



Open Access

**QLANTIC**  
 JOURNAL OF  
 SOCIAL SCIENCES

## The Impact of Foreign Direct Investment and Domestic Investment on Tourism in Pakistan

Jiar Soun Bhatti <sup>1</sup> Azra <sup>2</sup> Alam Khan <sup>3</sup> Hassan Taj <sup>4</sup>

**Abstract:** *The current study considers the relationship of tourism with foreign direct investment and domestic investment in Pakistan. The study used time series data, which covers the period from 1990 to 2021 for the proposed variables of tourism receipts measured as the percentage of exports, foreign direct investment, gross fixed capital formation as a proxy for domestic investment and the control variables of domestic credit and trade openness. Johansen's co-integration test and FMOLS are used in the study. Johansen's co-integration test shows that the variables are co-related in the long run for Pakistan. The results of FMOLS show negative results. Further, the control variable of domestic credit to private sectors showed a positive relation with tourism receipts, although their relationship was insignificant. The variable of trade openness is also a vital factor in increasing tourism in the country. The result of the study implies that Pakistan should facilitate the tourism sector with domestic investment as the formation and re-innovation of the sector can attract foreign investment.*

**Key Words:** Tourism, Foreign Direct Investment, Domestic Investment, FMOLS, Pakistan

### Introduction

#### Background of the Study

In the modern era of globalization, tourism is an essential factor responsible for revenue expansion. In today's world, tourism has become a strong factor that can lead both developed and emerging economies towards sustainable development as it offers a transformation of cultural, technological, social, and economic products across the borders of a country for businesses. The World Travel and Tourism Council (WTTC, 2021) has established a statement that tourism is a vital factor that can lead to economic prosperity as it is responsible for the creation of jobs. Tourism brings a lot of economic value and brand awareness to the business. In this aspect, it enables an economy to seek growth and development. It contributes a lot to shaping the prosperity and development of the economies. For most economies, the tourism sector is considered to be the main engine that provides opportunities for growth and development. Through the theory, it is well known that tourism has a positive relation with the economic growth, employment, production, and gross income of the nations. In this aspect of tourism, the international tourism that draws foreign tourists towards a domestic country also contributes to enhancing the foreign exchange earnings to create employment opportunities, improve the infrastructure, improve the quality of life, and thus eventually contribute to sustainable growth. The given figure illustrates the contribution of tourism by GDP on global scales.

<sup>1</sup> M.Phil. Scholar, Department of Economics, Kohat University of Science & Technology, Kohat, Khyber Pakhtunkhwa, Pakistan. Email: [Jsounb123@gmail.com](mailto:Jsounb123@gmail.com)

<sup>2</sup> Lecturer, Department of Economics Kohat University of Science & Technology, Kohat, Khyber Pakhtunkhwa, Pakistan.

<sup>3</sup> Assistant Professor, Department of Economics Kohat University of Science & Technology, Kohat, Khyber Pakhtunkhwa, Pakistan. Email: [alam@kust.edu.pk](mailto:alam@kust.edu.pk)

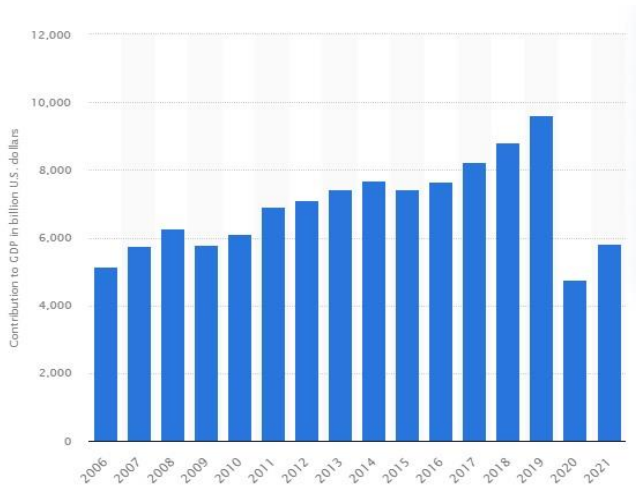
<sup>4</sup> PhD Scholar, Department of Economics, Kohat University of Science & Technology, Kohat, Khyber Pakhtunkhwa, Pakistan. Email: [hassantaj633.ht@gmail.com](mailto:hassantaj633.ht@gmail.com)

▪ **Corresponding Author:** Azra ([azra@kust.edu.pk](mailto:azra@kust.edu.pk))

