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Does Tourism Development Influence the Economic Growth in Pakistan? Evidence from ARDL and Causality Approach

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ABSTRACT

This study analyzes the influence of tourism development on economic growth (GDP) in the case of Pakistan's economy using the time series data covering the spanning from 1995-2022. In order to unveil reliable and robust results, a more appropriate time-series approach was applied for the current article. Time series unit root tests infer that all the variables have unit root problems at levels I(0), however, after taking the first difference I(1), all series turn into following the stationary process. Furthermore, (ARDL) bound test reveals that a long-term cointegration prevails among all analyzed variables. The Granger causality test is also utilized to check the causal relationship among the series. The long-run elasticity estimates examine a statistically significant and positive link between the sect tourism sector GDP growth in the case of Pakistan. Furthermore, political instability and inflation rate have an inverse influence on GDP growth, whereas, capital investment has a positively significant influence on GDP growth. In addition, it is concluded that tourism sector development helps to move upward shift in the economy of Pakistan by generating more profits for the country. Finally, it is suggested that goverment should have to focus on investing in the tourism sector and provide better facilities for tourists.

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1. Introduction

Economic growth of a country means to a rise in the total production of goods and services within an economy over a specific time duration. Economic growth of a country raises the ability to generate goods and services and fulfill the unlimited needs and desires of the people of that particular economy. A sustainable level of economic growth of any country provides security and greater welfare for the citizens as well as improves the living standard of residents of the country (Romer, 2012). Economic growth of an economy is well defined by outward shifting in the production possibility curve. A country's total level of output or gross national product (GNP) or GDP is used to estimate the level of economic growth of a country's economy (Barro, 2008). Basically, a country's GDP is the total amount of all finally produced

goods and services excluding income from abroad which are produced within the economy in a given time period. So, a rise in the country's GDP can also be called a rise in the country's production level domestically (Lewis, 2013). GDP per capita (GDPPC) is considered a more reliable and consistent measure of economic growth as it takes into account both a country's total population and the country's total production level. Likewise, real GDP per capita is most reliable than all other measures and it measures the real income of per person of the country (Barro, 1991).

The most important impact of the economic growth of an economy is that it positively affects to country's income and level of employment, which leads to raising the living standard of the country's residents (Friedman, 2010). If the GDP of a country rises, it means that country is producing more goods and services and this higher level of production increases the employment level and this effect leads toward the high population growth and higher amount of wealth of the country (Hall & Jones, 1999). When the rate of growth in population increases, the higher rate of economic growth maintains the living standard of the population and wealth of the economy as well as economic growth reduces the poverty level.

Every economy has three core sectors as the industrial sector, agricultural sector and services sector which mainly contribute to the economic growth of that country. In the industrial sector, tourism industry is also the most important sector which creates greater revenues for the country. Such weight age of the tourism sector can be observed by the truth that this sector raises incomes, creates job opportunities, develops infrastructure and encourages the business activities of the country (WTO, 1997) . Tourism sector is one of the key divisions of the global economy, which has added to approximately 10% of the worldwide economic growth and provides(266million) job prospects in all over the world during the year of 2014 (Usman, Makhdum, & Kousar, 2021; Zaman, Moemen, & Islam, 2017). Considering the (World Economic Forum 2017), industry of tourism globally sector is providing 10% to global GDP and hopefully this amount would rise from 10% to near about 50% in the coming ten years. Trickledown effect by the development of tourism has been observed by most of the researchers and this effect improves not only the tourism sector but as well as raises the overall growth of the economies (Lee and Chang, 2008). The tourism sector development engages with export paybacks where spending are approved in the exporting countries (Usman et al., 2021). Having such importance, the tourism industry has received greater academic attention as becoming a reliable and consistent indicator of the economic growth of the countries. Some of the researchers suggest that improved level of economic growth of an economy can be achieved in different ways through which this sector can lead to better economic growth. For example, according to Bhagwati and Srinivasan (1979); Buallay (2022) the tourism sector increases the efficiency through competition among the destinations of international tourists and domestic firms which escorts to a higher GDP growth rate well as the tourism industry also contributes to economic growth through generating economies of scale in domestic firms (Jalil, Mahmood, & Idrees, 2013).

