Empirical analysis of tourism as a tool to increase foreign direct investment in developing country: Evidence from Pakistan

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ABSTRACT

This study examines the role of tourism in increasing the attraction of foreign investors towards Pakistan. For this purpose, we use time-series data from 1995 to 2018, by considering the tourism on the “total number of tourists” and “total receipts from tourism” by comparing it with Foreign Direct Investment (FDI). The analysis was done with a tool called E-Views and testing the data using the unit root test and Johansen Cointegration test. For testing the long-term relationship between the variables, the Granger casualty test is used which shows the long-run relation between tourism and foreign direct investment. The results show that tourism is a Granger cause of foreign direct investment by showing two unidirectional relationships between tourism and foreign direct investment. From the result, we concluded that tourism has a constructive impact on FDI, thus Pakistan should promote tourism in the country to increase the level of foreign direct investment in the country through tourism.

Key Words: Pakistan, Tourism, Foreign direct investment (FDI), Tourists, Total receipts of tourism

I. Introduction

Tourism FDI was discussed at the extent in the dependency’ of political, financial system literature of the 1970s, and several authors are still relatively negative in their valuation (Wilkinson 1987; Clancy 1999; Weaver 1988; Harrison 1992; Oppermann 1993). However, tourism and FDI have not been much analyzed in a broad or far-reaching way, for example contrasting the associations of various nations or the impacts of remote in examination with local investors. For example, Gerosa and Gaucer (2002) and Welde and Nair (2005) investigated the subject of the tourism FDI and the General Agreement on Trade in Services (GATS) of the World Trade Organization (WTO). Kusluvan and Karamustafa
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(2001) investigated arrangement ramifications of international hotels in rising nations, yet principally from a hypothetical and not a contextual analysis or observational viewpoint. Thus, Rodríguez and Acosta-González (2007) and Chen and Irini (2005) concentrated more on business strategy and did not concentrate on creating nations. Then again, to address the subject of the connection among FDI and the travel industry in China, yet inspect FDI altogether and not the travel tourism-related FDI Tang et al. (2007). The tourism industry nowadays is considered to be an important economic sector in both, developed and developing countries. Samimi et al. (2013) highlighted the importance of the tourism industry in increasing foreign exchange income. Moreover, another author points out the great role of tourism in creating employment opportunities and contributing to economic growth. Higher quality services and better friendliness tend to entice more tourists, increase incomes from the tourism industry and to contribute to the economy as a whole (Satrovic and Muslija, 2018). Worried that, the connection among the travel industry and FDI has as of late become a hot research point. The available literature presents different dimensions of the dependency between these two components of the economy (Bezić and Radic, 2017; Fereidouni and Al-mulali, 2012; Li et al. 2018; Tang et al. 2007; Yazdi et al. 2017). The statement of the problem of this research, “foreign investor have sustained to stay away from Pakistan as they are disinclined to make long-term reserves in the face of uncertainty about the new economic policy of the Pakistan government. FDI dropped 55% to $161.2 million in October 2018, compared with $354.6 million in the same month of last year, the State Bank of Pakistan” (Saddaqi 2018). The tourism segment requires capital, framework, information and access to worldwide advertising and conveyance chains to create and continue (Banerjee et al. 2015). The significance of the study is “the impact of FDI on China's growth is more than the collision of FDI on the growth of India and other variables are much more significant to predict growth rather than FDI” (Agrawal and Khan, 2011). According to the report, the FDI of Pakistan is low from the years just because of not coming tourists at desired numbers. Therefore, it's very important to study the impacts of both variables to check the level and importance of tourism. The specific research question, does the tourism industry have a significant impact on foreign direct investment? Consequently, this study's research objective was to examine the collision tourism on FDI in Pakistan from the period of 1995 to 2018 by measuring the tourism from “total number of tourists” and “total receipts from tourism” in Pakistan.

Research framework
According to the model, the tourism is an independent and taken foreign direct investment as a dependent variable which can be changed and measure by tourism like number of tourist and tourist receipt, we will then take the number of tourists and will check the relation with the foreign direct that how they are related to each other (Agrawal and Khan, 2011).

