using annual time series data from 1997 to 2020. As statistical tools, they suggest the Johansen Co-integration test and the vector error correction model. This analysis finds a positive and substantial long-run association between Chinese FDI, total FDI, trade openness, and Bangladeshi economic growth, but these factors have no influence on Bangladeshi economic growth in the short term. These findings also show that Chinese FDI, TFDI, and trade openness have a long-term granger causation on Bangladesh's GDP. Asafo-Agyei and Kodongo ([2022](#)) conducted research on the impacts of foreign direct investment (FDI) on economic growth in Sub-Saharan Africa, as well as the mediating function of FDI absorptive capacity. They discovered that the annual threshold for FDI inflows per person is around US\$ 44.67. Countries must have a minimal capacity to absorb the growth-enhancing advantages of FDI in order for it to have an influence on economic growth. The technological gap between hosted international firms and local enterprises, for example, should be at least 0.6904.

Furthermore, Ruohan Wang et al. (2021) investigated if foreign debt predicts weaker growth. He used data from low- and middle-income countries (LMICs) between 1970 and 2018 to do a panel regression. The findings show that an increase in total, long-term, or foreign debt consistently predicts worsening short- and medium-run economic development. Further data demonstrates that despite the nations' borrowing costs being high, improved institutional quality can help minimize the negative impact of external borrowing on GDP. Rising amounts of debt have a negative impact on a country's economic growth. According to several recent research, the nonlinear effects of the tipping point or debt ratio threshold, GDP, and public debt on economic growth are highly considerable (Kharusi & Mbah, 2018). Increased revenue enhances the country's ability to meet external debt obligations without necessitating private investment at home. On the contrary, the country's economy, which is heavily reliant on external debt, is having a negative influence on growth (Chandio et al., 2021).

South Asian nations have recently seen a drop in investment and economic development as a result of uncertainties in their foreign debt status. Due to South Asian nations' failure to avoid defaults in an inefficient capital market, development has been hampered by considerable foreign debt, and, as a result, they have been unable to pay their anticipated commitments. The empirical examination of external debt and economic development provides useful insights into this context Alemzero et al (2021). Furthermore, by acquiring foreign debt, a positive link between government expenditure and government revenue may be noticed, aiding the budget support with expanded investment prospects among recipient states. The government's inability to properly manage assets, on the other hand, has severe effects in the form of external debt, especially in developing countries that see foreign aid as crucial to their economy. As a result, the only method to mitigate the displacement impact is to increase fiscal debt. To decrease everlasting debt, emerging nations such as Pakistan, Bangladesh, India, and Nepal must enhance investment channels while decreasing governmental spending. As a result, for increased economic growth, the current account deficit must be reduced Shahbaz et al. (2018). The study examines the impacts of foreign debt with a value ranging from 30% to 60%. To calculate debt load, two additional parameters are used: overall income to total external debt ratios and total debt service to export products ratios (Lagoa, 2022). The research done by Ahmed & Gasparatos (2020) claims that foreign debt has a beneficial influence on the borrowing country's economy since each external loan incurred represents marginal productivity greater than the principal and interest payment.

According to Mohsin et al. (2021), The study investigated the relationship between external debt and economic development in South Asia. Panel ordinary least squares (OLS), fixed effect, quantile regression, and robust output regression were used to analyze World Bank data from 2000 to 2018 (World Bank, 2020). Foreign debt has a negative impact on economic growth, whereas external debt stock has a positive impact, according to the study. The theory is that when foreign borrowing is effectively utilized to fund income-generating domestic projects and infrastructure expansions to improve private sector participation, long-term economic

growth will be boosted. The income base will expand as well, enhancing the country's ability to service the foreign debt without stifling private investment at home (Jayaraman & Lau, 2009).

The chapter's goal was to provide an understanding of the theoretical and empirical aspects of the relationship between FDI and economic growth as well as foreign debt and economic growth. Different theories express their views differently depending on the basis of their assumptions, as cited by various Neoclassical, New Keynesian, and New Growth theories. In this research, we are using the endogenous growth theory. The Solow-Swan model (1956) is the primary reference point in modern economic growth literature. The preceding model is an exogenous growth model that we use in this paper. Also, according to the empirical review, how FDI and Foreign debt affect economic growth depends on the country. That is, depending on factors that affect the link between FDI and Foreign debt per country, the impact will always be different.

Based on the above literature review, in all the above empirical studies on FDI as well as foreign debt most of the researchers have done research on a single country, and some have researched multiple countries. For all of the above, most researchers use time series data. From the above literature, we did not see the research done in South Asian countries. Most of the researchers used the ARDL, OlS, VAR (vector autoregressive models), and VECM (vector error correction model) methods for empirical analyses. Most of the research results show that FDI also has a positive impact on economic growth in different countries. Bolanle and some other research results show FDI has a negative impact on GDP growth and domestic saving. Most of the results found a negative relationship between foreign debt and economic growth, and some researchers like Amoateng, Jayarman, and Roch found a positive relationship between foreign debt and Economic growth. After reading al above paper we chose those variables for our analysis which are never used also some papers were published in 2020 and 2021 but they took data before 2018. All above it is analyzed that the absence of FDI has remained a bottleneck issue curbing socio-economic trends in the developing countries. In the absence of FDI and Foreign debt, the countries are likely to face innumerable problems from individual to collective level. In case of a dearth of FDI trends, practices, and models, the countries are unable to find effective determinants for uplifting the economic fabric for progress and prosperity. A number of issues ranging from societal to economic will not invite healthy investment institutions for the development of economic growth. The under-reference study focuses purely focuses the trends of economic development and determinants of economic development with reference to Foreign Direct Investment and Foreign debt.

3. THEORETICAL FRAMEWORK, METHODOLOGY, AND DATA
3.1. Framework

In current economic growth literature, the Solow-Swan model (1956) is the major reference point. The preceding model is an exogenous growth model, that is, a neoclassical economic model of long-run economic growth. It considers capital accumulation, labor or population increase, and technological innovation in an attempt to explain long-run economic growth. The necessity of technical innovation in producing long-term economic growth is one of the most fundamental findings gained from the Solow-Swan model.

Although the Solow-Swan model is a good place to start, endogenous growth theory is now providing a review of it. We need to understand the factors that promote growth since this is a requirement for promoting economic growth processes. Knowledge and technology are developed through contact with physical capital, which is a key requirement. In the long term, regardless of the beginning per capita stock, all nations will progress to the same stable condition and a similar level of life, according to the Solow model.

The simple Solow-Swan model has served as a foundation for increasingly complicated models over the years. The endogenous growth hypothesis first arose in the 1980s, with Roner et al. (Jones, 2019) playing key roles. This theory emphasizes that technological advancement is an endogenous effect of an economic system, rather than the result of external pressures. Furthermore, this hypothesis reawakens interest in long-term economic growth.

Solow devised the exogenous growth theory, sometimes known as the neoclassical growth model or the Solow-Swan growth model (1956 and 1957). According to this theory, economic progress is powered by the accumulation of external production inputs like capital and labor. Cobb and Douglas' aggregate production function is commonly used in exogenous model empirical investigations of economic growth (1928). According to Hicks, the Cobb-Douglas production function, also known as the aggregate production function, is modeled against local and international capital input, labor input, and the rate of technical advancement, which varies over time (1932).

It has been shown that capital accumulation directly contributes to economic growth in proportion to capital's share in national production when using this technique. Furthermore, labor force expansion and technical innovation are both necessary for economic growth. According to this theory, FDI boosts the host country's capital stock, which boosts economic growth. Barro (1995) found a link between capital accumulation and output, but Herzer et al. (2008) recently found that FDI aids economic development by complementing local investment.