The link between the GDP growth and tourism sector is well defined in previous literature as well as in the research of tourism economics. The results of all studies briefly explained four hypotheses. The first hypothesis of GDP growth and tourism proposes a one-way causality relationship between GDP growth and tourism in a country and growth of incoming tourism is considered as a main gear of economic development. Hence, giving such importance of incoming tourism, any type of restrictions may worsen the economic growth. Although this first hypothesis is found in small economies such as Taiwan, Spain, Italy, Mexico, Jordan and South Africa Akinboade and Braimoh (2010); Chen and Chiou-Wei (2009); Cortes-Jimenez (2008); Kreishan (2011). According to Oh (2005) the second hypothesis of tourism and economic growth recommends a causality (unidirectional) from GDP growth to better incoming tourism and the finding of this hypothesis implies that by making restrictions on the tourists, economic growth of the countries is not adversely affects by the tourists. Similarly, the third hypothesis of economic growth and tourism is the feedback hypothesis which implies

that bidirectional causality is running between incoming tourism sector development and the GDP growth of a country and these both determine each other jointly. According to Kim and Chen (2006); Ozturk and Acaravci (2009) the fourth hypothesis of tourism and economic growth is the neutrality (no relationship) hypothesis which suggests that there is no causality relationship found between GDP growth and inbound tourism. In the sense, according to this hypothesis, it is proposed that the tourism industry does not have any impact on GDP growth as well as GDP growth is not needed for improving the tourism sector. The current study is an effort in the same path and the aim of this research is to explore the influence of tourism on GDP growth in Pakistan by using the time series data over the duration of 1995 to 2018.

The travel and tourism industry provide revenues of 7.6$ billion and 2.7% to the country's GDP while in comparison South Asia provides 42.1$ billion on average in 2016World Travel and Tourism Council (Zakharova, 2022). However, out of region' share of the tourism industry to GDP remains higher in India, China, Indonesia and Thailand in the past decades. During last year, the economic growth of Pakistan was 5.3% which was high in the decade and this effect was due to greater economic activities provided by the industries as hotels, airlines, travel agents and transportation services of the passengers (Ozkaya & Demirhan, 2022).

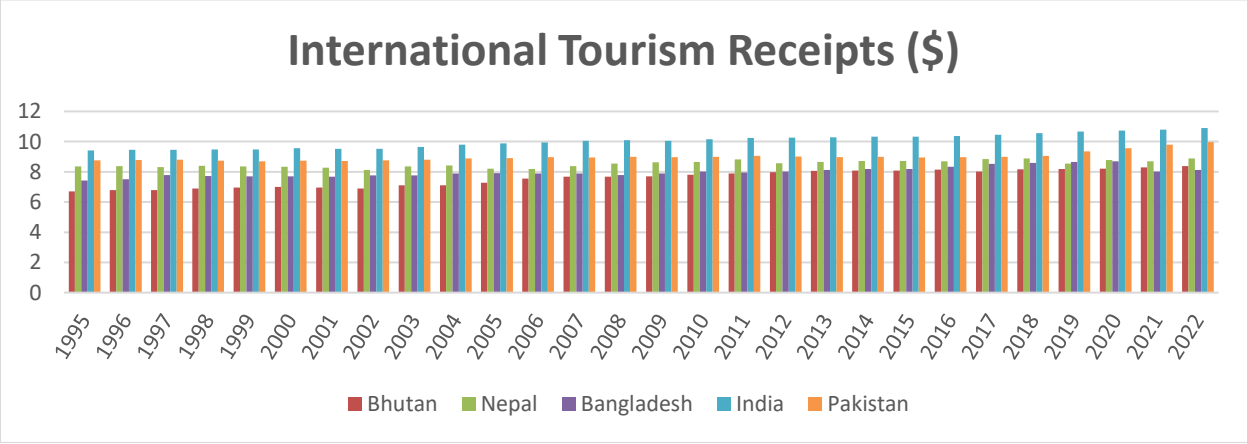

Figure 1: International Tourism Receipts in Pakistan as Compared to Other South Asian Countries (1995-2022)

