# IMPACT OF FINANCIAL DEVELOPMENT AND FOREIGN DIRECT INVESTMENT ON THE ECONOMIC GROWTH OF SAARC MEMBER COUNTRIES: A SEGREGATED APPROACH

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**Abstract**
*This study investigates the impact of Financial Development (FD) and Foreign Direct Investment (FDI) on the Economic Growth (EG) of SAARC nations using panel data from 1995 to 2023. The data was collected from World Development Indicators. For data analysis, panel unit root tests, cointegration tests, panel Autoregressive Distributed Lag (ARDL) model and Granger causality tests were applied. The panel ARDL long-run estimates show that the variables employment rate, GCF, FDI, FD, and human capital are positively associated with the EG in SAARC countries whereas, the inflation rate is negatively associated with the EG in SAARC countries. The influence of employment rate, GCF, FDI, human capital, and inflation rate is found to be statistically significant. It implies that FDI and FD are imperative to improve the EG of SAARC countries. Therefore, the study suggests that FDI inflows and financial sector development should be encouraged to improve the economic growth of SAARC countries.*

## 1    Introduction

EG targets are settled by the world nations looking onto their economic potential. As a result of increased EG, nations create a multitude of unique plans and policies aimed at promoting social welfare and long-term economic development. EG is influenced by a wide range of macroeconomic factors like; technology, human capital, physical capital, and so forth. FDI is considered a critical element of EG and the process of financial globalization due to the belief that it can provide not only the much-needed additional foreign capital, but also new and improved managerial and marketing skills, new and improved technology and know-how, and horizontal and vertical knowledge spillovers through backward or forward linkage with local firms (Javorcik, 2004; Alfaro, 2017).

It is becoming more and more frequent for developing nations to benefit from FDI as a tool for EG and strengthening (Muhammad, 2007). The most hopeful effects of FDI entry include higher gross output, more job opportunities, higher export outflows, and the exchange of technological advances between countries and investors (Gudaro et al., 2010). Employment, for instance, increases a person's income, which is then instantly incorporated into GDP. This also applies to exports. However, the transfer of technology, information, and skill through

licensing, job training, and imitation are also considered indirect effects of FDI on GDP.

The definition of FD is the advancement of the financial system in terms of efficiency, quantity, and quality. It can be attributed to the expansion, accessibility, and efficiency of the financial sector

The theoretical justification of the relationship between FD and economic expansion is established by Schumpeter's (1911) work. He further demonstrates that a resilient financial system encourages the transfer of resources from less productive to more productive industries, which in turn accelerates the development of technological advancements.

Empirics, however, indicate that FDI starts to impact EG as soon as a host nation crosses a certain level of FD and that this impact grows as FD increases (Azman-Saini & Law, 2010).

It is commonly acknowledged that FDI and FD play a significant role in determining EG. FD facilitates the allocation of resources to productive sectors, increases capital access, and improves the efficiency of financial intermediation. FDI, on the other hand, provides access to global markets, technology, and managerial know-how in addition to finance. Nonetheless, there is still a lack of research and understanding regarding the contribution of FD and FDI to economic progress in the SAARC region. The financial growth of the SAARC nations varies, with some having more developed financial infrastructures than others. This discrepancy raises the question of whether FD influences the regional EG is consistent. While some SAARC nations see high levels of FDI, others have difficulty luring in outside capital. The region's unequal FDI distribution points to possible obstacles that should be found and removed. The interplay between FD and FDI and their combined impact on EG varies depending on the nation. It is vital to know if underdeveloped financial systems obstruct the advantages of FDI or if FD increases the beneficial effects of FDI on EG. Therefore, this study is initiated to investigate the influence of FD and FDI on the EG of SAARC countries.

The novelty of this study is that it's an attempt to allocated the time series data of the SAARC countries to know the empirical impact of FDI and FD in segregation on the EG. The study is organized in five sections. Where, Sections 1 and Section 2 are bestowed on the Introduction and Literature Review. Whereas, Section 3 is allocated for the Methodological Explanations. And, Section 4 and Section 5 are known for the Results and Discussions and Conclusions and Policy Recommendations.