By collecting capital and absorbing new inputs and technologies into the host country's production function, the exogenous or neoclassical growth model has demonstrated that FDI may have a direct influence on economic growth. According to the neoclassical growth model, FDI increases economic growth in the host country by increasing the volume and/or efficiency of investment. There is no well-known theoretical framework that explains how the Solow growth model and foreign debt are linked. Several empirical research on foreign debt, on the other hand, used the Solow growth model as a framework to investigate its impact on

economic growth. As we saw in the theoretical phase, the Solow growth model is based on a closed economy in which labor and capital are the primary means of production. The influence of foreign debt on growth in this scenario may be assessed in terms of public savings, which are then invested in a closed model.

Before we can look at the overall effect of foreign debt on Solow's growth model, we need to look at the projected individual effects of debt overhang and debt crowding out. According to the debt overhang concept, the government raises the tax rate on the private sector to pay off the accumulated debt (as a means of transferring resources to the public sector). Private sector investment is discouraged as available resources are allocated to meet debt commitments, while government public spending on infrastructure (road building, telecommunications, electric power supply, and so on) decreases. As a result, overall investment (both private and governmental) in the country will decline. As a result, the Solow growth model's investment and production function curves will be lowered.

When nations are required to pay a portion of their foreign debt, they utilize their export income and, in certain situations, transfer resources such as foreign debt and foreign money to service their upcoming debt; this is the case for the debt crowding out effect. Countries that move money from exports that could be utilized for investment to debt repayment would inhibit public investment. In the Solow growth scenario, this will restrict economic growth and change both the investment and production functions.

The Solow growth model theory is best to explain this paper because this research model includes an exogenous variable that affects economic (GDP) growth.

3.2. Methodology:

The chapter presents the type of data and variable definition, to be adopted by the paper. The chapter is structured to present an explanation of panel data, the advantages of panel data, and also the different types of diagnostic tests including Panel unit root test, heteroscedasticity test, multicollinearity test, Normality tests, Hausman test, Endogeneity test, which use to clean and test the data and model for reliability.

According to Hsiao (1986) (Shahbaz et al., 2018), panel data, explains a type of data that consists of a time series element containing observation of several individual states. As such, panel data consist of at least a cross-section dimension with a subscript "i", and a time series element "t". As stated by Hsiao, panel data can be defined as; $(x1_{it}, x2_{it}, ., xk_{it}, y_{it})$; $i=1,2,….,N, and\ t=1,.,.,T$, where N is the number of entities and T as the total time period (years, weekly, monthly, etc.). Given the research explanatory variables, a panel data model can be defined as follows.

$$y_{it}= \beta 0+ \beta 1x_{it}+ \beta 2k_{it}+ \beta 3g_{it}+ \beta 4f_{it}+ \beta 5m_{it}+\beta 6Z_{it}+ \beta 7q_{it}+ \mu_{it}. \qquad (3\text{-}1)$$

Where $i=1,$ and $t=1,$ and T. f, m, z, and q are the control variables. while Y is the dependent variable, and k and g are independent variables Below is a presentation of the covariate definition.

Where:

yit	Economic Growth
xit	FDI
kit	FD
git	Import
fit	Export
mit	Technology Transfer
Zit	Productive Project
qit	Improved Technology & Expertise
μit	error term

To account for unobserved nation-specific factors that differ from country to country but do not change over time, as well as unobserved temporal fixed effects variables. The fixed-effect model provided below will be used in the study.

3.3. Fix effect model

One can either adopt the Least Square Dummy Variable (LSDV) model or the fixed effects model to deal with the country-specific effects, but since the LSDVM is too "tedious" to work with because of many dummy variables, the research will adopt the FE model.

Fixed-effects models are statistical models in which the levels (or values) of independent variables are assumed to remain constant while only the dependent variable changes in response to the levels of independent variables.

The formula of fixed effect model regression is:

$$Yit = \beta 0 + \beta 1 Xit + \beta 2 Zi + uit. \tag{3-2}$$

Where Zi is an unobserved variable that varies from one state to the next but does not change over time.

We want to estimate $\beta 1$, the effect on Y of X holding constant the unobserved state characteristics Z.

FE explores the relationship between predictor and outcome factors inside a single entity (country). The predictor factors may or may not be affected by each creature's specific characteristics. When we employ FE, we must account for the fact that anything about the individual may impact or skew the predictor or outcome

variables. This is why we assume that the entity's error term and predictor variables are related. FE eliminates the impact of time-invariant features, allowing us to assess the predictors' overall impact on the outcome variable.

Another essential premise of the FE model is that time-invariant attributes are unique to the individual and should not be linked to other personal traits. Because each item is distinct, its error term and constant (which reflects distinct characteristics) should not be grouped together. If the error terms are linked, FE is not appropriate since inferences may be wrong, and we must define the relationship (perhaps using random effects), which is the primary argument for the Hausman test (presented later on in this document).

3.4. Data

The paper uses Panel Data for the period 1980-2020 to examine the influence of FDI and FD on the EG of India, Pakistan, Sri Lanka, Bangladesh, Nepal, Maldives, and Bhutan. The information was gathered from the IMF and World Bank.

The study has taken two independent variables; FDI and FD.GDP growth is the dependent variable while import, export, Technological transfer, Improved Technology & Expertise, and productive projects are explanatory variables.

Table 1. variable and data proxy

Variables Name	Data	Sources of Data
GDP growth (Dependent variables)	GDP growth (% growth annually)	world-development-indicators
Foreign Debt	Current US dollar in millions	world-development-indicators
Foreign direct investment	Current US dollar in millions	world-development-indicators
Export	Current US dollar in millions	world-development-indicators
Import	Current US dollar in millions	world-development-indicators
Technology Transfer	Current US dollar in millions	world-development-indicators
Productive Project	Current US dollar in millions	world-development-indicators
Improved Technology & Expertise	Current US dollar in millions	world-development-indicators

3.5. Variable description

Given below is a description of the explanatory variables used for analysis, and how they are linked to economic growth as explained by different theoretical and conceptual views. selection of the variables in the research is important because it, directly and indirectly, affects economic growth as well as FDI. These combinations of variables have never been used in previous research. The details of each variable are listed below.

A. Economic growth

From one period of time to the next, economic growth is described as a rise in the production of economic commodities and services. Historically, gross national product (GNP) or gross domestic product (GDP) have

been used to quantify aggregate economic growth, while alternative metrics have been employed on occasion. Here in this research, we used GDP growth as an indicator of economic growth, and economic growth is dependent on variables. Given below are some figures for South Asian developing countries' economic growth. (Percentage of GDP growth per year).

The below figures (Fig. 1) a, b, c, d, e, f, and g show the economic growth in developing countries. Figure A shows Bangladesh, Maldives, Bhutan, India, Sri Lanka, Nepal, and Pakistan. Most developing countries GDP growth decreased in 2019 and 2020 due to the epidemic of COVID19.