▪ **To Cite:** Bhatti, J. S., Azra., Khan, A., & Taj, H. (2024). The Impact of Foreign Direct Investment and Domestic Investment on Tourism in Pakistan. *Qlantic Journal of Social Sciences*, 5(1), 24-34. <https://doi.org/10.55737/qjss.331477228>

**Figure 1**

Contribution of tourism to Global GDP in billion US\$



Source: Travel and Tourism Council (WTTC, 2021)

In the modern era of globalization, tourism is an essential factor responsible for revenue expansion. In today's world, tourism has become a strong factor that can lead both developed and emerging economies towards sustainable development as it offers a transformation of cultural, technological, social, and economic products across the borders of a country for businesses. The World Travel and Tourism Council (WTTC, 2021) has established a statement that tourism is a vital factor that can lead to economic prosperity as it is responsible for the creation of jobs. Tourism brings a lot of economic value and brand awareness to the business. In this aspect, it enables an economy to seek growth and development. It contributes a lot to shaping the prosperity and development of the economies. For most economies, the tourism sector is considered to be the main engine that provides opportunities for growth and development. Through the theory, it is well known that tourism has a positive relation with the economic growth, employment, production, and gross income of the nations. In this aspect of tourism, the international tourism that draws foreign tourists towards a domestic country also contributes to enhancing the foreign exchange earnings to create employment opportunities, improve the infrastructure, improve the quality of life, and thus eventually contribute to sustainable growth.

### Religious Tourism

Religious tourism involves the travel and visits to sacred places, shrines and worship places, and these visits are done on one's behalf and provide a medium to exchange religious values between people (Kasim, 2011). Pakistan is considered the birthplace of Sikhism, and there are many Islamic and Hindu places that have many followers around the world. Although many people living in Pakistan follow Islam, and it is an Islamic republic as compared to other religions, the country is not rich in Islamic heritage. The Baba Guru Nanak is hugely admired in the Sikh community, and his tomb is in Pakistan, which makes Pakistan more favorable for Sikh tourists. The culture of Kalash is very famous in Pakistan. This culture is the oldest found in the world, and tourists from around the world are attracted to it, which makes Pakistan more vulnerable and open to religious tourists (Arshad et al., 2018).

### Historical and Archeological Tourism

Pakistan is historically rich and can be considered the home of archeological evidence of different civilizations. The Gandhara, Buddhist and Indus Valley civilizations are the main ones, among others. The places that possess archeological evidence of these ancient civilizations are Takht Bhai, Pushkalavati, Mehengo Daro, and Harappa. The Mughals and their historical monuments and palaces are also a subject of tourist attraction. All these archeological and historical places make Pakistan heaven on earth for this specific tourism, which indeed can quantify and qualify Pakistan's potential for the sake of tourism (Arshad et al., 2018).



### Eco-Tourism

Eco-tourism is mainly connected with cultural and natural resources, and eco-tourists consider it to be a product. The cultural resources in eco-tourism are museums, festivals, events, handicrafts, and local cooking as well. Eco-tourism includes trekking, mountaineering, mountain biking, white water rafting, mountain and desert jeep safaris and other festivals of tourism and amusement. The cultural festivals that are endeavored in Pakistan are also quite famous among tourists. That includes the Shandur Polo Festivals, Silk Rout Festival, Kalash Festivals, Khanpur Water Sports Festival, and many more. All these tourism opportunities are considered one of the means of developing the tourism sector in Pakistan (Israr et al., 2009).

### Adventure Tourism

Few countries in the world have the capacity for adventure tourism. For this type of tourism, a country needs high mountain ranges; in Pakistan, these magnificent tourist areas do exist, like the area located in the northern KP province of Pakistan. The places of Swat Valley, Kalam, Malan Jabba, Shangla, Balakot, Muree, Ayobia, and many more areas provide the luxury of adventure tourism to tourists coming from all around the world. Pakistan is one of those few countries in the world that has a geographic and demographic environment. In winter, most tourists are attracted to the areas of Swat Valley and Malan Jabba. Tourists from all around the world join this event and get amusement. Murree, which has a higher altitude as compared to other areas of Pakistan, attracts weather-loving tourists who want the thrill of snowy and high-altitude mountains. All these areas depict Pakistan's capacity and potential for the tourism sector to grow (Khalil et al., 2007).