## 2      Literature Review

Sghaier (2023) examined the relationship between FD, trade openness, and EG in North African nations using data from 1991 to 2015. The study used the generalized method of moment (GMM) for data analysis. The study found a strong positive relationship between trade openness and EG. According to the study, trade openness seems to be enhancing FD and has a stronger impact when the FD variable is present.

Taddese and Abebaw (2023) investigated the association between EG and the development of the financial sector in 25 sub-Saharan African nations between 2010 and 2017. GMM estimate was utilized in the study to analyze the data. The study employed return to assets, commercial bank branch per 100,000 adult population, and credit provided to the private sector per GDP as proxies and metrics for the depth, accessibility, and efficiency of the financial sector, respectively. The findings showed that the depth, accessibility, and efficiency of the financial sector have a favorable and significant impact on the EG of these nations. As a result, it was advised that the relevant authorities take note of the necessity of increasing the depth of financial institutions by extending more credit to the private sector.

Abbas et al. (2022) used data from 44 nations between 1995 and 2018 to examine the connections between FD and EG. The study used the panel ARDL model for data analysis. Nguyen et al. (2022) investigated the relationship between growth and FD in developing economies using data from 1980 to 2020. The DCCE and causality tests were employed in this study. The findings showed that, over time, FD assists to improve EG. The outcomes also demonstrated that there was a positive and linear association between FD and EG.

Nguyen and Pham (2021) explored the contribution of FD to EG. The analysis employed the GMM method for data estimation and used data from five Asian developing economies spanning the years 1990 to 2020. The findings demonstrated that, although the link appears to be inverted U-shaped, the three FD metrics were substantial predictors of EG in transitional economies. Kassie (2021) investigated the influence of FD on EG of African nations using a panel dataset covering 35 African nations from 1985 to 2018. The study used GMM estimation for data analysis.

Ekanayake and Thaver (2021) explored the association between FD and EG in emerging nations using panel data from 138 developing nations between 1980 and 2018. The study used the FMOLS model for data analysis. The study's findings demonstrated a clear connection between FD and EG in developing nations. The positive and substantial interaction term between the finance and institutional quality indicator suggests that the country's level of institutional quality influences the FD's beneficial effects.

Moving on to the FDI related empirics, Awan and Waqas (2023) determined the linkage between EG and FDI in the instance of Pakistan using yearly data from 1973 to 2021. The GDP was the dependent variable, while the three independent variables were trade, inflation and FDI. Both short- and long-term relationships are examined by the Johansen cointegration approach. The results indicated that trade and FDI have a positive influence on economic expansion, but inflation has a negative correlation with GDP.

Azizov et al. (2023) examined the effects of FDI on Turkey's GDP between 1990 and 2021. The results indicated that there was a significant and optimistic link between FDI and GDP. The variables exchange rate and FDI and GDP have a long-term integrative connection. This implies that a one percent increase in FDI causes a 0.35% rise in GDP, provided all other factors stay the same.

Osei and Kim (2020) discovered the impact of increased FD on the growth-promoting effects of FDI on GDP. The study reexamined the potential nonlinearity between finance, FDI and growth using data of 62 middle- and high-income countries for the period of 1987 to 2016. The study supported the hypothesis that FDI endorses growth; however, the growth impact of FDI was lost when the FD roses above 95.6 percent.

Ramzan et al. (2009) examined the association between EG and FDI in the context of 70 developing nations. In this study, the panel dataset covering the years 1980 to 2015 was used. Net FDI inflows, the labor force growth rate, gross capital formation, FD, inflation as assessed by the GDP deflator, and human capital were the exogenous factors included in the model, and the GDP growth rate was used to measure the dependent variable, which was EG. The outcomes exhibited that FDI had a favorable influence on EG if a nation's human capital surpassed a certain level.

Phuyal and Sunuwar (2018) examined the association between EG and FDI. Examining how FDI affects Nepal's employment and EG was the primary focus of this examination. Data from the years 2007 to 2016 was used to achieve this goal. The investigation's findings demonstrated a strong correlation between Nepal's GDP development and FDI inflows into the travel and agricultural sectors.

Siddique et al. (2017) explored the correlation between FDI and EG utilizing data from Pakistan that covered the years 1980 to 2016. The outcomes were estimated using the ARDL econometric approach. EG was the dependent variable, whereas FDI, HC and physical capital are the exogenous variables. The results showed that trade, physical capital, HC and FDI all had a favorable effect on EG.