Figure 1. Presentation of the GDP growth of seven South Asian developing countries
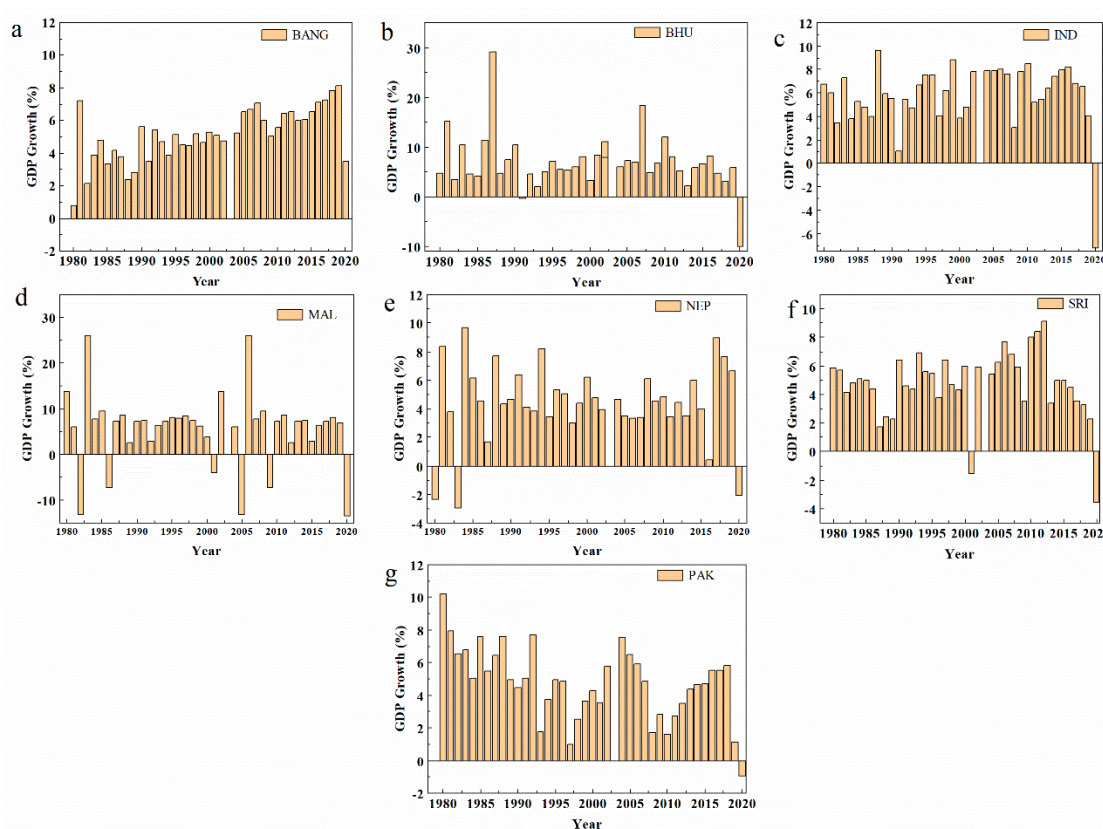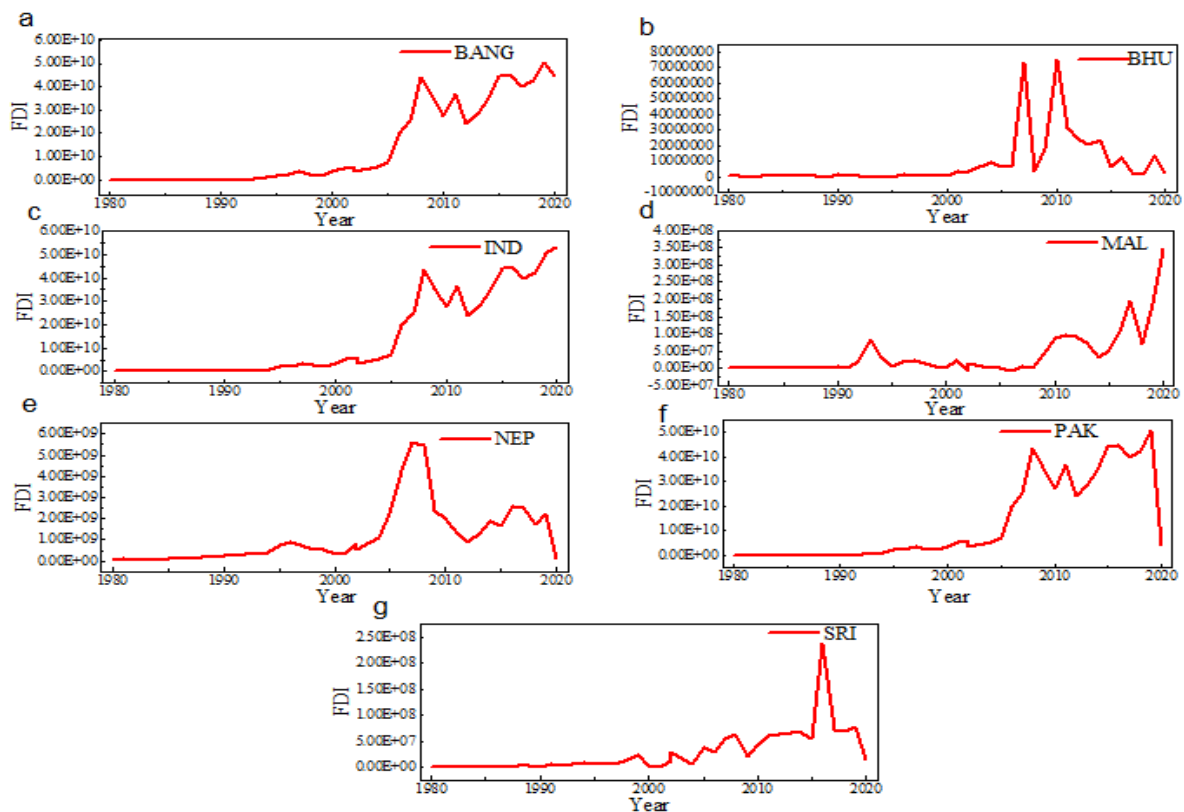

Source: Calculated by authors

B. Foreign direct investment

Foreign direct investment (FDI) is a sort of cross-border investment in which a resident of one nation invests in and exerts significant influence over a resident of another economy. According to the study, the influence of FDI on growth increases as one moves from low-income to middle-income nations. As a result, foreign direct investment is more advantageous for emerging economies, which have a stronger demand for investment and a greater need for modern technology than industrialized ones. FDI plays an important role in

the economy because it has a direct effect on economic growth. Given below are the figures for South Asian developing countries' FDI records from 1980 to 2020.

Figure 2. Presentation of the FDI of seven developing countries

Source: Calculated by authors

The above figure (Fig. 2) shows the FDI of developing countries, including figures a, b, c, d, e, f, and g, showing Bangladesh, Maldives, Bhutan, India, Maldives, Pakistan, Nepal, and Sri Lanka.

In the early years after independence, South Asian nations had fairly restrictive regimes, and it was only in the last decade that they began to loosen up and make their FDI policy settings more conducive to foreign investment. FDI was first allowed in a restricted and mutually beneficial manner, with local businesses owning the majority stake. In the 1990s, however, all South Asian countries made a concerted effort to attract FDI by altering their macroeconomic policies as well as trade and FDI rules.

C. Foreign debt

Foreign debt is money borrowed from another country's government or private lenders by a government, corporation, or private household. Liabilities to international institutions such as the World Bank, Asian Development Bank (ADB), and International Monetary Fund (IMF) are also included in foreign debt (IMF). Increasing debt has a direct influence on all emerging countries' economic prospects. Employees will have less to use in their vocations if high debt levels force out private capital investments, resulting in poorer productivity and, as a result, lower incomes. Foreign debt is a part of the economy of emerging nations, and it has a direct impact on economic progress. The given below figures show the foreign debt of developing countries. These figures show the foreign debt incurred by seven developing countries from 1980 to 2020.

