Impact of Tourism Growth and FDI on Economic Growth: Evidence from South Asian Countries

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ABSTRACT

Nowadays, economic growth has again gained global attention because of the uncertainty in global economic conditions and attracts the focus of regulators and recent research studies. In this scenario, this study examines the role of tourism growth and foreign direct investment (FDI) on the economic growth of South Asian countries. This study has used the interest rate and population growth as the control variables. The secondary data has been extracted from the world development indicators (WDI) from 2001 to 2020. The fixed effect model (FEM) and generalized method of moments (GMM) are run to test the linkage among the variables. The results expose that tourism growth, FDI, interest rate, and population growth have a positive and significant effect on the economic growth in South Asian countries. The results provide guidelines to the regulators and furnish policies regarding economic growth for tourism growth.

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1.   Introduction

The overall size of the economy and the strength of fiscal conditions are essential and significant components of a country's economic growth (Peprah & Adekoya, 2020). The competition among the countries in the world market has been increasing, and the government struggles to confront this competition bravely. The power and position of a country in the world market are based on the development of its economy. Moreover, the increase in the EG of a country enhances the supply of public goods, creates employment opportunities, reduces poverty, increases people's living standards and social well-being (Baloch et al., 2021; Pham & Vo, 2021). Economic growth is based on individual economic sectors and equity levels (Chien, Kamran, et al., 2021; Eggoh, Bangake, & Semedo, 2019). Tourism growth and FDI have a significant impact on the EG of a country. It is one of the economic sectors that not only contribute directly to national revenues but also leads to the development of all other economic sectors and has a significant share in economic growth (Chien, Pantamee, et al., 2021; Wang, Jiang, & Zhan, 2019). FDI refers to the purchase of interests in inland companies from foreign companies or individuals. The FDI enhances the companies' financial capacity and allows them to expand their business and overall production. This also supports other concerned enterprises and leads the economy towards growth (Nair, Arvin, Pradhan, & Bahmani, 2021; Nawaz, Seshadri, et al., 2021).

The focus of the study is on South Asian economies to analyze the role of tourism growth and FDI to achieve high economic growth. Pakistan, Bangladesh, India, Bhutan, Afghanistan, Maldives, Sri Lanka, and Nepal are selected for empirical analysis. Pakistan was a lower-middle-income economy with 207.68 million as per the 2017 national census and 299 billion nominal gross domestic products in 2021. With its unique cultures, people, and landscapes, Pakistan has drawn 90 million tourists, nearly double a decade ago. Pakistan is now ranked 130th in the world in terms of tourism income. In Pakistan, the average FDI was 158.45 USD million from 1997 to 2021with a high investment of 1262.90 USD Million in June of 2008 (Chien, Sadiq, Kamran, et al., 2021; Zhuang, Yang, Razzaq, & Khan, 2021). India is a developing economy with 1,40,00,00,000 as of 2021 and 3.049 trillion nominal GDP in 2021. Over the recent years, India has witnessed a steady flow of FDI. Tourism generated US$200 billion, contributing 9.4% of the country's GDP in 2017 and supporting 41.622 million jobs that represent 8% of its total employment. The sector is expected to grow at an annual rate of 6.9% to US$430 billion by 2028 (Meo, Sabir, Arain, & Nazar, 2020; Shair et al., 2021). Afghanistan is a developing country with 39,767,414 in 2021 and a GDP of $19.81 billion estimated in 2021. In 1977, tourism growth was at its peak, and now about 20,000 foreign tourists visit Afghanistan (Shaheen et al., 2019). Sri Lanka has 21,803,000 population in 2019 and $80.7 billion GDP in 2020. In 2020 tourist arrivals fell to 507,704 from 1,913,702 in 2019. In 2020, FDI fell to $548 million from $793 million in 2019 (Anser, Adeleye, Tabash, & Tiwari, 2021). Bangladesh has a 162,650,853 population and a GDP of $409 billion in 2021. According to 2014 facts, 125,000 tourists visited Bangladesh (Aslan, Altinoz, & Özsolak, 2021; Chien, Sadiq, Nawaz, et al., 2021).

The selected South Asian countries are developing ones with slow growth rates and are almost unable to touch the growth line of a developed country. Consequently, these countries face neglect, high poverty, unemployment, low living standards, and weak social development (Balsalobre-Lorente & Leitão, 2020; Li et al., 2021). Keeping in mind, the current study focuses on the driving factors of EG. The study's objective is to identify the association between the EG of the country and tourism growth, interest rate, FDI, and population growth. Although the study takes the factors from the literature to determine their influences on the country's economic growth, it is an excellent addition to the literature. Because in the previous study, manufacturing sectors are the focal point for analyzing the economic growth, whereas the current study gives attention to the service sector of the economies to determine their growth.