The literature gap is evident in context of SAARC. The segregated analyses of FDI and FE in line with EG is a stance of this study to fill a literature gap. Relying on the literature review, following conceptual framework is developed which is shown in Figure 1.
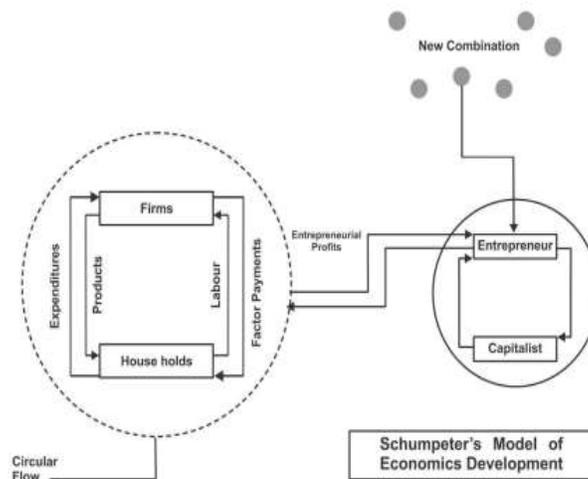
**Figure 1**

**Conceptual Framework**

**3        Methodological Explanations**

This study analyzes relationship between FD and FDI In EG of SAARC nations which include; Bangladesh, Nepal, Pakistan, India, Sri Lanka, Bhutan and Maldives that availability of data has been used for the study purpose. In this study the data from 1995 to 2023 was to be used. Data together from WDI dataset.

The classical growth model infers that labor and capital are vital sources of production in an economy. The production function suggested by classical is given as follows:

Output = f (Labor, Capital)

$$(4.1)$$

In addition, FDI and FD are imperative to boost the economic growth of any country. Therefore, this study adds FDI and FD to the classical growth model. Similarly, the control variables incorporated in a model are inflation rate and human capital. The model's functional form is given as under:

Output = f (Labor, Capital, FDI, FD, Human Capital, Inflation Rate)

The model's econometric form is as follows:

$$EG_{it} = \beta_o + \beta_1 ER_{it} + \beta_2 GCF_{it} + \beta_3 FDI_{it} + \beta_4 FD_{it} + \beta_5 INF_{it} +$$

$$(4.2)$$

Where;

EG = Economic growth
ER = Employment rate
FD = FD

GCF = Capital
FDI = FDI
INF = Inflation rate
HC = Human Capital
$u_{it}$ = Error term

**Table 1**

**Variables' Descriptions**

| Variables | Descriptions | |
|---|---|---|
| **Dependent Variable** | | |
| EG | Economic Growth | GDP growth rate (Annual) |
| **Independent Variables** | | |
| ER | Employment Rate | |
| GCF | Gross Capital Formation | Percentage of GDP |
| FDI | FDI Inflows | Percentage of GDP |

| FD | FD | Domestic credit to private sector (percent of GDP) |
|---|---|---|
| HC | Human Capital | Secondary School Enrolment (Gross) |
| INF | Inflation rate | CPI (Annual) |

Pesaran et al. (1999) initially introduced the autoregressive distributed lag (ARDL) model, which addresses singular cointegration. The ARDL approach has the advantage of not necessitating that all variables be I (1), as the Johansen framework does. Additionally, it remains applicable if the set contains I(0) and I(1) variables. In contrast to other methods of co-integration, the bounds test procedure has the following econometric advantages:

➢ The model is predicated on the assumption that all variables are endogenous.

➢ The bounds test procedure for cointegration is being implemented regardless of the variable's integration order. Integrated first-order I (1) or I (0) may exist.

➢ The

➢ model's short-run and long-run coefficients are estimated concurrently.

The bound test is conducted to know the long run relationship. In this case, the Wald Test F statistic is calculated. The conclusions are given below:

• If the Wald statistic exceeds the upper bound, it indicates strong evidence of cointegration.

• If it falls below the lower bound, it suggests no cointegration.

• If the statistic falls between the bounds, the results are inconclusive.