Figure 3. Presentation of the Foreign debt of seven developing countries
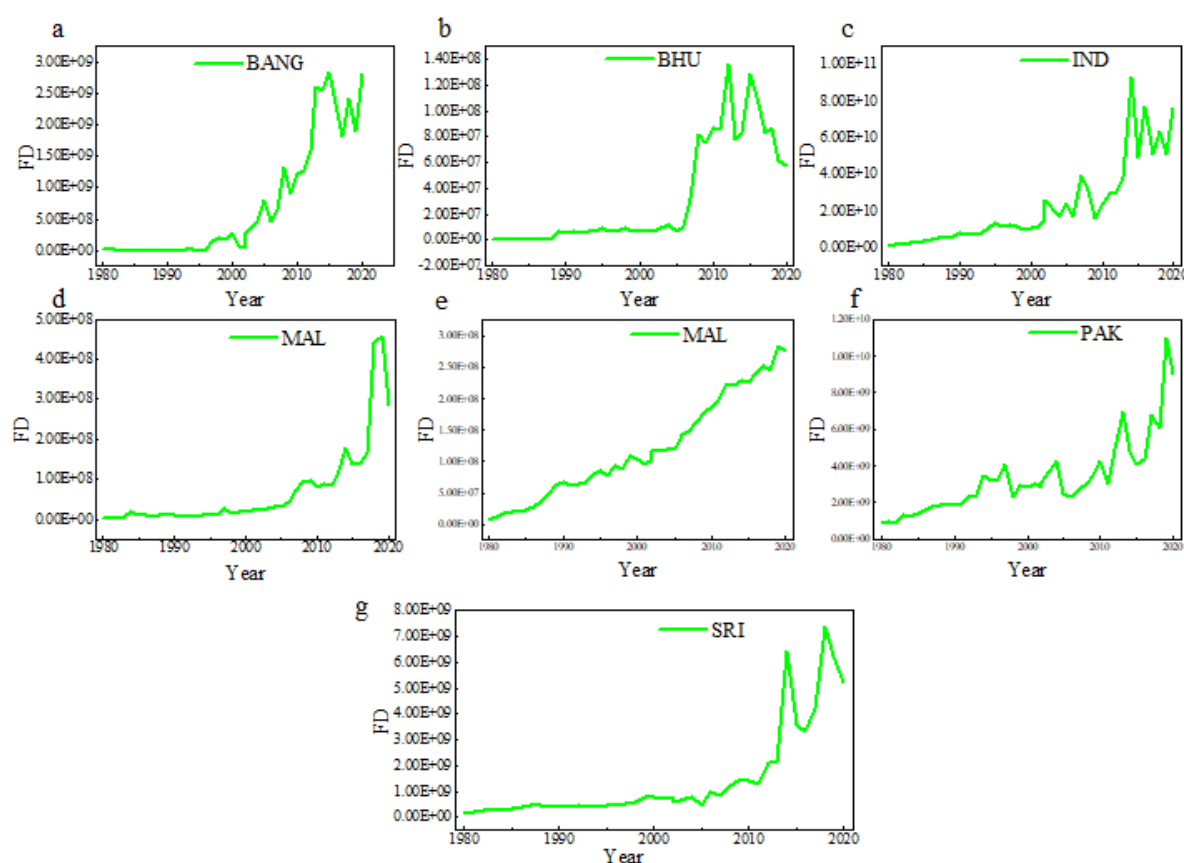

Source: Calculated by authors

The above Fig. 3, in a, b, c, d, e, f, and g show the foreign debt of Bangladesh, Maldives, Bhutan, India, Nepal, Pakistan, and India. All South Asian countries' debt increased after 2010, which is because of the political instability in these regions and the domestic war satiation in Pakistan. The corrupt government is also a major reason for the economic crisis.

D. Project productivity

Project productivity is a measure of how productive a project or program's labor is. This is based on the productivity formula, which employs widely monitored project metrics. Productivity may be quantified at the individual, corporate, and regional levels, and is often expressed as output per unit of work. Empirical data from numerous nations and over extended periods show a substantial association between economic growth/prosperity and productivity.

E. Technology transfer

The act of moving technology from the person or organization that owns or retains it to another person or organization in order to translate discoveries and scientific findings into new goods and services that benefit society is known as technology transfer. Technology transfer is a critical component that has a significant influence on both immediate and long-term economic growth. Structure changes to the whole economy are practically impossible without successful technology transfer and a well-defined country's innovation system. Labor productivity rises, and the economy becomes more self-sufficient than has been observed in the history of industrialized countries. When the method has been domesticated and is used as an important element of the home production economy, the transfer is complete.

F. Improved technology & expertise

Technology is generally recognized as a key engine of economic development in nations, regions, and cities. Technological advancement enables more efficient production of more and better goods and services, which are the building blocks of riches. There are many benefits to technological advancement. By boosting productivity and supplying citizens with new and better products and services, it improves the overall level of life. They could attempt to limit chances for innovation and entrepreneurship, which might lead to increased long-term prosperity and growth.

Solow's approach created a new school of economics called growth accounting, which tries to evaluate the variables that support economic growth empirically. According to Solow, technical change accounts for nearly 90% of US productivity; other studies have shown similar magnitude influences.

4. RESULT AND DISCUSSION

This chapter presents and gives an analysis of results from a diagnostic test as well as regression results. The chapter is structured to start with the presentation of descriptive statistics, followed by an interpretation of

diagnostic test results and regression (Fixed Effects and Random Effects models), results then end with a conclusion.

4.1. Descriptive statistics and analysis

The table above shows the statistical results described. According to the results, between 1980 and 2020, according to some developed countries, the initial GDP growth was 5.181155, the median was 5.328, the mean was 5.181, and the minimum was -33.49. During the study period, the average FD was 411M, the median was 453M, the maximum was 928M, and the minimum was 235 M. The total FDI is 258M, the standard deviation is 8,730M, the maximum is 53,2M, and the minimum is -6660000. The total Productive Project is 8,004.49, the average deviation is 28,733.20, the maximum is 290,928.40, and the minimum is 4,550,036. According to the explained statistics, all variables hang evenly. Isolation indicates a cut or tenderness in the joint. For the normal distribution, Kurtosis levels are 3. Since the number is greater than 3, the result obtained confirms the traditional nature of the distribution.

Table 2. Results from descriptive statistics (in millions of US dollars)

	GDP growth	FDI	FD	Import	Export	Technology Transfer	Improved Technology & Expertise	Productive Projects
Mean	5.181	2,58	411	970	974	249	644	800
Median	5.328	877	453	111	516	569	225	755
Maximum	29.05	532	928	478	517	527	959	290
Minimum	-33.49	-666.	235	0.00	227	130	629	455
Std.Dev.	5.181	8,73	116	396	422	562	110	287
Skewness	4.741	4.17	4.81	8.68	8.77	5.02	3.58	7.15
Kurtosis	24.11	19.62	28.95	87.68	88.56	35.34	20.51	61.47

Source: Calculated by author

4.2. Analysis of correlation matrix

In order to test the robustness of the relationship between variables, this study uses a relationship measure. The following table shows the relationship between variables.