Moreover, in the previous literature, the variables like tourism growth, interest rate, FDI, and population growth have been analyzed to determine the EG at different time periods. The current study combines tourism growth, interest rate, FDI, and population growth at the same period to analyze economic growth. Third, this study contributes to the literature by selecting South Asian countries as a sample of research to find out the relationships between economic growth and tourism growth, interest rate, FDI, and population growth.

This paper is composed of several parts. The second part, after the introduction, looks at the pieces of evidence about the influences of tourism growth, interest rate, FDI, and population growth on economic growth from different studies. The third part highlights the data collection process on the research subject and analyzes the validity of the concerned relationships. In the fourth part, the results are compared with the findings of other studies. In the end, study implications and conclusions, along with future directions, are given.

2.   Literature Review

It is the rate of economic growth of a country, which ranks it among the countries and determines the level of social well-being and people's living standard. All the enterprises, whether they belong to any economic sectors and different economic factors, contribute to the country's GDP (Mohsin, Kamran, Nawaz, Hussain, & Dahri, 2021; Sokhanvar, 2019). By now, many authors have addressed the influences of tourism growth, interest rate, FDI, and population

growth on economic growth. This study uses previous studies' help and determines the hypotheses regarding the correlation among the factors mentioned earlier.

Tourism is the primary source of national revenues, geographical development, and development in other economic sectors; thus, it is a great contributor to the EG of a country (Nawaz, Hussain, et al., 2021; Roudi, Arasli, & Akadiri, 2019). Through a research survey, Brida, Gómez, and Segarra (2020) examine the tourism evolution and EG for 80 countries for the period 1995-2016. They took per capita GDP growth and the arrival of international tourists to measure growth rate and tourism growth, respectively. A Hierarchical Tree and a Minimal Spanning Tree were formed to detect the countries with similar effectiveness. Two groups of countries have low and high tourism performance. The study highlights that the countries with low performance in the tourism sector tend to increase the EG of the country, while the low performance keeps the economic growth low. The study conducted by Saint Akadiri, Eluwole, Akadiri, and Avci (2020), identifies causality among tourism, geopolitical risk, and EG of a country with evidence from Turkey, a tourism-dependent economy. Toda and Yamamoto (1995) applied causality tests to find the nature of the relationship among tourism, geopolitical risk, and economic growth. This study examines the interrelationship among understudy variables in the light of quarterly based data from 1985Q1-2017Q4. It finds a negative causality from geopolitical risk to tourism and EG and positive causality from tourism to EG both in the short-term and long term.

The interest rate is a significant determiner of tourism as mostly the business of the tourism firms is based on borrowed money, and thus, the interest rate affects the economic growth. The low interest rate raises the borrowing capacity of tourism firms, assists in developing tourism services, and contributes to developing the country's GDP (Antonakakis, Dragouni, Eeckels, & Filis, 2019). The study of Santamaria and Filis (2019) identifies the relationship between tourism and EG along with the change in the interest rate of loans for Spain. The main focus of the study is on the Spanish economy, and the monthly tourist arrivals information was taken from 1998 to 2017 from key origin countries across the world. The interest rate is used for analyzing the influences of tourism development on EG. The study implies that the change in the interest rates within a country is linked with tourism development and EG. When the interest rate is low, more funds can be acquired for qualitative and quantitative improvement in the tourism services, and the resultant increase in tourism activities enhances the country's national revenues and total production. Nunkoo, Seetanah, Jaffur, Moraghen, and Sannassee (2020) workout emphasizes precisely integrating the relationship among interest rate, tourism, and economic growth. In the workout, a rigorous meta-regression analysis was made based on the information taken from 113 articles that had dealt with the integration among interest rate, tourism, and EG. The results show that tourism positively influences EG if the interest rate is persistently low.