The panel ARDL long-run forms of the model is given as follows:

$$\Delta EG_t = \alpha + \beta_1 EG_{t-1} + \beta_2 ER_{t-1} + \beta_3 GCF_{t-1} + \beta_4 FDI_{t-1} + \beta_5 FD_{t-1} + \beta_6 HC_{t-1} + \beta_7 INF_{t-1}$$
$$+ \sum_{i=1}^{a_1} \delta_1 \Delta EG_{t-i} + \sum_{i=0}^{a_2} \delta_2 \Delta ER_{t-i} + \sum_{i=0}^{a_3} \delta_3 \Delta GCF_{t-i} + \sum_{i=0}^{a_4} \delta_4 \Delta FDI_{t-i} + \sum_{i=0}^{a_5} \delta_5 \Delta FD_{t-i} + \sum_{i=0}^{a_6} \delta_6 \Delta HC_{t-i}$$
$$+ \sum_{i=0}^{a_7} \delta_7 \Delta INF_{t-i} + \varepsilon_t$$

Similarly, the ARDL short run form of the model is given below:

$$\Delta EG_t = \alpha + \sum_{i=1}^{a_1} \lambda_1 \Delta EG_{t-i} + \sum_{i=1}^{a_2} \lambda_2 \Delta ER_{t-i} + \sum_{i=0}^{a_3} \lambda_3 \Delta GCF_{t-i} + \sum_{i=0}^{a_4} \lambda_4 \Delta FDI_{t-i} + \sum_{i=0}^{a_5} \lambda_5 \Delta FD_{t-i}$$
$$+ \sum_{i=0}^{a_6} \lambda_6 \Delta HC_{t-i} + \sum_{i=0}^{a_7} \lambda_7 \Delta INF_{t-i} + \omega ECM_{t-1} + \varepsilon_t$$

## 4    Results & Discussions

Descriptive statistics are given in Table 2. Wider dispersions are recorded at all the variables except EG, FDI, and INF. Most of the series are positively skewed with the exception of EG and INF. All the series except HC are leptokurtic with wide tail and sharp peak.

**Table 2**
**Descriptive Estimates**

| Variables | Mean | Maximum | Minimum | S.D. | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| EG | 5.081 | 26.111 | -33.500 | 4.737 | -3.092 | 29.579 |
| ER | 41.390 | 79.524 | 17.458 | 15.263 | 1.247 | 3.775 |
| GCF | 29.505 | 69.485 | 9.264 | 11.939 | 1.188 | 4.478 |
| FD | 34.069 | 88.440 | 6.961 | 14.865 | 0.753 | 3.562 |
| FDI | 1.788 | 17.138 | -0.676 | 2.713 | 3.103 | 13.576 |
| HC | 58.822 | 100.943 | 18.524 | 22.347 | 0.244 | 2.187 |
| INF | 6.320 | 22.565 | -18.109 | 4.167 | -0.499 | 9.852 |

Correlation analyses is given in Table 3. The results show relatively lesser than moderate correlation among the series.

Table 3
**Correlation Estimates**

| Correlation | EG | ER | GCF | FD | FDI | HC | INF |
|---|---|---|---|---|---|---|---|
| EG | 1.000 | | | | | | |
| ER | -0.004 | 1.000 | | | | | |
| GCF | 0.101 | -0.053 | 1.000 | | | | |
| FD | -0.146 | -0.060 | 0.287 | 1.000 | | | |
| FDI | -0.052 | -0.221 | 0.091 | 0.099 | 1.000 | | |
| HC | 0.100 | -0.418 | 0.275 | 0.575 | 0.143 | 1.000 | |
| INF | 0.030 | -0.016 | -0.191 | 0.059 | -0.149 | -0.006 | 1.000 |

Various panel unit root tests are applied, including the ADF Fisher test, PP Fisher test, LLC, and IPS. Table 4 summarizes the outcomes of these assessments. The outcomes point out that EG, FDI and inflation are stationarity at I(0) although employment rate, gross capital formation, FD and HC are stationarity at the I(1). Consequently, it is determined that the panel ARDL model is well-suited for the long-term parameter estimation, as indicated by the mixed integration order.