Pakistan is selected as a case study to test the nexus between tourism and economic growth due to several causes. With these sceneries, major attractive destinations for international tourists are K2 and Himalayan hills. K2 is the second top hill in the world which attracts a large number of international tourists. Furthermore, Pakistan has also many earliest civilizations like Badshahi Mosque, Taxila, Mohenjo-Daro, ShahiQila and Harappa. These civilizations and cultural places also attract many international tourists and make the country a heaven for the tourists. Before the world crises, each year more than fifty thousand international tourists come to Pakistan. According to the Bucher (2018), Pakistan improves its ranking in the travel and tourism industry rather than past years. Furthermore, the tourism industry provides job opportunities more than 5.7% of total employment rate of the country as well as a share of the tourism industry in exports have been increased than previous years it was 86 billion rupees in 2011. There is very short literature available on the connection between inbound tourism and economic growth in the case of Pakistan (Fauzel, Jaffur, & Seetanah, 2021; Jalil et al., 2013; Khan, Naseem, & Khan, 2021; Malik, Chaudhry, Sheikh, & Farooqi, 2010). However, out of these studies, some authors used either traditional econometrics techniques to measure this relationship or use demand function for tourism. Therefore, this study utilizes the Autoregressive Distributive Lag (ARDL) model to inspect the influence of inbound tourism on growth of GDP for Pakistan by using historical data over the period of 1995-2022.

2. Materials and Methods

The present study consists of a time series analysis to scrutinize the effect of tourism on GDP growth in Pakistan. The observed estimations of the desired objectives in the study, a panel data of 28 years over the time period of 1995-2022 the base of accessibility of the data are employed. The information of every variable is collected from world development indicators (WDI). In the present study of Per Capita GDP is used as a dependent variable of the inflation rate, tourism receipts, no. of deaths due to terrorism, capital investment in the tourism sector and political instability are used as explanatory variables in the study.

The variable per capita GDP is a useful related used for the GDP growth. So, in the study, the variable GDP per capita is used for economic growth and this variable also were used by a lot of studies (Amna Intisar, Yaseen, Kousar, Usman, & Makhdum, 2020; Barro, 1991; De Dominicis, 2014; Grossman & Krueger, 1995; Irshad & Anwar, 2019a; Irshad, Xin, & Arshad, 2018; Irshad, Xin, Hui, & Arshad, 2018; Kravis, Heston, & Summers, 1981; Kruger, 2011; Usman, Kousar, & Makhdum, 2020; Usman, Kousar, Yaseen, & Makhdum, 2020; Usman et al., 2021). The variable international tourism receipts in the US dollarsare used for tourism. This variable is in monetary form and has been used by many earlier studies as (Arslanturk, Balcilar, & Ozdemir, 2011). ARDL is employed to investigate the short-run and long-run results of the models of this study. The ARDL model is anticipated by the (Pesaran, Shin, & Smith, 1999).

ARDL model is a very popular method that is commonly used in econometrics. The decision of the estimation technique is much dependent on the outcomes of the unit root results. In this case, all the variables are I (0).Then, we used simple ordinary least square method OLS in the time series data. On the contrary, when all the series are stationary at I(1) then Johansen cointegration approach is used. But when both cases do not exist and some variables of the study are stationary at I(0), while the other remaining series of this research are stationary at I(1) Amna Intisar et al. (2020) in this circumstances, ARDL is applied. The reason for the popularity of ARDL model is the analyzed short-run and long-run cointegration of the different variables.

2.1. Empirical Model

$$LPGDP = \beta_0 + \beta_1 LINF + \beta_2 LCI + \beta_3 PI + \beta_4 LTER + \beta_5 LTOUR + \mu)$$

The symbols used in the model are explained as:

$\beta 0$ stands for intercept and $\beta 1, \beta 2, \beta 3, \beta 4, \beta 5,$ are the parameters of slope coefficients. μ is the error term.
LPGDP=Log of Per Capita GDP growth, LINF= Log of Inflation rate, LCI= Log of Capital Investment, PI= Political Instability, *LTER= Log of no. of deaths due to Terrorism*, and *LTOUR= Log of Tourism receipts*