**Figure 2**

*Contribution of tourism to the GDP of Pakistan in percent*



Source: Travel and Tourism Council (WTTC, 2021)

Same as figure 1, the above figure shows the contribution of tourism to GDP specifically in Pakistan. The growth of an economy mostly depends upon the dynamic capacity of the national income, which can cause an economy to grow faster and achieve the desired levels of development. The growth indicates that the services and goods produced in circulation are far enough for thumping purposes. In this aspect, the output produced by the full employment of resources is necessary. The rate of investment in a country is an appropriate indicator that can show the dynamic feasibility of an economy toward the potential goal of growth. In this aspect, the domestic investment in an economy indicates the change that occurs in the capital goods of an economy. Domestic investment brings changes in the flow of capital goods over some time, and indeed, investment can serve as the source of producing the required goods and services for economic growth. Two types of investments, public and private investments, can stimulate the economic growth of a country. These investments create new opportunities for the economy to produce goods and services, and eventually, this can stimulate an economy toward growth. The emphasis on domestic investment entirely gives opportunities for an economy to sustain growth through the production of required goods and services (Saleem & Zaheer, 2018).

## Research Questions

The current study will answer the following research questions:

1. Does Foreign Direct Investment enhance tourism in Pakistan?
2. Does domestic investment improve tourism in Pakistan?

## Hypotheses of the Study

The study presents the following hypotheses in accordance with research questions:

1. To examine the status of tourism in Pakistan.
2. To explore the impact of FDI on Tourism in Pakistan.
3. To examine the impact of domestic investment on tourism in Pakistan.

## Problem Statement

The current study carries a unique context of exploring the impact of FDI and domestic investment on Pakistan's tourism sector. Previously, Munir and Iftikhar (2021) explored the impact of FDI on tourism by using panel data for Asia. In this study, the factor of domestic investment was not included, and a panel of Asian countries was under observation. Similarly, Fauzel (2020) also conducted a study in the current context of testing FDI as a factor that influences tourism for the panel of small economies. Like the other studies, the factor of domestic investment has not been considered for tourism. In the context of domestic investment, Nguyen (2021) conducted a study on Vietnam and concluded that domestic investment can contribute to the enhancement of tourism growth. In previous studies, the findings of both foreign direct investment and domestic investment have not been highlighted together. This enhances the importance of the current study and becomes the research gap that the current study is filling. In this aspect of the impact of domestic investment and foreign direct investment on the tourism sector of Pakistan, the current study plays a 19 unique role and is also highlighted through this fact of testing both the domestic and foreign investment in the aspect of the tourism sector of Pakistan. The current study will open up new landscapes of the role that domestic and foreign investment can play in shaping the growth of the tourism sector, as the tourism sector has a significant impact on the growth, which shows the importance of this sector in accomplishing growth targets in the modern world.

## Literature Review

Pakistan has a rich potential for travel and tourism as it has such favorable geographical settings that it experiences all the 4- weathers in a year, which makes it even more attractive and inspirational to international tourists. Pakistan is also a rich country in the light of its culture and history, which is a reason for all types of tourism in the country. According to the study, tourism can serve as the most suitable element for economic gains, and Pakistan has the potential to do it. Pakistan does offer adventure tourism with the high mountains located in the north of the country. Religious and historic places located in Pakistan of different religions make it a more suitable area to visit for those people who seek religious and archeological pleasure and satisfaction. According to Arshad et al. (2018), the sector of travel and tourism is largely associated with the other sectors of the economy, and it enhances and affects other sectors of the economy by resulting in increasing foreign investment employment opportunities and enhancing trade and infrastructure development as well.

It is widely considered that every developing nation around the world tends to gird up the living standards alongside sustainable growth development as well. In this context, Azam et al. (2022) conducted a research study for Pakistan. This study aimed to derive and explore the relationship between tourism and other important factors, which include labor force, official developmental assistance, domestic investment, and inflation, with Pakistan's overall economic growth. To achieve the said goals, time series data comprising the period of 1980 to 2018 was considered. ADF was applied to economic growth, tourism receipts, labor force, investment, inflation, and developmental assistance. The data has also been tested by the autoregressive distributive lag model. The empirical results showed a positive long-term effect of tourism on Pakistan's economic growth, which validates the expansion of tourism growth to achieve a sustainable level. These outcomes demonstrated that tourism is a key role factor in shaping the economic growth of developing countries like Pakistan.



According to Harun et al. (2016), tourism expansion trends have risen in developed nations after the end of World War II. However, its importance for economic growth has been recognized in the 20<sup>th</sup> century. Turkey, which has the biggest trade share of tourism after the manufacturing sector, shows the importance of the tourism element for the growth leading strategies. The main objective of the study was to establish the long-term relationship between tourism receipts and Turkey's economic growth. Time series data for the period of 1972–2014 was considered for the fulfillment of the synthesis. The main variables that were taken into account for this study were tourism receipts, GDP, and Turkey's real exchange rate. To determine the co-integration between these given variables, Johansen's co-integration test was taken into account. The results of this specific test implied that there were co-integration vectors found in the analysis, which concluded that Turkey's tourism receipt does influence the growth of Turkey's economy in a positive way. To verify this relationship, the Granger causality test was also performed, which concluded the same results as Johansen's co-integration test. Furthermore, the study came up with the conclusion that the policymakers of Turkey do need to recognize the expansion in the tourism sector as it can lead the economy towards the sustainable developmental phase.