II. Materials and Methods
The study was conducted in Pakistan; the data that has been set for this study is a time-series data covering the period from 1995 to 2018. Three variables were used, “foreign direct investment (FDI)” measured in terms of million US dollars, “Total number of tourists (TNT)” and “Total receipts from tourism (TRT)”. Data for the same has been collected from the World Bank sources. This research is quantitative in nature. The population for the research includes all the variables that affect the FDI in Pakistan. For this study, Pakistan has taken as a sample to inspect the effect of the tourism industry on foreign direct investment. Twenty-four years of data taken as a sample to calculate the outcomes of
tourism on FDI in Pakistan from the period of 1995 to 2018. EViews offers instructive specialists, enterprises, government offices, and understudies’ paths into incredible measurable, determining, and displaying apparatuses through a spearheading, simple-to-utilize object-situated interface. EViews, this tool is used for the analysis of time-series data. To check the causal relationships among the selected variables, the first step is to determine whether time series data have unit root or not. Augmented Dickey-Fuller (ADF) test is one of the most popular techniques to check whether data has unit root or not. Enders (2008) Co-integrated and long-run relationships are said to exist if such a stationary linear combination. Co-integration implies the existence of causality between variables, but the direction of the causal relationship is not indicated by this method. Granger Causality is employed for the determination of the direction of causality both in the shorter and in the longer run.

Model specification
The basic estimation model for three variable FDI, TRT and TNT are mathematically presented, as where \( i \) stands for the individual (countries in this case), and \( t \) stands for the time period. The meaning of variables is described above. \( \beta_0 \) is a constant term, \( \beta_1 - \beta_2 \) are regression parameters while \( \epsilon_{it} \) represents an error term (Jalil et al. 2013).

\[
\text{FDI}_{it} = \beta_0 + \beta_1 \text{dTTR}_{it} + \beta_2 \text{dTNT}_{it} + \epsilon_{it}
\]

Data analysis
E-views are used for a tool for analysis. “Granger causality test” was applied to grasp the bearing of the relationship between GDP, FDI, and the travel industry.” A set of criteria, known as the Diagnostic test was applied before the Granger test. The criterion method was as follows: - “unit root test”, "Johansen’s Cointegration Test" (Kaur and Sarin, 2016).

### III. Results and Discussion
The important step is to ensure the stationary of time-series data to decide the order of the integration of all of the three variables, which are used in the study. "Augmented Dickey-Fuller" unit root test has been utilized in the investigation of information. The result of the unit root test is described in Table 01. It is clear from the results that the null hypothesis of no unit-roots for the entire time-series is rejected at their second differences as the ADF test statistic values are less than the critical values at 1%, 5% and 10% level of significances. Thus, the entire variables are stationary and integrated of the same order, i.e. \( I(2) \). From the order of integration, it is deep-rooted, how many times data need to be differentiated to befall stationary. Once data is stationary, we can use it for further analysis (Kaur and Sarin, 2016).

#### Table 01. Results of augmented Dickey-Fuller unit root test

| Variables with intercepts | Levels      | Frist difference | Second difference |
|---------------------------|-------------|------------------|-------------------|
| FDI                       | -3.05**(0.04)| -5.162**(0.0005) | -7.470**(0.0000)  |
| TRT                       | -3.431**(0.0227)| -6.772**(0.0000) | -9.140**(0.0000)  |
| TNT                       | -4.292**(0.0031)| -5.699**(0.0002) | -4.756**(0.0020)  |

** Denotes the refusal of the null hypothesis of no integration at the 5% level.

Another important step is to check the stationary of time-series data to conclude the order of integration used for all of the four variables used in the study. “Augmented Dickey-Fuller “unit root test was utilized for the investigation of data. The results of unit root test are reported in Table 01 and it is obvious from the results that the null hypothesis of no unit-roots for the entire time series are rejected at their second differences as the ADF test statistic values are less than the significant values at 1%, 5% and 10% levels of significance.