2.2 Hypothesis of the Model

The hypothesis that are examined on the basis of the research objectives are as follows:

Hypothesis 1

H0: $\beta 1 = 0$ Inflation rate influence on GDP growth per person is not significant
H1: $\beta 1 \neq 0$ Inflation rate influence on GDP growth per person is significant

Hypothesis 2

H0: β1=0 Capital Investment impact on GDP growth per person is no significant
H1: β1≠ 0 Capital Investment impact on GDP growth per person is significant

Hypothesis 3

H0: β1=0 Political Insatiability impact on GDP growth per person is no significant
H1: β1≠ 0 Political Insatiability impact on GDP growth per person is significant

Hypothesis 4

H0: β1= 0 Terrorism impact on GDP growth per capita is no significant
H1: β1≠ 0 Terrorism impact on GDP growth per capita is significant

Hypothesis 5

H0: β1= 0 Tourism receipts impact on GDP growth per capita is no significant
H1: β1≠ 0 Tourism receipts impact on GDP growth per capita is significant

3. Results and Discussion

This section has much importance in the chapter and presents the descriptive statistics of the variables under consideration.

3.1 Unites Roots Test

Before applying an econometric technique, we have to examine the stationary of data. This is necessary to make non stationary data into stationary to achieve valid results of the study. The classical methods follow the assumption in econometric estimation that the average and variance of the aforementioned variables are constant (C) over a period of time. Phillips Perron test Phillips and Perron (1988) and Augmented Dickey-Fuller test Dickey and Fuller (1979) tests are most commonly used in previous studies to estimate the stationary of the panel data.

Table 1
Descriptive Statistics of the Study

Variables	LPCGDP	LINF	LTER	PI	LTOUR	LCI
Mean	0.595158	0.830482	2.894433	-1.68075	8.904626	1.862398
Median	0.666430	0.885175	2.934176	-2.22262	8.940021	1.939319
Maximum	0.894655	1.152441	3.237415	0.819780	9.052926	2.654678
Minimum	0.007038	0.412549	2.504135	-2.82004	8.711965	1.098698
Std. Dev.	0.218937	0.240662	0.215208	1.174568	0.121345	0.612729
Skewness	-1.03223	-0.30674	-0.20458	0.997415	-0.34328	-0.135601
Kurtosis	3.840753	1.794859	1.997451	2.590979	1.587066	1.445908

In this table, the Mean, Median, Maximum, Minimum, Standard Deviation and Skewness are presented in form of rows while, variables of study such log of Per Capita GDP (LPGDP), log of Capital Investment (LCI), Political Instability (PI), log of Terrorism (LTER), log of Inflation (LINF) and log of Tourism receipts (LTOUR) are presented in form of columns. The results showing that Mean value of variable LPGDP is 0.595158 and the range of the variable is from 0.007038 to 0.894625. Likewise, the values of Median and Std. Dev of the variable are 0.666430 and 0.218937 respectively. In the same way, the values of Mean, Median and Std. Dev of the variable LINF are 0.830482, 0.885175 and 0.240662 respectively. The range value of the LINF is from 2.504135 to 1.152441. For another variable naming LTER, values of Mean, Median and Std. Dev are 2.894433, 2.934176 and 0.215208 respectively. The range value of

the LTER is from 0.412549 to 3.237415. Likewise, the values of Mean, Median and Std. Dev of the variable PI are -1.68075, -2.22262 and 1.174565 respectively. The range value of the PI is from -2.82004 to 0.819780. In contrary, the values of Mean, Median and Std. Dev of the variable LTOUR are 8.711965, 8.940021 and 0.111345 respectively. The range value of the LTOUR is from 8.711965 to 9.052924. In the last, the values of Mean, Median and Std. Dev of the variable LCI are 1.862398, 1.939419 and 0.5602529 respectively. The range value of the LCI is from 2.504155 to 2.654678. Further, the skewness of all the variables are negative except variable PI.