Table 4
**Panel Unit Root Test Estimates**

| Variable | LLC | IPS | ADF | PP | LLC | IPS | ADF | PP | LLC | ADF | PP | Results |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EG | 2.612 | -2.981 | 35.346 | 39.706 | 4.818 | -1.331 | 24.308 | 26.283 | -2.259 | 26.055 | 33.906 | I(0) |
| | 0.996 | 0.001 | 0.001 | 0.000 | 1.000 | 0.092 | 0.042 | 0.024 | 0.012 | 0.026 | 0.002 | |
| ER | 2.858 | 4.471 | 7.884 | 1.726 | -0.081 | -0.029 | 12.339 | 5.833 | -3.813 | 31.032 | 42.772 | I(1) |
| | 0.998 | 1.000 | 0.895 | 1.000 | 0.468 | 0.488 | 0.579 | 0.971 | 0.000 | 0.006 | 0.000 | |
| GCF | -0.356 | -0.101 | 13.097 | 14.187 | 1.851 | 0.045 | 13.581 | 14.364 | 1.197 | 6.200 | 6.750 | I(1) |
| | 0.361 | 0.460 | 0.519 | 0.436 | 0.968 | 0.518 | 0.481 | 0.423 | 0.884 | 0.961 | 0.944 | |
| FD | 0.990 | 2.749 | 4.374 | 3.277 | 1.932 | 2.171 | 4.029 | 3.317 | 3.113 | 3.310 | 3.213 | I(1) |
| | 0.839 | 0.997 | 0.993 | 0.999 | 0.973 | 0.985 | 0.995 | 0.998 | 0.999 | 0.998 | 0.999 | |
| FDI | -1.409 | -2.546 | 33.376 | 41.484 | -0.816 | -1.926 | 27.351 | 40.691 | -1.483 | 18.264 | 26.021 | I(0) |
| | 0.079 | 0.005 | 0.003 | 0.000 | 0.207 | 0.027 | 0.017 | 0.000 | 0.069 | 0.195 | 0.026 | |
| INF | -2.762 | -2.605 | 27.901 | 47.809 | -1.537 | -0.781 | 15.787 | 33.463 | -2.713 | 23.965 | 31.684 | I(0) |
| | 0.003 | 0.005 | 0.015 | 0.000 | 0.062 | 0.217 | 0.327 | 0.003 | 0.003 | 0.046 | 0.004 | |
| HC | 0.976 | 3.903 | 2.171 | 3.802 | 0.507 | -0.116 | 13.015 | 11.274 | 3.677 | 0.402 | 0.193 | I(1) |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.836 | 1.000 | 1.000 | 0.997 | 0.694 | 0.454 | 0.525 | 0.664 | 1.000 | 1.000 | 1.000 |

For cointegration analysis, Pedroni and Kao cointegration tests are employed. Table 5 reports the outcomes of the cointegration tests. The outcomes of Pedroni cointegration tests exhibit that the Panel PP-Statistic and ADF-Statistic, Group PP-Statistic ADF-statistic tests have p-values less than 0.05 and indicate that the null hypothesis is rejected. Similarly, the Kao test also shows the p-values less than 0.05. Therefore, the findings indicate that there is a long-run cointegration exists between variables in both models.

**Table 5**
**Cointegration Test**

| Tests | Model $EG_{it} = \beta_o + \beta_1 ER_{it} + \beta_2 GCF_{it} + \beta_3 FDI_{it} + \beta_4 FD_{it} + \beta_5 INF_{it} + \beta_6 HC_{it} + u_{it}$ | |
|---|---|---|
| | **Statistic** | **Prob.** |
| Panel v-Statistic | -1.7451 | 0.9595 |
| Panel-rho-Statistic | 1.0662 | 0.8569 |
| Panel-PP-Statistic | -3.0383 | 0.0012 |
| Panel-ADF-Statistic | -2.3660 | 0.0460 |
| Group-rho-Statistic | 2.4152 | 0.9921 |
| Group-PP-Statistic | -4.9766 | 0.0000 |
| Group-ADF-Statistic | -2.8672 | 0.0102 |
| **ADF** | -5.2026 | 0.0000 |

Long run coefficient estimates are got through ARDL method. The results are given in Table 6.