Table 3. Results from the correlation matrix

	GDP growth	FDI	FD	Imp	Exp	TT	ITE	PP
GDP growth	1.00*							
FDI	0.002*	1.00						
FD	-0.0029*	-0.1504*	1.00					
Imp	-0.028*	0.104*	0.909*	1.00				
Exp	0.027*	0.037*	0.922*	0.992*	1.00			
TT	0.024*	0.078*	0.925*	0.987*	0.991*	1.00		
ITE	0.022*	0.123*	0.907*	0.953*	0.953*	0.967*	1.00	
PP	0.084*	0.227*	-0.0002*	-0.054*	-0.099*	-0.056*	-0.017*	1.00

Note: The above table the * shows the P valve which explains its significance level at 0.01%.

Source: Calculated by author

The results show that FD has a negative correlation with GDP growth and imports also have a negative correlation with GDP growth. At a 1% significance level, FDI and FD have a negative correlation. All other variables also have a positive correlation, but the PP (productive project) has a positive correlation with GDP growth and FD but a negative correlation with import, export, TT (technology transfer), and ITE (improved technology and expertise).

4.3. Unit root test results

One of the properties of panel data is that it reveals patterns; as a result, the data is referred to as non-stationary. Panel data must be steady to avoid the data trending and, more importantly, to avoid false data findings. Unit Root Test is done to check if data is stationary or trending (non-stationary). The value is noticed as a comparison with different critical values provided by software at a 1% significance level using the unit root test. The Fisher unit-root test is a form of unit-root test that is used to determine the stationary test. The specific variable is stationary at any level or first difference significance level if the Fisher-type value at the level or first difference is less than all or any of the critical values. The tables below show the Fisher-type test results. A panel data set with a constant mean over time and a constant variance is referred to as a stationary series; however, if the mean and variance are not constant over time, the series is referred to as non-stationary. The tables that follow might assist you in better understanding.

Table 4. GDP Growth Results from FT Unit root

		At level Coefficient	P value		At first difference Coefficient	P value
EG	Chi-square	85.2614	0.00	Chi-square		
	Z	-5.6075	0.00	Z		
FDI	Chi-square	10.2874	0.7409	Chi-square	133.8185	0.00
	Z	2.1639	0.9848	Z	-8.8254	0.00
FD	Chi-square	2.5097	0.9997	Chi-square	142.6060	**0.00**
	Z	4.3957	1.0000	Z	-9.6283	**0.00**
Import	Chi-square	3.5925	0.9975	Chi-square	95.9010	**0.00**
	Z	2.5162	0.9941	Z	-7.9794	**0.00**
export	Chi-square	5.0109	0.9857	Chi-square	56.6918	**0.00**
	Z	1.382	0.9166	Z	-5.1331	**0.00**
TT	Chi-square	5.1890	0.9830	Chi-square	65.7638	**0.00**
	Z	2.5195	0.9941	Z	-5.4093	**0.00**
ITE	Chi-square	6.4107	0.9551	Chi-square	56.6178	0.00
	Z	3.7676	0.9999	Z	-4.7752	0.00
PP	Chi-square	53.3998	**0.00**			
	Z	-5.0654	**0.00**			

Source: Calculated by author

The null hypothesis in this test is that all panels have a unit root. We accept this theory based on the evidence presented above. When we look at the tests P and Z, we receive a value for these test statistics, and the p-value is in the following column. The null hypothesis may be rejected at a 1% level of statistical significance

since they are all smaller than 0.01. This signifies that the panels have no unit roots under the stated test circumstances (including panel mean and time trend). Because the p-value represents the degree of statistical significance at which the null hypothesis can be rejected, this should also address our second question. The GDP growth is stationary at this level. The above results show that economic (GDP) growth and productive projects are stationary at level, but the rest of the variables are stationary at first difference.

4.4. Normality through histogram

The test of normality for continuous data is a key step in determining measures of central tendency and statistical approaches for data analysis. When our data has a normal distribution, parametric tests are employed to compare the groups; otherwise, nonparametric approaches are utilized.

The normality of residuals is also indicated through a histogram graphic. The series' normal distribution is represented by a bell-shaped curve. The hypothesis of normality tests is:

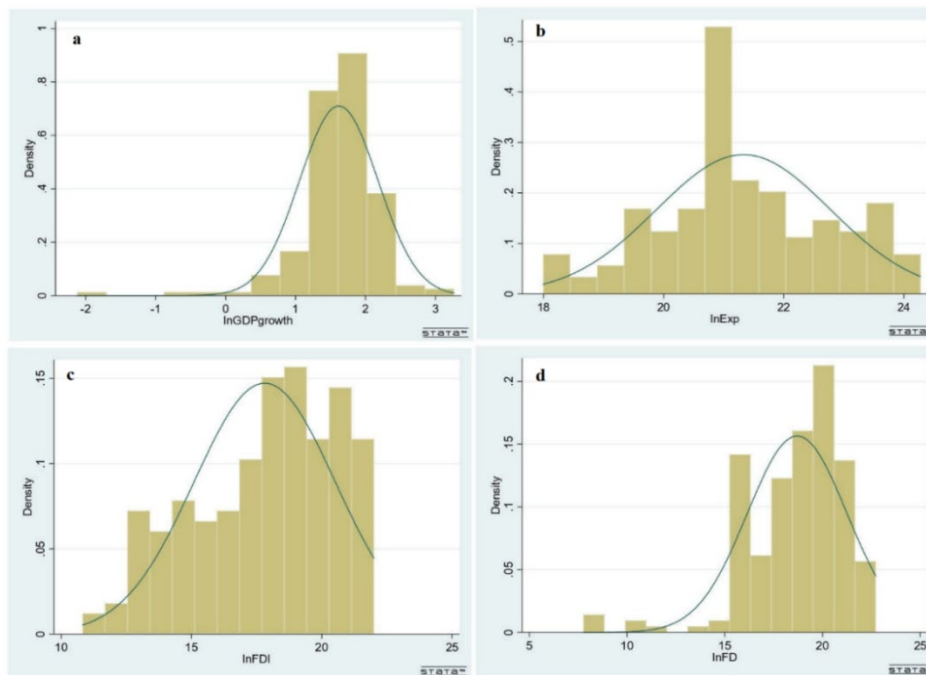H0: All panel data are normally distributed.
H1: All panel data are not normally distributed.

Give below the outcome of the normality test through histogram.

Figure 4. Presentation of normality test of variables

(a)
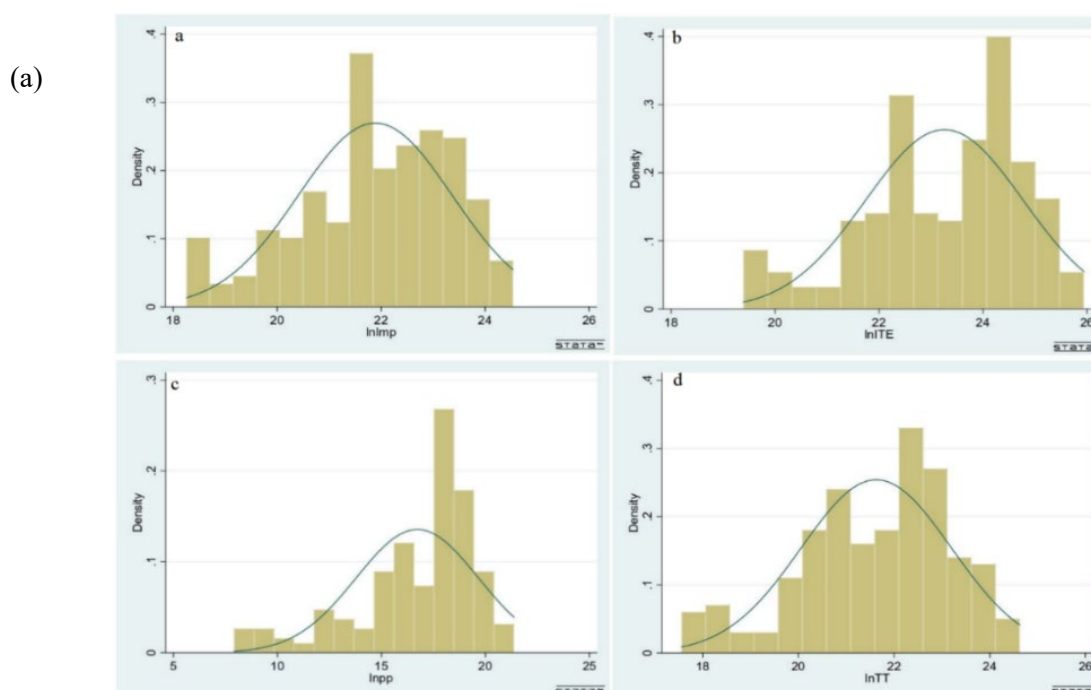
(b)