Table 2
Results of Augmented Dickey-Fuller Test

Variables	At level				At first difference			
	ηc	P-value	ηc,t	P-value	ηc	P-value	ηc,t	P-value
LPGDP	-3.00	0.052**	-3.07	0.1408	-5.33	0.000*	-5.2640	0.0018*
LINF	-1.94	0.3091	-1.86	0.6381	-4.42	0.0023*	-4.3281	0.0126*
LCI	-0.11	0.9365	-2.94	0.1703	-3.16	0.037**	-3.0211	0.1499
LTER	-1.38	0.5649	-5.20	0.0019*	-7.33	0.0000*	-3.8530	0.0390**
PI	-1.40	0.5628	-1.63	0.7478	-6.36	0.0000*	-2.8345	0.2022
LTOUR	-3.74	0.0149*	-1.48	0.787	-4.07	0.0051*	-4.0428	0.0225**

Note: ηc represents the intercept, ηc,t represents the intercept and trend. *,** represents the level of significance at 1% and 5% respectively.

Table 2 reports the t-statistics and p-values with both intercept and with intercept and trend at a level as well as 1st difference for all the variables. The p-value of the variable LPGDP is significant at level I(0) with both intercept and with intercept and trend at 5% as well as it is also significant at 1st difference at 1%. Another variable naming LINF is insignificant at the level. Moreover, the variables LTER and LTOUR are significant at both at level and as well as 1st difference.

Table 3
Results of Philips-Perron Test

Variables	At level				At first difference			
	ηc	P-value	ηc,t	P-value	ηc	P-value	ηc,t	P-value
LPGDP	-2.825	0.07***	-3.026	0.146	-5.581	0.000*	-5.459	0.001*
LINF	-2.004	0.282	-1.934	0.604	-4.429	0.002*	-4.329	0.012*
LCI	-0.244	0.918	-1.999	0.569	-3.207	0.03**	-3.054	0.141
LTER	-1.646	0.444	-5.254	0.001*	-11.46	0.000*	-11.90	0.000*
PI	-1.403	0.562	-1.476	0.808	-6.388	0.000*	-6.946	0.000*
LTOUR	-1.137	0.6828	-1.176	0.891	-4.074	0.005*	-4.042	0.02**

Note: ηc represents the intercept, ηc,t represents the intercept and trend.
*,**,*** represents the level of significance at 1%, 5% and 10% respectively.

Table 3 is the stationary outcomes of all the variables of study using Phillips Perron (PP) unit root test. The LPGDP is significant at levelI(0) with only intercept at 10% as well as it is also significant at 1st difference at 1%. Another variable naming LTER is significant at level at 1% and as well as it is also significant with both intercepts.

Table 4
Results of Correlation Matrix

Correlation	LPGDP	LCI	LINF	PI	LTOUR	LTER
LPGDP	1.000000					
LCI	0.248707	1.000000				
LINF	-0.24958	0.065767	1.000000			
PI	-0.23910	0.970152	-0.094465	1.000000		
LTOUR	0.138425	0.895006	0.417805	0.822484	1.000000	
LTER	-0.18846	-0.86965	-0.025267	-0.856070	-0.844406	1.000000

Table 4 shows the results that the variable LCI has a positive correlation with LPGDP but its value is lower which indicates that LCI has a positively weak correlation with LPGDP. In the same way, the variable PI has also a positively weak correlation with LPGDP with the value of 0.239100 but it has a very strong positive correlation with the variable LCI and also very strong negative correlation with the variable LINF. Likewise, another important variable LTOUR has also had a positive but very weak correlation with LPGDP with the value of 0.138425 but along with it has very strong positive and negative correlation with LCI and PI variables respectively. On contrary, the variable LINF has negative and weak correlation with LPGDP with the value of -0.24958. Further, the variable LTER has also weak negative correlation with the LPGDP with the value of -0.18846. Moreover, terrorism also has negative correlation with all the other variables of the study.

Table 5
VAR Lag Order Selection Criteria for Selected Model

Lag	LogL	LR	FPE	AIC	SC	HQ
0	71.80317	NA	7.65e-11	-6.26696	-5.968534	-6.202201
1	166.0573	125.67	3.49e-13	-11.8149	-9.725939	-11.36161
2	256.8014	69.138*	5.67e-1*	-17.028*	-13.1490*	-16.1867*

Note: * indicates lag order selected by the criterion.