**Table 6**
**Long-Run Results of Panel ARDL**

| DV: EG (GDP Growth Rate) | | | | |
|---|---|---|---|---|
| ARDL (1, 2, 2, 2, 2, 2, 2) | | | | |
| **Variables** | **Coefficient** | **S.E.** | **T-Stat.** | **Prob** |
| **ER** | 1.1917 | 0.1663 | 7.1636 | 0.0000 |
| **GCF** | 0.2745 | 0.1210 | 2.2683 | 0.0261 |
| **FDI** | 1.1920 | 0.3043 | 3.9164 | 0.0002 |
| **FD** | 0.0432 | 0.0374 | 1.1522 | 0.2528 |
| **INF** | -0.1779 | 0.0611 | -2.9087 | 0.0047 |
| **HC** | 0.2361 | 0.0330 | 7.1353 | 0.0000 |

The findings have shown that one unit increase in ER increases economic growth by 1.1917 units. Increase in employment favors the economic activity which in-turn lead to engage the economic growth. These outcomes suggest that an increase in employment enhances the income and living standard of the people. So, they can consume and invest it in goods and services and this can lead to improve the economic growth of the country. Asghar et al. (2024) and Shah et al. (2020) also support the classical proposition that there is a positive link between labor and EG.

It suggests that investment in physical assets like machinery and infrastructure supports the economy's overall growth. This is because capital formation fosters technical improvements,

increases employment, and improves productivity all of which are essential for long-term economic growth. Asghar et al. (2023), Shah et al. (2020) and Kanu and Ozurumba (2014) also found a similar association between GCF and economic growth.

The FDI's coefficient postulates that as it enhances by a unit the EG also leads to an increase of 1.1920 units. These results suggest that a country's EG is improved by the transfer of technology, an increase in gross fixed investment, and the enhancement of employment opportunities through FDI. Ciobanu (2021), Siddique et al. (2017), and Malik (2015) also establish an optimistic association between FDI and EG.

The $\beta$ of FD identifies that as it enhances by a unit the EG also leads to augment of 0.0432 units. It suggests that the innovative process of entrepreneurs is supported and aided by FD, which facilitates the mobilization of useful savings, the promotion of information, the improved utilization of resources with the assistance of finance, and the improvement of risk management. This effect may create a macroeconomic environment that is conducive to accelerated economic growth (Enisan & Olufisayo, 2009; Iram et al. 2024). These findings are also supported by Asghar et al. (2024), Jalil and Feridun (2011) and Greenwood et al. (2013).

The HC's $\beta$ states that as it enhances by a unit the EG also leads to an increase of 0.2361 units. These results infer that improvement in human capital of the country improves the skills, efficiency and specialization of labor. These factors are crucial to improve the productivity and output of the country. Asghar et al. (2024) and Shah et al. (2020) also found a positive link between HC and EG.

The INF's coefficient postulates that as it enhances by a unit the EG also leads to a decrease of -0.1779 units. These results point out that the confidence of individuals in money as a medium of exchange is diminished as a result of inflation, which in turn reduces savings, discourages investment, and impedes economic growth. Inflation's primary mechanism for impeding economic advancement is investment (Barro, 1995). Therefore, an elevated inflation rate is detrimental to economic expansion. A high inflation rate, poverty, unemployment, and inadequate welfare are all inextricably linked to an economy with insufficient growth (Aydin et al., 2016). These results are also found by Shah et al. (2020) and Azam and Khan (2022).

Short run coefficient estimates are published in Table 7.

Table 7
Short Run Estimation

| Variables | β | S.E. | T-Stat. | Prob. |
|---|---|---|---|---|
| ECT(-1) | -0.5328 | 0.1823 | -2.9216 | 0.0046 |
| D(ER) | 0.9416 | 1.0506 | 0.8962 | 0.3729 |
| D(GCF) | 0.1277 | 0.3621 | 0.3527 | 0.7252 |
| D(FDI) | 0.8682 | 0.4621 | 1.8787 | 0.0640 |
| D(FD) | -0.3666 | 0.1764 | -2.0779 | 0.0410 |
| D(HC) | 0.2538 | 0.1370 | 1.8516 | 0.0679 |
| D(INF) | 0.0642 | 0.0942 | 0.6820 | 0.4972 |
| C | -36.7683 | 16.7336 | -2.1972 | 0.0310 |

The results show that employment rate, inflation rate and gross capital formation are positively but insignificantly associated with EG in the short-run. Similarly, FDI and HC is found to be directly and significantly connected to the EG in the short-run. In contrast, the influence of FD on EG is negative and also statistically substantial in the short-run but it is positive but insignificant in the long-run. In addition, in the model of short-run, the ECM term is imperative to study. The outcomes display that the ECT(-1) is negative and statistically significant. It specifies that at the rate of 53.28 the

short-run errors are adjusted to move into long-run equilibrium.