Another study conducted by Manzoor et al. (2019) served a similar purpose of establishing knowledge about how the tourism sector can help an economy achieve a sustainable level of growth and employment as well. According to the study on the global economy, the tourism sector is experiencing a noticeable expansion and growth. The reason behind this growth is that most developed economies are expanding towards the tertiary sector, that is, the service sector of the sustainable developmental phases. Further increase in the tourism inflow can bring a lot of positive changes in the nation's economic outcomes. This theory is also valid for developing economies because developing economies have the tendency to approach and catch up with the trends that the developed world is following. The study further stated that as most South Asian countries are developing and well-equipped with geographical richness, in this case, tourism expansion can serve to increase the growth of an economy.

Tourism is an important factor in developing economies through providing job opportunities and development in infrastructure. In this regard, Nguyen (2021) conducted a study with the aim of developing and assessing the impact of investment in tourism infrastructure development. The study stated that to attract more tourism to a country, the infrastructure of tourism is the most important factor that needs financial assistance. The study has divided the concept of investment into two important integral parts, which are public and private investment channels and sources. This study has considered the most dramatically encouraging and developing economy of Vietnam. To serve the purpose of synthesis under this study, panel data comprising different geographical destinations in Vietnam between 1995 and 2019 has been considered. To analyze this data, the study considered the panel autoregressive distributive lag model (Panel ARDL) to test the variables for co-integration. The analysis of the panel ARDL resulted in a long-term positive relation of investment with transportation, communications, hoteling and residential places, and recreational places infrastructure, which indeed implies and confirms the idea of using investment as a tool for expanding the tourism sector.

## Methodology

The importance of the tourism sector has almost become inevitable for developing nations. To fulfill the objectives of the study, the current study treats tourism receipts as the dependent variable, which is measured as the percentage of exports. Further, the independent variables include FDI and gross fixed capital formation as a proxy for domestic investment, which is also measured as a percentage of total GDP. Further, the domestic credit to the private sector and trade openness are used as the control variables in the model. Data for the variables is taken from 1990–2019 from the World Bank database (2021). The study will use Augmented Dickey Fuller (Dickey & Fuller, 1979) and Phillips–Peron test (Phillips & Perron, 1988) to test the variables for unit root. Furthermore, Johansen's co-integration test (Johansen, 1989) and the Fully Modified Ordinary least square method (FMOLS) developed by Phillips (1995) are used to test the long-run co-integration between the variables. The general model that the current study will use for the analysis is given below:

$$TOR_t = f(FDI_t, DIN_t, DCR_t, TRD_t) \quad (1)$$

Where the *TOR* represents the tourism receipts in a single year of time "t", *FDI* shows foreign direct



investment, *DIN* stands for domestic investment, *DCR* shows the domestic credit to the private sector and *TRD* stands for the trade openness at time “*t*”.

A time series data has been considered for the analysis, and most of the time series data carries unit root for which different econometrical techniques are used. Stationarity is purely a statistical term, but to simplify it, a series of data is called stationary if there are no consistent changes in the properties of the data, such as no change in mean and variance of the data with respect to time as most of the time series data suffers with the problem of the unit root which means that the mean average, variance and covariance of the data tends to change over time. In order to make them constant, the unit root analysis has been used, and as stated, the current study has used the method of ADF and PP unit root test by including both trend and intercept, for which the general representation is given below:

$$\Delta Y_t = \alpha_1 + \sum_{j=1}^n \phi \Delta Y_{t-j} + e_t \quad (2)$$

The hypothesis is tested through the statistical probability value of “ $\phi$ ”, the following hypothesis are tested for the unit root analysis.