Table 5 shows the results of different criteria for the selection of lag. According to all criteria it is showing that lag2 is a perfect and appropriate lag for the selected model of the study.

Table 6
Results of ARDL Bound Test

Test statistics	Value	K
F-statistics	35.37724	5
Bounds critical values		
Significance level	I0 Bounds	I1 Bounds
10%	2.28	3.39
5%	2.66	3.89
2.5%	2.95	4.20
1%	3.43	4.78

Table 6 showing the F-statistics value and illustrates the upper and lower critical values of the bound test on which decision is taken. The results show that the value of F-statistics is more than the lower and upper critical values of the bound test. This result implies that the ARDL technique can be applied to the selected model.

Table 7
Results of long-run ARDL model

Variables	Coefficients	Std.Error	t-test statistics	P-value
LINF	-1.007635	0.199284	-5.056282	0.0023*
LCI	5.238043	1.884860	2.779009	0.0320**
PI	- 0.527171	0.073620	7.160679	0.0004*
LTOUR	6.296586	1.229647	5.120644	0.0022*
LTER	-1.693333	0.641000	-2.641705	0.0385**

Note: *,** represents the level of significance at 1% and 5% respectively.

In this sense, the Table 7 expressed the coefficients values of the concerned variables, Std.error, t-statistics and p-values of the coefficients. The results of ARDL are showing that all the regressors have a significant connection with the GDP growth. The coefficient of LINF is showing negative sign but significant at 1% with a p-value of 0.0023. This outcome shows that a 1% rise in the rate of inflation will lead to -1.007635% decrease in GDP per capita. This result supports the fact that inflation is not a good thing that affects GDP growth negatively.

The estimated outcomes are in line with some previous findings of Barro (1995); Sarel (1996) and (Bittencourt, Van Eyden, & Seleteng, 2015).

The estimated coefficient value of another variable capital investment (LCI) is positive and statistically significant. This result explore that variable capital investment has a significantly positive association with GDP growth. More specifically, a 1%influence in capital investment leads to an increase in per capita GDP by 5.238043% in the long-run. This result supports the information that as capital investment in tourism sector increases the more income generated for the country. Thus, capital investment in the tourism sector is a good thing for Pakistan for (Irshad & Anwar, 2019b; Stauvermann & Kumar, 2017).

In the same way, the estimated coefficient value representing the variable political instability also has a significantly adverse coefficient value. The result implies that political instability has significantly negative relationship with per capita GDP. Further, the result indicates that as the political instability score increases by one percent, the per capita GDP also decreases by 0.527171 percent. The high magnitude value of the coefficient shows a strong relationship with per capita GDP. This result supports the fact that political instability is a harmful thing for GDP growth inPakistan even in case of whole world. This result is consistent with (Aisen & Veiga, 2013; Alesina, Özler, Roubini, & Swagel, 1996; Siddique, e Ali, & Irshad, 2022; Siddique, e Ali, Sajid, Khan, & Irshad, 2022).

Another important result of the study representing the variable LTOUR has a significantly positive coefficient, with a value of 0.0022%. This outcome implies that international inbound tourism receipts have a significantly positive association with GDP growth. It indicates that as tourism receipts increase by one percent, the per capita GDP also increases by 6.296586 percent. This result shows that the tourism sector also helps to move economy of the Pakistan upward. This outcome is in line with the conclusion of (Alam, Paramati, Shahbaz, & Bhattacharya, 2017; Du, Lew, & Ng, 2016; Naveed, Sarwar, e Ali, Irshad, & Taqi, 2022; Tang & Tan, 2015).

In the last, the estimated coefficient value of the variable representing LTER has a negative with significant p-value 0.0385. The result illustrates that the number of deaths due to terrorism has negative association with GDP growth of the particular country. This result shows that as deaths due to terrorism increases by 1%, the per capita GDP decreases by -1.69333%.This result supports the fact that terrorism is a main issue in the East Asia especially; Pakistan is facing problems due to terrorism. In this sense, terrorism also affects the income of the tourism sector. This outcome is in line with the conclusion of Lanouar and Goaied (2019) and (Hasan, Naeem, Arif, Shahzad, & Nor, 2020).