To examine the causality analysis, panel Granger causality test is applied. For this purpose, firstly, optimal criteria of lag length are determined using LogL, LR, AIC, SC and HQ tests. The outcomes reported in Table 8 indicate that the LR, AIC and SC tests are significant at lag 3 while HQ suggests optimal lag length one. Based on the findings, it is concluded that the optimal lag length for the Granger causality test is three.

**Table 8**
**Estimate of the Lag-Length Criterion**

| Lag | LogL | LR | AIC | SC | HQ |
|---|---|---|---|---|---|
| 0 | -3949.827 | NA | 49.1531 | 49.2871 | 49.2075 |
| 1 | -2763.707 | 2254.364 | 35.0274 | 36.0992 | 35.4626* |
| 2 | -2697.388 | 120.2806 | 34.8122 | 36.8218 | 35.6282 |
| 3 | -2630.197 | 116.019* | 34.5863* | 37.5337* | 35.7830 |

Table 9 displays the Granger causality test estimates. The results show that one-way causality between employment rate and EG, one-way causality between GCF and EG, two-way causality between FD and EG, unidirectional causality between FDI and EG, unidirectional causality between human capital and EG and no causality between INF and EG.

**Table 9**
**Granger Causality Test (Lags 3)**

| H$_o$ | F | P-Value | Results |
|---|---|---|---|
| ER $\nrightarrow$ EG | 0.08776 | 0.9667 | Two-Way |
| EG $\nrightarrow$ ER | 3.28107 | 0.0226 | |
| GCF $\nrightarrow$ EG | 2.68946 | 0.0484 | Unidirectional |
| EG $\nrightarrow$ GCF | 0.72437 | 0.5389 | |
| FD $\nrightarrow$ EG | 3.21093 | 0.0247 | Bidirectional |
| EG $\nrightarrow$ FD | 2.21072 | 0.0891 | |
| FDI $\nrightarrow$ EG | 6.67238 | 0.0003 | Unidirectional |
| EG $\nrightarrow$ FDI | 0.99895 | 0.3951 | |
| INF $\nrightarrow$ EG | 0.99163 | 0.3985 | No-Causality |
| EG $\nrightarrow$ INF | 0.68883 | 0.5602 | |
| HC $\nrightarrow$ EG | 4.32327 | 0.0059 | Unidirectional |
| EG $\nrightarrow$ HC | 0.25931 | 0.8546 | |

## 5        Conclusion & Policy Recommendation

This study investigates the impact of FD and FDI on the economic growth of SAARC countries. For this purpose, the data from seven SAARC countries including Bhutan, Bangladesh, Nepal, Pakistan, Sri Lanka, Maldives and India are used in a study based on data availability. Data from 1995 to 2020 is used in the study. The data was collected from World Development Indicators.

The dependent variable used is economic growth whereas employment rate, gross capital formation, FDI, FD, Human capital and inflation rate are taken as independent variables.

The panel ARDL long-run estimates show that the variables employment rate, GCF, FDI, FD, and human capital are directly linked with the EG in SAARC countries while inflation adversely impacting the EG of SAARC countries. The

impact of employment rate, GCF, FDI, HC and INF are found to be significant. Similarly, the panel ARDL results of model also show that the coefficient of ECT (-1) term is negative and statistically significant and specifies that at the rate of 53.28 the short-run errors are adjusted to move into long-run equilibrium.

It implies that FDI and FD are imperative to improve the EG of SAARC countries. These results also point out that a country's economic growth is improved by the transfer of technology, an increase in gross fixed investment, and the enhancement of employment opportunities through FDI.

As a policy recommendation, it is need to create an environment which is friendly for FDI and FD related concerns so that the desired objectives of economic growth are achieved by the SAARC nations.

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