**H<sub>0</sub>**; There is unit root

**H<sub>1</sub>**; There is no unit root

Further going into the methodology, the study uses the Johansen co-integration test, which was developed by Johansen (1989). According to this co-integration test for a given *k* number of variables in the model, the *k*-1 number of co-integration vectors at most can be present. These co-integration vectors depict a unique long-run equilibrium relationship between the variables. The Johansen co-integration test depicts the co-integration of variables with several I(1). The general representation of the model for this test is given below:

$$\Delta y_t = \Pi y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + \beta x_t + \varepsilon_t \quad (3)$$

After the determination of the co integration vectors, the magnitude of the impact that each variable is having on tourism receipts is determined through FMOLS. The representation of the model which will be analyzed under the methodology of FMOLS is given as follows:

$$TOR_t = \beta_0 + \beta_1 FDI_t + \beta_2 DIN_t + \beta_3 DCR_t + \beta_4 TRD_t + u_t \quad (4)$$

Here the  $\beta_0$  shows the intercept of the regression and  $\beta_1, \beta_2, \beta_3$  and  $\beta_4$  are the coefficient of the FDI, domestic investment, domestic credit to private sector and Trade openness respectively. “ $u_t$ ” is residual of the regression which is also called the error term.

The data for the current study has been collected from WDI and is available at World Bank (2021). In order to check the impact of both domestic and foreign direct investment, the current study considered tourism receipts, which indicate the growth of tourism in Pakistan. The FDI is measured as a percentage of the GDP. For domestic investment, the proxy of gross fixed capital formation has been considered, which is also a percentage of total GDP, after the control variables of Domestic credit to the private sector and trade openness have also been considered as the percentage of total GDP for which the details have been stated in the given below table.

**Table 1**  
Description of the variables

Variables	Abbreviations	Description	Sources
<b>Dependent Variable</b>			
Tourism Receipts	TOR	Measured as percentage of total exports	World Bank (2021)
<b>Independent variables</b>			
Foreign Direct Investment	FDI	Measured as % of GDP	World Bank (2021)
Domestic Investment	DIN	Proxy of Gross Domestic Product (measured as % of GDP)	World Bank (2021)
Domestic Credit	DCR	Measured as percentage of GDP	World Bank (2021)
Trade Openness	TRD	Measured as percentage of GDP	World Bank (2021)



The proposed methodology in this dissertation, which serves as an analytical tool, has been implemented in this chapter, and the results have been obtained. The chapter starts with a brief discussion of the descriptive analysis of individual samples, which is taken for each of the variables, alongside the brief descriptive analysis. The details of the variables and their graphical illustration for trend specification have also been incorporated in this section. After the descriptive analysis and discussions, the methodology has proposed to undertake the unit root test, which is ADF (Augmented Dickey-Fuller) (Dickey & Fuller, 1979) and PP (Phillips & Perron, 1988) unit root test. The upcoming section after the descriptive statistics denotes the result for these two tests. The methodology further carries the implementation of Johansen’s co-integration test (Johansen, 1989) for the long-run co-integration vectors. The fully Modified Least square (FMOLS) method (Phillips, 1995) has been implemented, and the results have been incorporated in this section as well, as the long-term relationship obtained through this test needs the interpretation and explanation of each individual coefficient so the discussion over these results has been made and incorporated in this chapter as well.

## Results and Discussion

The descriptive analysis has been made by taking the individual sample for all the given variables. Here, the advanced econometric software Eviews 10 has been utilized to obtain the mean, maximum, minimum and standard deviation for each sample set. The details are given below in the table, and the discussion has been made accordingly.

**Table 2**

*Descriptive analysis*

	Tourism Receipts	Foreign Direct Investment	Domestic investment	Domestic Credit	Trade Openness
Mean	4.34	1.09	15.66	21.88	32.23
Maximum	6.19	3.67	19.11	28.73	38.50
Minimum	2.74	0.37	12.52	15.39	25.31
Standard-Dev	1.03	0.83	1.76	3.93	3.90

*Author’s Calculation*

*Data source: World Bank (2021)*

The above-reported Table 2 shows the descriptive statistics of the given variables. Through the individual sample, the mean indicates the average value, the maximum, which shows the highest value, the minimum, which represents the lowest observation recorded in the data and the standard deviation, which shows the spread of the data from its mean, have been obtained and recorded. A time series data using the source of World Bank (2021) has been obtained and hence tested for descriptive analysis. First, the description of the tourism receipts was considered. The descriptive analysis implies that in the data from 1990 to 2019, the average value of the tourism receipt for Pakistan is 4.34 percent of the total GDP over the years. In the meantime, the maximum value that tourism has experienced during the given period is 6.19 percent of Pakistan's total GDN. Further, the minimum value is also not far away from the mean value of tourism, which is 2.74 percent of the total GDP, which shows that the bottom point hit by the tourism receipts during the period is 2.74 percent, as the standard deviation depicts the spread of the data from its means 1.03 percent which depicts that the data is not biased and largely spread. Furthermore, the variable of foreign direct investment has an average value of 1.09 over the given time period of the data, the maximum and top point hit by the FDI during the period of 1990-2019 for Pakistan is 3.67 percent of the total GDP, the minimum point for the variable of FDI during the same period have been recorded as 0.37 percent of the total GDP which shows a low trend in the FDI inflow for Pakistan during the given period. The standard deviation for FDI is calculated as 0.83 percent, which shows a low and lesser deviation of the data taken from the mean of FDI. The domestic investment for which the proxy of Gross fixed capital formation has been considered has a mean value of 15.99 percent of the total GDP, which, on the one hand, shows a huge contribution to the economic growth of Pakistan and, on the other hand, it depicts a higher trend of domestic investment on the economic sectors as well. The maximum and top value during the period of 1990-2019 for the domestic investment is calculated as 19.11 percent, which does not show a large spread from its mean. This implies that the data for domestic investment is free of outliers and thus can