#### Table 02. Results of Johansen's Co-integration Test

| Hypothesized no. of CE(s) | Trace statistic     | Max-eigen statistic |
|---------------------------|---------------------|---------------------|
| None *                    | 47.75654**(0.0002)  | 24.05395**(0.0188)  |
| At most 1 *               | 23.70259**(0.0023)  | 14.44686**(0.0468)  |
| At most 2 *               | 9.255733**(0.0023)  | 9.255733**(0.0023)  |

** Denotes the refusal of the null hypothesis of no integration at the 5% level.
To test the co-integration between stationary variables, Johansen's cointegration test has been applied and the outcome is concluded (Table 02) based on trace value and maximum "Eigenvalue tests". Both the Trace test and maximum Eigenvalue indicate that these variables are integrating at 1%, 5% and 10% level of significances. This test confirms that there exists a long-run association among all three variables. But this test does not indicate the direction of this relationship. To know the variable Granger, cause the other variable we will apply the Granger Causality test as the final step. Further, the existence of co-integration implies the subsistence of Granger causality at least in one direction (Granger 1988).

Table 03. Results of the Granger causality test

| Null hypothesis | F-statistic        | Decision                                      |
|-----------------|--------------------|------------------------------------------------|
| DTNT Does Not Granger Cause DFDI | 3.83241 (0.0543) | There is unidirectional relation running from DTNT to DFDI |
| DFDI Does Not Granger Cause DTNT | 4.00642** (0.0490) |                                              |
| DTRT Does Not Granger Cause DFDI | 0.43257 (0.8133) | There is a unidirectional relation between FTNT and DFDI |
| DFDI Does Not Granger Cause DTRT | 3.00283** (0.0333) |                                              |
| DTRT does not Granger Cause DTNT | 0.92940 (0.5150) | There is no relation between DTNT and DTRT |
| DTNT does not Granger Cause DTRT | 3.09186 (0.0867) |                                              |

** Denotes the refusal of the null hypothesis of no Causality at the 5% level.

The Granger Causality was applied to know the direction of association among all three variables. Results show that DTRT and DTNT are not showing any causal relationship between both. There is a unidirectional relationship consecutively from DTNT to DFDI means as the "number of foreign tourists" arrival increase; [foreign direct investment] also increases. The null hypothesis of DTNT does not Granger cause FDI has been rejected by p-value which implies that the growing total number of tourists in the economy attracts foreign direct investment as both are found causally related to each other. The causality running from FDI to TNT and TRT is also unidirectional in nature.

Similar to this study, Garcia-Flores et al. (2008) reported a time-series regression examination of the endurance of a positive relationship between FDI and the travel industry development in Mexico. While Fereidouni and Al-mualali (2014) chosen OECD nations, panel co-integration and panel Granger causality regression methods begin a since a long-run relationship from FDI inland division to the travel industry stream. The analysts likewise famous a bidirectional causal relationship. Furthermore, Siddique et al. (2012) reported that time-series econometrics (vector autoregressive structure) event of just a single direction causal relationship from FDI to the tourism in India. In addition, Tiwari (2011) reported that India, China, Pakistan, and Russia also used panel standard least squares estimation procedure found that the travel industry had assumed a significant role in expanding FDI.

IV. Conclusion and future directions

The tourism industry has a significant cause on FDI in Pakistan from the period of 1995- 2018. To determine the causal relationship or direction of this relationship among these variables Granger causality tests were used, and the results of this test indicate a unidirectional association running from FDI to TNT, TRT. The relation between foreign tourist arrival and FDI is also unidirectional running from TNT to FDI, which implies the number of foreign tourist arrivals, does the impact foreign direct investment but the latter does not affect the former. There might be plentiful details of unproductive association among unremarkable assets (tourism) of inferior countries and financial growth of the land, in any case, the brand hypothesis proposes that absent a significant device for deploying an inventive and consistent way is the most important cause.

The consequences of the study make it known that FDI has a positive impact lying on the trade and industry growth of Pakistan. Correlation analysis also suggests that FDI and GDP are certainly linked to each other. So finally, the result of the study exposes that FDI positively affects the economic growth in Pakistan. Therefore, the study commends that government strategy makers should bring reforms in the domestic marketplace in order to draw more FDI in Pakistan. The recommendation for the researchers...
is that they can work to check the relationship in the country and the attraction of foreign investment. Indeed, market size, trade openness, a good or bad organization, the current account deficit has a significant effect on FDI inflows. The other control variables like GDP, trade openness, inflation rate, telephone mainlines, literacy rate and agglomeration are also making an optimistic and significant impact on the flow of FDI in developing countries like Pakistan.

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