Many foreign individuals or companies are interested in domestic companies or any specific economic activities because of the expected outcomes and desire to invest their excessive resources (Sun et al., 2020). FDI promotes financial resources within the country, and assists carry on developmental and innovative activities to keep pace with the increasing requirements in marketing. A high rate of FDI raises the economy's position in the international market (Ahmad, Draz, & Yang, 2018; Zhuang, Yang, Chupradit, et al., 2021). A study by Alvarado, Iniguez, and Ponce (2017) investigates the impacts of FDI on EG with evidence from 19 Latin American states. With panel data econometrics, the study concluded that the relationship of FDI on economic cannot be significant in all cases. According to the survey, FDI significantly influences GDP in high-income countries. In lower-middle-income countries, the impact of FDI on GDP may be harmful and significant. Research conducted by Makiela and Ouattara (2018), examines the role of FDI in achieving high EG that was a dilemma to the investigators and authors. Both developing and developing countries were the sample of this research, and the acquired data belongs to the period of 1970-2007. The research findings reveal that FDI affects EG through the acquisition of inputs but not through the total factor productivity

increase. The results are based on the evidence from developing countries that FDI, along with other factors, increases the total productivity in an economy.

Population growth has a considerable link with the EG of a country. Bucci, Eraydın conducted a study addressing the controversial association between population growth and EG. This article was drawn on historical information covering the past 200 years, taken from the population growth rate, per capita output growth, and overall economic development studies. According to the results of this study, the increase in the population leading to capital accumulation is the solution to these problems. Whereas, in low-income countries, high population growth can slow down the economic growth if not managed adequately for generating human capital. In an academic article, Azam, Khan, and Khan (2020) present their opinions to test the Malthusian and Kremer approaches by analyzing the nexus among population and EG in India. The study concluded that population growth positively impacts EG, which supports the population growth-driven EG assumption indicating population growth triggers economic development. The study findings confirm the applicability of Kremer's theory.

3.   Data and Methodology

The study examines the role of tourism growth, FDI, interest rate, and population growth on the EG of the South Asian countries named Pakistan, Bangladesh, India, Bhutan, Afghanistan, Maldives, Sri Lanka, and Nepal. The article has used the secondary data extracted from the WDI from 2001 to 2020. The current study has run the FEM and GMM to test the linkage among understudy constructs. The study equation is given as below:

$$EG_{it} = \alpha_0 + \beta_1 TG_{it} + \beta_2 IR_{it} + \beta_3 FDI_{it} + \beta_4 PG_{it} + e_{it} \tag{1}$$

Where EG = Economic Growth, i = Country, t = Time Period, TG = Tourism Growth, IR = Interest Rate, FDI = Foreign Direct Investment, PG = Population Growth

The study has taken the economic growth as the predictive construct measured as the GDP growth (annual percentage). In addition, tourism growth calculated as the international tourism receipts (% of total exports) and FDI measured as the FDI net inflow (% of GDP) are used as the independent variables. Finally, it has also been used to control the interest rate and population growth. Table 1 shows the measurements of understudy variables.

Table No. 1
Variables with measurements

S#	Variables	Measurement	Sources
01	Economic Growth	GDP growth (annual percentage)	WDI
02	Tourism Growth	International tourism receipts (% of total exports)	WDI
03	Interest Rate	Interest rate (%)	WDI
04	Foreign Direct Investment	Net inflow (% of GDP)	WDI
05	Population Growth	Population growth (annual percentage)	WDI

The study has also executed descriptive statistics like mean and standard deviation. Moreover, it also provides the minimum and maximum values and shows the total observations. In addition, a correlation matrix has also been used to indicate the nexus among the variables. Moreover, variance inflation factor (VIF) is also executed to check the multicollinearity. The VIF equations are mentioned below:

$R^2{}_Y \implies \quad Y_{it} = \alpha_0 + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + e_{it}$ (2)

$j = R_Y^2, R_{X1}^2, R_{X2}^2, R_{X3}^2, R_{X4}^2, R_{X5}^2$ (3)

$Tolrance = 1 - R_j^2 \qquad VIF = \frac{1}{Tolerance}$ (4)

The appropriateness of the model has been selected using the Hausman test. If the probability value is lower than 0.05, then rejecting null hypotheses about the random model is appropriate and vice versa. The Hausman test equation is given as under:

$$H = (b_1 - b_0)(Var(b_0) - Var(b_1))(b_1 - b_0) \tag{5}$$

The results of the Hausman test indicated that the FEM is appropriate. In FEM, the "model parameters" are fixed and control all "time-invariant" omitted constructs. FEM can estimate the number of "additional parameters." The estimation equation for FEM is given as below:

$$Y_{it} = \beta_{1i} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + u_{it} \tag{6}$$