be called normally distributed. The bottom value of the domestic investment is depicted through the calculated minimum value, which is 12.52 percent of Pakistan's total GDP. Again, the same thing stands for the minimum calculated value, which is not far from its mean. This shows the normal trend of domestic investment during the course of 1990–2019. The standard deviation for domestic investment is 1.76 percent, which shows that the data is not vastly different from its mean. The control variables of the regression have the mean average value of 21.88 percent of the total GDP, and this shows that the credit given to the private sector in the developing nation of Pakistan is also huge over the given time period. The maximum value for domestic credit stays at 28.73 percent of the total GDP, which shows the highest value of domestic credit in the time period. The minimum value of 15.39 percent indicates a larger difference between the maximum and average value of the data. Further, the standard deviation for domestic credit is 3.39 percent from its mean. The last variable taken for the analysis of the study is trade openness, which is also measured in terms of percentage of the total GDP of Pakistan 32.33 percent is the mean average value of trade openness, which in turn implies that the larger portion of the GDP of Pakistan is associated with the trade. Furthermore, the maximum calculated value, which indicates the top value hit by the variable, is calculated as 38.5 percent of the total GDP, which is not far from its mean, which means that the top values of the variable are more tended toward the mean of the whole dataset for trade openness. Moreover, the minimum calculated value for trade is 25.31 percent of the total GDP, which indicates a massive decline in the trend of trade openness during the considered period. Lastly, the standard deviation for trade openness is 3.9, which does not indicate a huge deviation of all the observations of the data from its mean value.

**Table 3**  
ADF test results (ADF)

Variables	Augmented Dickey Fuller test				Integration
	Trend and Intercept (At level)		Trend and Intercept (1 <sup>st</sup> difference)		
TOR	-0.78	0.8093	-5.32	0.0002*	I(1)
FDI	-2.93	0.0539	-3.48	0.0159**	I(1)
DNI	-1.71	0.4157	-4.59	0.0011*	I(1)
DCR	-1.25	0.6351	-4.29	0.0023*	I(1)
TRD	-1.88	0.3336	-5.32	0.0002*	I(1)

Source: Author's Calculation

Note: \* and \*\* depicts the statistical significance at 1% and 5% respectively

Table 3 above depicts the results of the augmented Dickey–Fuller test. The proposed model for the ADF test includes both the trend and intercept in it, and all the variables are tested individually by using the E-views version 10. First, all the variables are tested at the level with the inclusion of both trend and intercept, which has shown that no variables under discussion are stationary at the level, which concludes that the mean, variance, and covariance are not constant over the data span of 1990–2019. This leads to taking the test with the first difference; after testing the variables for unit root at the first difference, it is concluded that the data is free from stationarity issue, in which tourism receipts, domestic investment, domestic credit and trade openness are showing the statistical significance at 1% and FDI is showing the statistical significance at 5%. The table concludes that all the variables are integrated at 1st difference, which fulfills the assumption of co-integration as well.

**Table 4**  
ADF test results (PP)

Variables	Phillips Peron Unit Root Test				Integration
	Trend and Intercept (At level)		Trend and Intercept (1 <sup>st</sup> difference)		
TOR	-1.06	0.7179	-5.32	0.0002*	I(1)
FDI	-1.79	0.3736	-3.35	0.0218**	I(1)





DNI	-1.71	0.4157	-4.55	0.0012*	I(1)
DCR	-1.53	0.5017	-4.29	0.0023*	I(1)
TRD	-1.88	0.3336	-5.32	0.0002*	I(1)

Source: Author's Calculation

Note: \* and \*\* depicts the statistical significance at 1% and 5% respectively

The Phillips Peron test is also applied in the same manner as the ADF test, but in order to cross-check the consistency of variables and their respective results of significance, the test is necessary. Table 4 above shows the calculated results of the PP test; first, the variables are tested at a level that doesn't show any significant results, which means that the data is free from stationarity issues, with both the inclusion of trend and intercept. After finding these results, all the variables are tested by taking the first difference with the same equation, which has yielded a parallel result to the ADF test as all the variables have become integrated at the first difference.