Source: Calculated by author

The residuals are distributed in a bell-shaped distribution, as seen in the picture above part of a graph. The GDP growth (Fig.4 a) and Exp (Fig.4 b) are shown on the X-axis, while the density of the data set is shown on the Y-axis. Therefore, the histogram plot verifies the normality test findings residuals are distributed in a bell-shaped distribution, as seen in the picture above. The FDI (Fig.4 c) and FD (Fig.4 d) are shown on the X-axis, while the density of the data set is shown on the Y-axis. As a consequence, the histogram plot verifies the normality test findings.

The residuals are distributed in a bell-shaped distribution, as seen in the picture above part b graph. The import (Fig.4 a) and ITE (Improved Technology & Expertise) (Fig.4 b) are shown on the X-axis, while the density of the data set is shown on the Y-axis. Consequently, the histogram plot verifies the normality test findings. The residuals are distributed in a bell-shaped distribution, as seen in the picture above. The PP(Productive Project) (Fig.4 c) and TT (Technology transfer) (Fig.4 d) are shown on the X-axis, while the density of the data set is shown on the Y-axis. Therefore, the histogram plot verifies the normality test finding.

4.5. Variance inflation factors (VIF)

The variance inflation factor (VIF) is a statistic that assesses the multicollinearity of a collection of multivariate regression variables. The ratio of total model variance to variance in a model with just that one independent variable is the VIF for a regression model variable. For each independent variable, this ratio is determined. A high VIF shows that the linked independent variable is highly collinear with the model's other variables. The result of VIF test results is given below (Tab.5)

Table 5. Results from VIF

Variables	VIF	1/VIF
FDI	2.11	0.473258
FD	3.98	0.250957
Exp	2.75	0.364187
Imp	3.28	0.305242
TT	6.29	0.159100
ITE	5.47	0.182650
PP	1.75	0.572923
Mean VIF		3.66

Ref: Calculated by author

Hypothesis for multicollinearity:

H0: Variables are multicollinear.

H1: variables are not multicollinear.

The mean VIF in the above case is 3.66, indicating no correlation. As a rule of thumb, VIF values less than 10 imply that the variables are not multicollinear. The tolerance, 1/vif, specifies the degree of collinearity.

If we look at the above VIF independent variables FDI the VIF value is 2.11 which is less than 10. which means that their FDI has no multicollinearity with other independent variables FDI will not cause other variables during regression. FD the VIF value is 3.98 which is less than 10. which means that there FD has no multicollinearity with other independent variables FD will not cause other variables during regression. Export the VIF value is 2.75 which is less than 10. which means that their export has no multicollinearity with other independent variables export will not cause other variables during regression. Import the VIF value is 3.28 which is less than 10. which means that their import has no multicollinearity with other independent variable import and will not cause other variables during regression. In technological transfer, the VIF value is 6.29 which is less than 10. which means that their Technological transfer has no multicollinearity with other independent variables Technological transfer will not cause other variables during regression. Improved Technology & Expertise the VIF value is 5.47 which is less than 10. which means that their Improved Technology & Expertise has no multicollinearity with other independent variables Improved Technology & Expertise will not cause other variables during regression. In productive projects, the VIF value is 1.75 which is less than 10. which means that their Productive projects have no multicollinearity with other independent variables Productive projects will not cause other variables during regression. Hence from the above results we reject the null hypothesis and accept the alternative hypothesis and we can say that there is no multicollinearity among independent variables.

4.6. Robust checks

The standard errors determine the accuracy of the estimations. To get the robust standard errors we employed VCE robust. Table 6 below shows that the findings are consistent with the REM and FEM models.

The results of the panel regression analyses with VCE robust in Table 6 are approximately similar to the earlier results and all variables have a significant effect on the economic growth.

Table 6. Results from Robust standard error.

Variable	Coefficient	Std.Error	T-statistic	P>|t|
FDI	0.0254577	0.062	1.67	0.042
FD	-0.1176708	0.072	2.49	0.021
Imp	-0.0781111	0.084	1.12	0.017
Exp	0.1258537	0.075	1.92	0.041
TT	-0.0331739	0.091	0.26	0.069
ITE	0.0063157	0.091	0.006	0.098
PP	0.0290805	0.046	1.16	0.041
R2	0.293			
Prob>f	0.00			

Source: Calculated by author

The empirical outcomes in the above Tables indicate that all the explanatory variables are highly significant in influencing the economic growth of the chosen countries. The results are effectively affirmed with robust standard errors. To further elaborate on the findings this section discusses all the explanatory and other variables.

4.7. Endogeneity test results

The below table presents estimated results obtained using the endogeneity test from Stata software. The test was based on the null hypothesis that all variables are exogenous. Note: all variables are in log form. As presented in the below table, the paper fails to reject the null hypothesis. The p-value of all variables is greater than 0.05% in both the Darbin and Hausman tests. That is, the estimates obtained after running the regression analysis using the mentioned variables are reliable and consistent. Since the estimates are fit to be used for the interpretation of the relationship between FDI, FD, and economic growth, the above-given coefficient estimates are reliable enough to be used to offer from the result of the endogeneity test, we accept the null hypothesis. So, our model is fit rather than 2SLS. The first stage test result of endogeneity shows that all F statistics values are greater than the critical values, which means that our instrumental variables (lags one variable used as an instrumental variable, using the two-stage least square method to test the robustness of empirical results) are not weak. The overidentified test result shows that all variables' P values are greater than 0.05, which means our model is well-specified and worth testing. Above all variables, the P value is greater than 0.05 and also F statistics values are greater than the critical values of all variables which means that variables are not weak. So, there is no endogeneity problem in the model.

Table 7. Result from Endogeneity Test.

Variables	Endogeneity		First stage		overidentified	
	Darbin	WU Hausman	F statists	2SLS	Sargan	Basmann
Foreign direct investment	1.0538 (0.304)	1.024 (0.312)	34.24	16.38	3.253 (0.192)	3.212 (0.185)
Foreign debt	1.123 (0.251)	1.095 (0.271)	56.42	41.32	1.952 (0.312)	1.844 (0.301)
Import	1.911 (0.162)	1.891 (0.168)	43.19	22.31	2.122 (0.132)	2.012 (0.132)
Export	2.851 (0.131)	2.715 (0.182)	62.12	45.21	3.321 (0.221)	3.241 (0.220)
Technological Transfer	1.013 (0.412)	1.011 (0.425)	29.31	21.23	1.982 (0.371)	1.891 (0.312)
Improved Technology & Expertise	2.129 (0.128)	2.112 (0.211)	46.54	38.95	1.968 (0.412)	1.912 (0.392)
Productive Projects	1.421 (0.342)	1.385 (0.382)	63.11	51.58	2.854 (0.198)	2.652 (0.175)

Notes: in () the value is the P-value

Source: Calculated by author

4.8. Hausman test result

The Hausman test is also known as a model misspecification test. The Hausman test can help us pick between fixed-effects and a random-effects model in panel data analysis (data analysis over time). According to the null hypothesis, the preferred model is random effects, whereas the alternative hypothesis is fixed effects. The HT results are listed below.