Table 8
Results of Short-run ARDL model

Variables	Coefficients	Std.error	t-test statistics	P-value
ECM(-1)	-0.803598	0.040811	-19.445506	0.0000*
D(LPGDP(-1))	-0.034917	0.036846	-0.947653	0.3799
D(LPGDP(-2))	0.196127	0.048022	4.084063	0.0065
D(LINF)	-0.068619	0.061608	-1.113807	0.3080
D(LTER)	2.840909	0.283280	10.028618	0.0001
D(PI)	0.248861	0.029986	8.299225	0.0002
D(LTOUR)	3.243255	0.357939	9.060910	0.0001
D(LCI)	0.756214	0.124142	6.091502	0.0009
C	-52.244313	2.683743	-19.466955	0.0000

Note: * represents the level of significance at 1%.

Table 8 is showing the variables, coefficients values, Std. error, t-statistic and P-value of the coefficients. The findings of the ARDL explore that the coefficient value for Error correction term (ECM) is highly significant with negative sign at 1% significance level. Further,

this result illustrates that the model will converge annually from short-run to long-run with a speed of 0.803598% with the change in LINF, LCI, PI, LTER and LTOUR respectively.

Table 9
Breusch-Pagan-Godfrey Test of Heteroscedasticity

$F-statistic$	0.476896	$Prob.F(13,6)$	0.8964
$Obs*R-squared$	10.07865	$Prob.Chi-Square(13)$	0.6962
Scaled explained SS	0.631725	$Prob.Chi-Square(13)$	1.0000

Table 9 is showing the value of F-statistics, observed R^2 and scaled explained SS with their probability values. The null hypothesis (H_0) assumes there is absence of heteroscedasticity in the estimated model. Hence, on the basis of the estimated findings as given in Table 9 probability value is insignificant which implies that the H_0 can't be rejected. The findings suggest that there is no heteroscedasticity in the selected model of the study.

Table 10
Breusch-Godfrey LM Test for Serial Correlation

$F-statistic$	0.617271	$Prob.F(2,4)$	0.5987
$Obs*R-squared$	4.668086	$Prob.Chi-Square(2)$	0.2078

In the Table, the values of F-statistics and observed R^2 are given with their probability values. The results of the LM test also show that both probability values are insignificant which implies that there is no problem of autocorrelation in the model. Hence, theH_0 is that there is no autocorrelation. So, on the basis of an insignificant p-value; the null hypothesis cannot be rejected. Hence, it is indicated that there is no problem with autocorrelation in the model.

Table 11
Results of Granger Causality Test

NullHypothesis:	F − Statistic	Prob.	Inference
LCI→LPGDP	3.12271	0.0716	CI cause PGDP
LPGDP → LCI	0.15157	0.8606	No causality relation
LINF→LPGDP	1.89785	0.1803	No causality relation
LPGDP→LINF	0.54609	0.5890	No causality relation
LTER→ LPGDP	1.14710	0.3409	No causality relation
LPGDP → LTER	0.08826	0.9159	No causality relation
LTOUR → LPGDP	0.10750	0.8987	No causality relation
LPGDP →LTOUR	1.05731	0.3692	No causality relation
PI→ LPGDP	0.93706	0.4111	No causality relation
LPGDP →PI	1.34201	0.2876	No causality relation
LINF→LCI	0.96241	0.4030	No causality relation
LCI →LINF	0.66924	0.5259	No causality relation
LTER→ LCI	0.85032	0.4457	No causality relation
LCI → LTER	4.00596	0.0389	CI cause TER
LTOUR → LCI	0.73832	0.4935	No causality relation
LCI → LTOUR	4.42953	0.0294	CI cause TOUR
PI → LCI	14.0974	0.0003	PI cause CI
LCI→ PI	0.01280	0.9873	No causality relation
LTER→ LINF	1.98133	0.1685	No causality relation
LINF → LTER	1.29353	0.3000	No causality relation
LTOUR → LINF	0.42140	0.6628	No causality relation
LINF→LTOUR	2.96638	0.0785	INF cause TOUR
PI→ LINF	0.92834	0.4143	No causality relation
LINF→PI	0.34193	0.7152	No causality relation
LTOUR→LTER	0.72234	0.4999	No causality relation
LTER→LTOUR	0.76049	0.4827	No causality relation
PI→ LTER	0.97452	0.3975	No causality relation
LTER→ PI	1.45203	0.2617	No causality relation
PI→ LTOUR	5.63653	0.0132	PI cause TOUR
LTOUR → PI	0.15923	0.8541	No causality relation