**Table 5**

Johansson's Co integration test

No. of Co integration	Maxi-Eigen Statistics	Trace Statistics	Critical Value	Probability
None	0.72	96.66	79.34	0.0014*
At most 1	0.69	60.97	55.24	0.0144*
At most 2	0.38	27.56	35.01	0.2493
At most 3	0.27	14.09	18.39	0.1804
At most 4	0.16	5.11	7.84	0.2370

Source: Author's calculations

Note: \*, \*\* and \*\*\* shows the statistical significance at 1%, 5% and 10% respectively.

Table 5 depicts the acquired results of Johansen's co-integration test. Here, the Trace statistical value and the respective critical values are given. The decision of significance and presence of the co-integration vector are taken on the basis of comparing both values. Suppose the statistical value is greater than the critical value. Then, it is concluded that there is a long-run co-integration vector between the given set of variables. Here, the results depict that there is a maximum of three cases in which the presence of co-integration vectors is confirmed. Firstly, the statistical value of the trace is greater than its respective critical value in the case of at most one, which confirms that at least one co-integration vector exists in the given set of variables. This confirms that the given set of variables is co-integrated in the long run. The FMOLS methodology is used to determine the individual coefficients and the nature of their relationship.

**Table 6**

Results of FMOLS

Variable	Fully Modified Ordinary Least Square			
	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-1.34	0.35	-3.75	0.0010*
FDI	-0.28	0.09	-3.07	0.0050*
DNI	1.11	0.54	2.06	0.0490**
DCR	2.45	0.41	5.89	0.0000*
TRD	-0.88	0.36	-2.45	0.0215**

Source: Author's calculations

Note: \*, \*\* and \*\*\* shows the statistical significance at 1%, 5% and 10% respectively

The foremost aim of the current study is to analyze the relationship between domestic investment and FDI in Pakistan's tourism sector, for which the proposed methodology has been used, and the results have been obtained. The main variable included the FDI and domestic investment, which are denoted by FDI

and DNI, respectively, in Table 6 above. After that, the control variables of domestic credit to the private sector and trade openness were included.

Firstly, the FDI has yielded a significant long-run relationship with tourism receipts as their coefficient is significant at 1%, which shows a strong long-run relationship. The sign of the coefficient for FDI against tourism is negative, which means that an incline in FDI will decline the tourism receipts of Pakistan by 0.28 percent. This nature of the relationship has been confirmed by Munir and Iftikhar (2021), who stated that an expansion in foreign direct investment will cause a contraction of tourism in a specific country, mainly the South Asian countries which Pakistan is included. It has been reasoned by the authors that although there are many opportunities for investment in South Asian countries in the tourism sector, the developing nature of countries like Pakistan, the FDI is more tended towards the industrial sector as the economy is surpassing through a transformation from the agricultural abundant products towards the industrial products.

Secondly, the results implied a significant and positive relationship between the domestic investment and tourism receipts with an impact magnitude of 1.11 percent, and the variable is also significant at 1%, which shows the strong cointegration nature of these variables. These results have been previously confirmed by Nguyen (2021), Ivanovic et al. (2011) and Fauzel (2020). Pakistan is facing a current trend of investments in the tourism sector for its expansion, which is the reason why this relationship with domestic investment is positive. Domestic investment brings a lot of capital investment into the sector, so according to the results, an increase in domestic investment will eventually benefit Pakistan's tourism sector.

The control variables of domestic credit to the private sector also have a positive and significant long-run relationship with the tourism sector. Through the results, it can be seen that an increase in the domestic credit to the private sector encourages tourism, as their relationship is positive. The other control variable of trade openness is also significant and negative with tourism. The more the country of Pakistan is open to trade, the less the tourism sector will grow as the trade openness of Pakistan implies that Pakistan trades in industrial and agricultural goods, which actually can cause a decline in this service sector export of tourism.

## Conclusion and Policy Recommendations

The current study considers this relationship of tourism with FDI and domestic investment in Pakistan, which covers the period of 1990 to 2021 for the proposed variables of tourism receipts measured as the percentage of exports, foreign direct investment, gross fixed capital formation as a proxy for domestic investment and the control variables of domestic credit to private sector and trade openness. In order to check the stationarity, the study used ADF and PP tests. Furthermore, Johansen's co-integration test and Fully Modified Ordinary least square method (FMOLS) are used to test the long-run co-integration between the variables. Johansen's co-integration test showed that the variables are co-related in the long run for Pakistan. Furthermore, the results of FMOLS implied that foreign direct investment has a negative relation with tourism as expansion in FDI will contract the tourism sector. This is because Pakistan has a poor industrial infrastructure, and most foreign investors are attracted by the government to invest in Pakistan's industries.