The FEM equation mentioned above shows subscript (i) that indicates "individual country" that makes a difference in countries regarding their features. The FEM equation using understudy constructs is given as below:

$$EG_{it} = \beta_{1i} + \beta_2 TG_{it} + \beta_3 FDI_{it} + \beta_4 IR_{it} + \beta_5 PG_{it} + u_{it} \tag{7}$$

In addition, the article has also selected the GMM to analyze the linkage among variables. GMM model has the characteristic to control the "heterogeneity" and "auto-correlation" issues. The estimation equation for the GMM model is given as under:

$$Y_{it} = \delta Y_{i,t-1} + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + u_{it} + \varepsilon_{it} \tag{8}$$

The GMM model is considered the best estimation model when the data have "autocorrelation along with heteroscedasticity." The GMM model using variables used in the study is given below:

$$EG_{it} = \delta EG_{i,t-1} + \beta_1 TG_{it} + \beta_2 FDI_{it} + \beta_3 IR_{it} + \beta_4 PG_{it} + u_{it} + \varepsilon_{it} \tag{9}$$

4.   Results and Discussion

The findings show that the mean value of EG is 4.029 percent, while the average value of TG is 3.023 percent. In addition, the results also expose that the mean value of IR is 4.529 percent while the average value of FDI is 4.992 percent and the average value of PG is 3.929 percent. The following table shows descriptive statistics outcomes.

Table No. 2
Descriptive Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
EG	160	4.029	1.563	2.812	6.093
TG	160	3.023	1.029	2.182	5.820
IR	160	4.529	1.092	1.926	7.029
FDI	160	4.992	0.772	2.091	5.993
PG	160	3.929	2.822	1.029	7.009

In addition, a correlation matrix has also been used to show the nexus among the variables. The findings expose that TG, IR, FDI, and PG positively associate with EG. Table 3 shows the matrix of correlation outcomes.

Moreover, VIF is also executed by the researchers to check the multicollinearity. The results exposed that the VIF values are lower than five, exposing no multicollinearity in the predictors. Following table 4 shows VIF outcomes.

Table No. 3

Matrix of Correlations

Variables	EG	TG	IR	FDI	PG
EG	1.000				
TG	0.630	1.000			
IR	0.543	0.677	1.000		
FDI	0.488	-0.033	-0.553	1.000	
PG	0.209	0.543	-0.404	0.433	1.000

Table No. 4
Variance Inflation Factor

Variables	VIF	1/VIF
TG	4.402	0.227
IR	3.993	0.250
FDI	3.220	0.311
PG	1.421	0.704
Mean VIF	3.259	.

The appropriateness of the model has been selected using the Hausman test. If the probability value is lower than 0.05, then rejecting null hypotheses about the random model is appropriate and vice versa. The results indicated that the probability value is lower than 0.05 that FEM is appropriate. Table No. 5 shows Hausman test outcomes.

Table No. 5
Hausman Test

	Coef.
Chi-square test value	5.983
P-value	0.000

The results of FEM expose that tourism growth, FDI, interest rate, and population growth have positive and significant linkage with the EG. The R square value (0.541) indicates that 54.1 percent of changes in EG are due to all the predictors used in the article. Table No. 6 shows FEM results.

Table No. 6
Fixed Effect Model

EG	Beta	S.D.	t-value	p-value	L.L.	U.L.	Sig
TG	0.983	0.309	3.18	0.020	0.023	2.092	**
IR	2.092	0.983	2.13	0.044	0.570	1,093	**
FDI	1.932	0.932	2.07	0.049	0.720	2.092	**
PG	0.654	0.229	2.86	0.025	1.092	2.920	**
Constant	22.874	4.983	4.59	0.000	2.092	9.443	***
Model Diagnostics							
R-squared		0.541	Number of obs				160
F-test		2.943	Prob > F				0.011
*** p<.01, ** p<.05, * p<.1							

Table No. 7
Generalized Method of Moments

EG	Beta	S.D.	t-value	p-value	L.L.	U.L.	Sig
TG	0.698	0.192	3.64	0.000	0.213	1.728	***
IR	0.392	0.188	2.09	0.027	0.132	1.920	**
FDI	0.509	0.182	2.80	0.015	0.982	1.928	**
PG	0.549	0.202	2.72	0.020	0.221	1.523	**
AR(1)	-2.85		Sargan Test			0.0801	
AR(2)	-2.62						
*** p<.01, ** p<.05, * p<.1							

The results of GMM expose that tourism growth, FDI, interest rate, and population growth have positive and significant linkage with the EG. The "Sargan test" reveals that the constructs are exogenous while no "autocorrelation" exists in the model. Table No. 7 shows GMM results.