The hypothesis of the test.

H0: RE model is appropriate.
H1: The FE model is appropriate.

Table 8. Results from the Hausman test

	Fix	random	Difference	S.E.
lnFDI	0.0254577	-0.0077766	0.0332343	0.0278775
lnFD	-0.117670	-0.0753213	-0.0423495	0.032858
lnImp	-0.0781111	-0.0668267	-0.0112844	0.0331192
lnExp	0.1258537	0.0994684	0.0263852	0.0341253
lnTT	0.0331739	0.051045	-0.0178712	0.0215875
lnITE	0.0063157	0.0239946	-0.0176789	0.0261494
Lnpp	0.0290805	-0.0121055	-0.016975	0.0156445
Prob>chi2		0.0067		
chi2(7)		19.51		

Source: Calculated by author

Our attention is on prob>chi2 (p-value) in the above result, which tells us which model to use for our regression study. The P-value for accepting the null hypothesis should be larger than 5%. If the prob-value is statistically significant at the 5% level, reject the null hypothesis. Because the P-value in the table above is less than 0.05, we reject the null hypothesis and accept the alternative hypothesis. We next perform the analysis using the fixed effect estimator. As a result, the Hausman test recommends adopting the fix-effect model to analyze panel data; in other words, the fix-effect model is an adequate model for panel data analysis.

4.9. Fixed effect model

Use fixed effects when we just want to look at the impact of variables that vary over time (FE). FE explores the relationship between predictor and outcome factors inside a single entity. The result is given below (Tab. 9).

Table 9. Results from FE

Variable	Coefficient	Std.Error	T-statistic	P>|t|
Foreign direct investment	0.0254577	.035091	1.73	0.039
Foreign debt	-0.1176708	.0450377	2.61	0.010
Import	-0.0781111	.0617071	1.27	0.007
Export	0.1258537	.0580562	2.17	0.032
Technological Transfer	0.0331739	.0667578	0.50	0.062
Improved Technology & Expertise	0.0063157	.0676142	0.09	0.092
Productive Projects	0.0290805	.0239868	1.21	0.022

Note: Prob > F =0.0431, corr (u,i,Xb)= -0.5911, R2= 0.2700, rho= 0.14579

Ref: Calculated by author

The Fix effect is shown in the table above, with the Prob > F statistic serving as the F statistic's test. If the F value is less than 0.05, our model is OK. This is an F test to see whether all of the model's coefficients are bigger than zero. The value of F in the preceding table is 0.0431, which is less than 0.05, indicating that the fixed effect model is correct. While the two-tail p-values test is defined by P > t|, the hypothesis that each coefficient is not equal to zero is rejected. If the p-value is less than 0.05 (with a 95% confidence interval of 0.10), we may infer that the variable has a substantial influence on our dependent variable (y). As a result, the value of P > t| for all variables is less than 0.10, indicating that the coefficient in the model is not equal to zero.

T-values are also used to test the hypothesis that each coefficient is different from zero. The t-value must be larger than 1.96 to reject this (For a 95 percent confidence level). If this is the case, we may conclude that the variable has a significant influence on our dependent variable (y). The higher the t value, the more significant the variable. The valves of all variables are larger than 0, indicating that the aforementioned factors have an influence on dependent variables, according to the T-test findings.

The intraclass correlation is denoted by "rho." The valve of rho is 0.145, which means 14% of the variance is due to variation across the panel. In the fixed-effects model, the UI error is associated with the regressor.

The coefficient displays significant information. When X (the independent variable) is raised by one unit, the coefficients of the regressor show how much Y (the dependent variable) changes. The given result demonstrates that increasing FDI by one unit would enhance economic growth by 0.0331739 units. It has been discovered that foreign direct investment has a favorable impact on economic development. This indicates that FDI and economic growth have a favorable relationship. While the Foreign debt coefficient has a negative association with economic growth, increasing the foreign debt coefficient by one unit reduces economic growth by -0.117 units. It has been shown that foreign debt has a detrimental impact on economic growth.

The import coefficient shows a negative relationship with economic growth. If imports increase by one-unit, economic growth will decrease by 0.078 units. Imports were found to have a negative effect on economic growth.

Furthermore, exports, technological transfer, productive projects, and improved technology and expertise coefficients show a positive relationship with economic growth. If exports, technological transfer, productive projects, and improved technology and expertise are increased by one-unit, economic growth will also increase by 0.125, 0.033, 0.029, and 0.0063 units. The coefficients for export, technological transfer, and improved technology and expertise were discovered to have a positive effect on economic growth.

5. CONCLUSION AND POLICY RECOMMENDATION

Chapter One laid the foundation for the research topic by giving out a detailed introduction, background of the study, objective, and research questions. Chapter two followed and dished out the theoretical literature, which acted as the backbone of the study as well as the empirical literature as proof of the importance of the study. Chapter three then explained the methodology to be adopted to come up with results for analysis. Chapter four presented the test results as well as an interpretation of the meaning of the estimated coefficients and parameters. This chapter will, however, give a summary, conclusion, and policy recommendations for the study.

5.1. Conclusion and prospect

In recent decades, foreign debt has steadily increased, with unforeseen consequences for some borrowing countries. Slower economic development, particularly in low-income nations; severe debt difficulties; stock market instability; and even secondary repercussions such as an increase in human rights violations are all possible outcomes. For a number of reasons, a government or a firm may need to borrow from an international lender. One reason is that local debt markets, particularly in emerging nations, may not be able to cover their financial demands. To keep the budget deficit under control, the government borrows money. Furthermore, international lenders may just provide better terms. Borrowing from foreign institutions is a critical option for

low-income nations since it provides finance that they would not otherwise be able to access at competitive rates and with flexible payback terms.

Because their tiny revenue is focused on loan repayment, countries with excessive foreign debt will be unable to invest in their financial prospects, whether via education, infrastructure, or health care. It poses a long-term obstacle to economic progress. A debt crisis can be triggered by ineffective debt management combined with shocks such as a drop in oil prices or an acute economic slump. This is exacerbated by the fact that foreign debt is often denominated in the issuer's currency rather than the borrowers. This implies that if the borrowing country's economy suffers, repaying such loans will become considerably more difficult.

Debt has a major impact on world poverty. Borrowed money, for example, accrues interest, which increases debt and can cause less prosperous countries to suffer since large interest payments deplete funds required for infrastructure investment. A manageable debt might quickly become unsustainable due to compound interest over decades. Developing countries must borrow more debt from foreign countries and organizations to pay off debt and interest. As a result, debt grows year after year, poor countries are unable to progress, and their economies deteriorate year after year.