## References

- Arshad, M. I., Iqbal, M. A., & Shahbaz, M. (2018). Pakistan tourism industry and challenges: a review. *Asia Pacific Journal of Tourism Research*, 23(2), 121–132. <https://doi.org/10.1080/10941665.2017.1410192>
- Azam, M., Mahdiat, M., Hafeez, M. H., & Bakhtyar, B. (2022). Investigating the Role of Tourism in Economic Growth: Empirical Evidence from Pakistan. *Polish Journal of Sport and Tourism*, 29(1), 39–47. <https://doi.org/10.2478/pjst-2022-0007>
- Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American statistical association*, 74 (366a), 427–431. <https://doi.org/10.2307/2286348>
- Fauzel, S. (2020). FDI and tourism futures: a dynamic investigation for a panel of small island economies. *Journal of Tourism Futures*, 7(1), 98–110. <https://doi.org/10.1108/jtf-05-2018-0026>



- Harun, B. A., Akça, E. E., & Bayraktar, M. (2016). The contribution of tourism to economic growth: a research on the Turkey. *Akademik Yaklaşımlar Dergisi*, 7(1), 1-20.
- Hwang, J., & Lee, J. (2019). Understanding customer-customer rapport in a senior group package context. *International Journal of Contemporary Hospitality Management*, 31(5), 2187-2204. <https://doi.org/10.1108/ijchm-02-2018-0128>
- Israr, M., Shafi, M., Khan, N. Z., Ahmad, N., Baig, S., & Khan, Z. R. (2009). Eco tourism in Northern Pakistan and challenges perspective of stakeholders. *Sarhad Journal of Agriculture*, 25(1), 113-120. <https://www.cabdirect.org/cabdirect/abstract/20103072433>
- Ivanovic, Z., Baresa, S., & Bogdan, S. (2011). Influence of foreign direct investment on tourism in Croatia. *UTMS Journal of Economics*, 2(1), 21-28. <https://EconPapers.repec.org/RePEc:ris:utmsje:0023>
- Johansen, S. (1989). Likelihood-based inference on co integration theory and applications. *Centro Interuniversitario di Econometria*.
- Kasim, A. (2011). Balancing tourism and religious experience: Understanding devotees' perspectives on Thaipusam in Batu Caves, Selangor, Malaysia. *Journal of Hospitality Marketing & Management*, 20(3-4), 441-456. <https://doi.org/10.1080/19368623.2011.562437>
- Khalil, S., Kakar, M. K., & Malik, A. (2007). Role of tourism in economic growth: Empirical evidence from Pakistan economy. *The Pakistan Development Review*, 46, 985-995.
- Manzoor, F., Wei, L., Asif, M., Haq, M. Z., & Rehman, H. U. (2019). The contribution of sustainable tourism to economic growth and employment in Pakistan. *International journal of environmental research and public health*, 16(19), 3785. <https://doi.org/10.3390/ijerph16193785>
- Munir, K., & Iftikhar, M. (2021). Asymmetric Impact of FDI and Exchange Rate on Tourism: Evidence From Panel Linear and Nonlinear ARDL Model. *SAGE Open*, 11(3), 1-10. <https://doi.org/10.1177/21582440211046589>
- Nguyen, Q. H. (2021). Impact of Investment in Tourism Infrastructure Development on Attracting International Visitors: A Nonlinear Panel ARDL Approach Using Vietnam's Data. *Economies*, 9(3), 131-150. <https://doi.org/10.3390/economies9030131>
- Phillips, P. C. (1995). Fully Modified Least Squares and Vector Autoregression. *Econometrica Journal of the Econometric Society*, 1023-1078. <https://doi.org/10.2307/2171721>
- Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, 72(5), 335-346. <https://doi.org/10.2307/2336182>
- Saleem, M., & Zaheer, R. (2018). A study on influence of domestic investment on the economic growth during 1980-2016. *Journal of Global Economics*, 6(3), 302-307. <https://doi.org/10.4172/2375-4389.1000302>
- World Bank. (2021). *World Development Indicators*. Retrieved from <https://data.worldbank.org/>.
- WTTC. (2021). *Global economic impact and trends 2021*. Retrieved 07 05, 2022, from World Travel and Tourism Council : <https://wtcc.org/research/economic-impact>