4.1. Discussions and Implications

The study results have indicated that tourism growth is positively associated with economic development. A study by Habibi, Rahmati supports these outcomes, which states that the tourism firms are making progress in giving a large variety of services like comfortable accommodation, better-working tourism infrastructure, fast transportation facility, good quality foods facility, and recreation service, more tourists are attracted towards particular destinations, and this increases the production of services which contributes to country's GDP and economic growth, These results are also supported by the past study of Beladi, Chao, Ee, and Hollas (2019), states that an increase in the tourism growth within the country enhances the foreign exchange and raises the chances of economic growth.

The study results have also indicated that interest rate negatively correlates with economic growth rate. These results are in line with the previous study of De Vita and Kyaw (2017), which shows that when the financial institutions have the policy to grant loans at a low-interest rate for the development of tourism in the country. Natural resources like forests, parks, hills, mountains, valleys, and canals are all paid attention to directly or indirectly the determinants of economic growth. These results also agree with the study of Liu and Song (2018), which reveals that the low rate of interest on the loans borrowed from financial institutions raises funds for the tourism firms to apply in performing tourism practices. With the improvement in tourism in itself and through the development of other industries, the country's GDP growth rate goes high, determining the high economic growth.

The study results have also revealed that FDI is positively related to the economic growth of a country. These results match Sirag, SidAhmed, and Ali's (2018) study, which shows that FDI is a significant source of finances available to business organizations listed and operating within the country. FDI enhances the level of production and employment within the country, resulting in economic growth rate increases. These results are also supported by the past study of Asamoah, Mensah, and Bondzie (2019), which indicates that when the economic enterprises within the country are operating well and have high goodwill, not only native people but also foreigners are interested in investing. The increased investment raises the scope of businesses within the country, which collectively contributes to economic growth. The study results have also represented that population growth has a positive impact on the economic growth of a country. The literary work supports these results from Hashmi and Alam (2019), which implies that high population growth increases the human resources, which play a vital role in the development of businesses as these are the human resources that carry the activities in all areas of a business enterprise. So, the increase in the population enhances economic growth.

This study has a theoretical significance as it contributes considerably to economic-based literature. The study examines the influences of tourism growth, interest rate, FDI, and population growth on the country's economic growth. In the existing literature, the role of tourism growth, interest rate, FDI, and population growth in getting high economic growth has long been investigated by researchers, but research time periods and research articles differ in each case. The current study presents joint research conducted for the same time period to investigate the impacts of tourism growth, interest rate, FDI, and population growth on economic growth. The current study significantly contributes to the literature in the research about the nexus among tourism growth, interest rate, FDI, population growth, and EG. This article guides the regulators while establishing the policies regarding economic growth concerning tourism growth. The current study also has great significance in all the emerging economies. This study is helpful to the government, economists, trade ministry, and other business regulatory authorities as it guides them on how they should design their policies to promote the country's

economic growth. The study highlights that economic growth can be accelerated with increased tourism growth, the low-interest rate, which leads to high tourism growth, a large amount of FDI, and effective management of population growth.

5.   Conclusion and Limitations

The research aimed to analyze the role of tourism growth, interest rate, FDI, and population growth in achieving the country's high economic growth. The study examined the economic conditions in South Asian countries and checked the extent to which tourism growth, interest rate, FDI, and population growth on the rate of EG. This analysis shows a positive association between tourism growth, FDI, and population growth and EG of the country while a negative relationship between interest rate and EG. The results stated that when the financial institutions follow the policy of granting credits at low speeds, the individual tourism firms are likely to enhance the financial resources in the form of borrowings to develop variety and facilities in the tourism services, which, in result, add to the economic growth of the country. The results also showed that FDI leads to an increase in the equity and total assets of companies they invest in. The expansion in the total productivity of these companies helps raise the value of the economy among world countries.

The present study is exposed to some limitations, but these limitations are likely to be removed with intellectual efforts in upcoming literature. First, the current research focuses only on tourism growth, interest rate, FDI, and population growth. While analyzing the country's economic growth, it does not consider the conduct of government, inflation, innovation factors, and ecological factors, which are drivers of economic growth. It is required for future researchers to pay attention here. The study is based on the evidence from South Asian countries for testing the role of tourism growth, interest rate, FDI, and population growth in economic growth. The researchers expand the time and countries for better estimates for policy recommendations for future research.

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