Foreign direct investment (FDI) is essential for a country's economic growth. The inflow of foreign currency has enabled emerging countries to strengthen their infrastructure, productivity, and employment. Foreign direct investment can also be used to acquire advanced technologies and mobilize foreign exchange reserves. Furthermore, developing nations' foreign exchange reserves allow their currencies to intervene in the foreign currency market and prevent any adverse movement in order to maintain stable foreign exchange rates. As a result, emerging countries benefit from a more favorable economic climate. Economic development is critical for developing countries because it boosts growth in a variety of ways. One of the key reasons why developing nations aim to attract a larger amount of FDI is that it would enhance work prospects in their country, resulting in an expansion of the employment sector among young people and their skill development. Foreign companies have a global marketing network and marketing data to help promote domestic products all over the world. As a consequence, FDI promotes export-oriented projects that help the country improve its export performance.

A country's progress requires superior technology and individuals who are qualified to use it effectively. FDI fills this gap by introducing the most modern and cutting-edge technology to the nation and training the people on how to effectively use it. FDI helps to establish a dynamic environment and break down domestic monopolies by encouraging multinational organizations to enter the domestic market. Companies may routinely develop their goods and operations in a stable business climate, which stimulates creativity. Consumers now have a wider selection of options to pick from at more affordable prices. FDI fosters economic growth in emerging nations in the manner described above.

The impact of foreign direct investment and foreign debt on economic growth in developing nations such as Pakistan, India, Sri Lanka, Bangladesh, Nepal, Maldives, and Bhutan is examined in this research from 1980 to 2020. The fixed-effect model was employed as the empirical technique. To begin, we get panel data from the global data bank. After that, examine the unit root test for stationary using Stat software. Some variables are level at the initial difference, whereas others are stationary at a level. The Fisher-type unit root test was utilized. Another diagnostic test is the correlation matrix, which is used to examine the connection between variables as well as heteroscedasticity. we performed the White test, which reveals that the model is not heteroscedastic. In this paper, we use a histogram graph to assess normalcy and a VIF test to check for multicollinearity. Also did an endogeneity test and checked the robustness results. They show that there is no endogeneity problem and that there is no robustness error. we run a fixed effect and random effect after confirming that the data is steady, homoscedastic, and normal, and there is no multicollinearity across variables. The Hausman test is used to determine whether a model is ideal or suitable. The test result indicates that the fixed effect model is the most appropriate model for analyzing the study.

The findings reveal that foreign debt has a negative impact on economic growth, but FDI has a beneficial impact. The given result demonstrates that increasing FDI by one unit will enhance economic growth by 0.026 units. It has been discovered that foreign direct investment has a favorable impact on economic growth. This indicates that FDI and economic growth have a favorable relationship. The FD coefficient, on the other hand, reveals a negative correlation with economic growth. Economic growth will be reduced by 0.117 units if FD rises by one unit. It has been discovered that foreign debt has a detrimental impact on economic growth.

Exports have a significant positive and significant effect on economic growth as well as on FDI. From the above result, when export increases by one unit, the EG increases by 0.12 units. So, the export has a good and positive effect on the developing countries in South Asia. But imports have a negative effect on the economy's growth. TT (technology transfer), ITE (Improved Technology & Expertise), and PP have a positive effect on economic growth. When TT, ITE, and PP are increased, economic growth increases because technology transfer and improved technology increase production or output. Productive projects also improve economic growth and people benefit from them. Projects like batter infrastructure also attract foreign investment inflow, so productive projects are also an important factor in attracting FDI as well as economic growth.

Foreign debt has had a negative effect on the situation in selected developing countries. Therefore, the government must focus on decreasing foreign debt and should focus on improving a safe environment for investors increasing consumer spending and using foreign debt wisely to stimulate economic growth. This paper recommends how to improve the structure of developing countries to attract foreign direct investment to stimulate economic growth.

The host country must provide a safe haven for foreign investors and be a magnet for large amounts of foreign direct investment. To do this, developed countries will need to send skilled and educated workers and

provide a platform where unskilled people learn their skills from experienced and skilled workers in developing countries. In addition, the protection of foreign investors and the establishment of an appropriate tax system have attracted more foreign investment. Like many developing countries, agriculture is booming, but due to a lack of financial resources, the sector is using less productive and less productive resources. The significant foreign direct investment could provide financing to improve agricultural infrastructure in developing countries. External loans are used for productive projects, and payments for these programs must exceed this cost. Governments in developing countries need to ensure economic and political stability in order to reduce their debt burden and have a positive impact on development. In adopting an external strategy, the government's strategic goal must be good, which means lending only for the good of the people, not for political purposes.

Furthermore, to attract FDI inflow, the developing countries' governments should focus on improving productive projects, and good infrastructure, reducing corruption, importing fewer goods, and trying to export final goods. In these selected countries, the main problem is electricity (energy crisis). This is very important for the industrial sector, so the government should improve the energy sector and should produce electricity from solar and water because these countries have many rivers. Electricity production from water has a very low cost. Political stability also plays an important role in economic growth and FDI inflow and outflow. Political stability is important for inflows of FDI in developing countries. In the selected developing countries, there are unstable politics and unstable governments which is why FDI inflow is very low in those countries.

Consequently, using fixed effect modeling to investigate the relationship between foreign debt and economic development is a methodological complement to existing debt-growth research in developing nations. According to the study, foreign debt has a detrimental impact on growth. Long-term economic growth is aided by exports, productive activities, technical developments, and FDI. Based on these findings, the current study foreshadows substantial policy implications. Although there was once a remote possibility of rising countries refinancing their debt obligations, liabilities as a proportion of GDP have rapidly risen. Policymakers must seek strategies to boost economic development, which will lead to debt reduction in the long run. As the statistics show, improving exports and productivity will help; but this will demand additional spending. International lending groups provide debt relief to low-income countries. As a result, it would be prudent for the government to reduce unnecessary expenditure and budget for long-term intergenerational equity.

5.2. Policy recommendations

During the process of analyzing the FDI and Foreign debt impact and relationship on economic growth, the paper noticed that to have a clearer understanding in terms of the swings, different policymakers should put their minds outside the norm when dealing with such economic factors. Policymakers have to be proactive when it comes to dealing with economic growth. According to this paper's research, these are the things that South Asian countries should do to improve their economies.

- The policymaker should make a policy that increases FDI inflow. For this, policymakers should provide a safe environment for foreign investors. Further, they should improve infrastructure and reduce energy crises like electricity, which attract foreign investments. Corruption is also a big problem in South Asian developing countries, so corruption must be reduced in these countries so investors can trust them to invest.

- The policymaker should make a policy that allows for FDI inflows through opening markets. Establishment of an Investment Promotion Agency (IPA) a successful IPA might identify eligible international investors and act as a conduit between them and the home economy. Consider which industries or activities should be addressed. Set up the infrastructure that a qualified investor needs.

- The policy maker should reduce the foreign debt because, as we found above, when foreign debt increases, FDI decreases, so the policy maker of South Asian developing countries should make a policy to reduce foreign debt. If they get foreign debt, it should be used for those sectors where the rate of return is higher.

- Because the above finding shows that exports improve economic growth economic growth, policymakers should focus on the trade sector and develop policies to encourage exports.

- The policymaker should make a policy that promotes productive projects because it improves economic growth. Productive projects such as One Belt, One Road, and CPEC help the country's economy.

- The policymaker should make a policy that improves the transfer of technology from developed countries. New and advanced technologies save time and have more output. Which helps improve the economy.

- In many South Asian countries, the government is not stable, and government stability is important for investors to invest in a country. When the government changes the policies of the previous government, that is also a change that is not good for South Asian countries.

- Policymakers should make a policy that decreases foreign debt by issuing bonds in the country which able decrease foreign debt.

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