The Table consists of the null hypothesis, F-statistics and probability value of the test. The estimated results are showing that there is no existence of bidirectional causality among any variables rather than unidirectional causality is found among many variables of the study. It can be seen from the results that there is unidirectional connection among variable of political instability and tourism receipts as well as among inflation rate and tourism receipts.

Likewise, there is also found one-way causal relationship among some other variables such as from political instability (PI) to capital investment (LCI), capital investment (LCI) to tourism receipts (LTOUR), capital investment (LCI) to terrorism (LTER) and capital investment (LCI) to economic growth (LPGDP). Further, except for the abovementioned variables the results also clarify that there is no causal association among the remaining series of the current study.

4. Conclusion

The results show that the coefficient value representing the variable LINF is negative. This result point outs that a 1% increase in rate of inflation leads to -1.007635% decrease in the per capita GDP. The result supports the fact that inflation is not a good thing because it affects economic growth negatively. The estimated value of capital investment is positive. This result indicates that the variable capital investment has a significantly positive and significant relationship with GDP per capita. Furthermore, 1% increase in capital investment leads to increase in GDP per capita by 5.238043%. These results support the fact that as a capital investment in the tourism sector increases more income is generated for the country. Thus, capital investment in the tourism sector is a good thing for Pakistan for generating more returns. In the same way, the estimated coefficient value representing the variable political instability also has a negative and significant coefficient value. Further, the result indicates that as the political instability score increases by 1%, the per capita GDP also decreases by 0.527171%. The high magnitude value of the coefficient shows a strong relationship with per capita GDP. Another important result of the study representing the variable LTOUR has positive. It indicates that as tourism receipts increased by 1%, the per capita GDP also increases by 6.296586%. This result shows that the tourism sector also helps to move the economy of Pakistan upward. In the last, the estimated coefficient value of the variable representing LTER has negative and significant. The result shows that the number of deaths due to terrorism has a negative and significant association with the economic growth of the country. This result indicates that as deaths due to terrorism increased by 1%, the per capita GDP decreased by -1.693333%. This result supports the fact that terrorism is the main issue in East Asia especially in Pakistan which is facing problems due to terrorism and the economy of Pakistan is much disturbed due to terrorism. In this sense, terrorism also affects the income of the tourism sector.

4.1. Policy Recommendation

On the basis of the results study also give some policy recommendations for concerned policymakers and government Pakistan is a developing country and has much importance in south Asia and has very beautiful places for global tourists within the country. So government should have to maintain greenery and natural places tourism sector in Pakistan is also an income-generating sector like the other sectors of the economy so government should have to make some long term policies regarding the tourism sector. Government should provide the facilities like transportation and guest houses. Government should also maintain the law-and-order situation in Pakistan. Capital investment is accountable for the process of economic growth in Pakistan and Pakistan's central authority should change their capital infrastructure policies and financial structure leadings towards the economic growth of Pakistan. The government of Pakistan should increase the budget for research and development in the financial sector and tourism sector. To should control inflation and central authority should take

more interest in institutional quality. Another important factor is terrorism which adversely affects the tourism sector at a larger scale and lowers the income share of the sector. For recent decades Pakistan is facing the problem of tourism in the country as well as the region therefore along with other policies regarding the investment in hotel industries the government should also have control of the problem of terrorism.

Authors' Contribution

Mujahid Iqbal: Writing Draft, Review of Literature, Conceptualization
Aminah Khawer: Data analysis and editing.
Ghulam Sajjad Khan: Data analysis and interpretation.
Muhammad Saqib Irshad: Revising the draft & and editing

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