

Tourism and Economic Growth in Bangladesh: An Empirical Investigation of Causal Links

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Abstract

Tourism is now regarded as a driving force for economic development in developing nations. Tourism has a direct impact on job creation and infrastructure development. It has also an indirect impact on agriculture, manufacturing, financial services, transport, trade and communications. That is why tourism is often coined as 'limitless growth potential. Although a good number of empirical studies on the contribution of the tourism sector in the overall economic development in Bangladesh have already been conducted in recent years. No research has been undertaken to investigate the causal relationship between the tourism sector and economic growth. This research fills the gap. This research uses a disaggregated approach to investigate the effect of both domestic tourists and international tourists on economic growth. The data sources for this research are secondary in nature. This study examines the causal relationship between the tourism sector and economic growth for the economy of Bangladesh by using the Augmented Dickey-Fuller Test (ADF) and Phillips-Perron (PP) test, Cointegration approach, Granger Causality test during the period of 1995 to 2019. Here, the cointegration and Granger causality test are applied to explore the direction of the causality. The study results show a long-run cointegration relationship between the tourism sector and economic growth for Bangladesh. It also shows that long-run unidirectional causality exists running from domestic tourists and international tourists to economic growth, and bidirectional causality exists between international and domestic tourists. The research results show that both domestic and international tourism promotes economic growth. These findings suggest that paying attention to domestic tourism could rapidly increase the tourism sector's share of GDP growth along with inbound tourism.

Keywords: Cointegration test, Granger causality test, Augmented Dickey-Fuller Test (ADF), Phillips-Perron (PP) test, Economic growth, Time-series analysis.

1. Introduction

A much-debated question in development economics is whether tourism contributes to the growth of economies (Bento, 2016). More recently, evidence suggests that the economic impact of tourism plays a vital role in the local and global financial domain and tourism could create new jobs and enterprises as well as could develop infrastructures (Hossen et al., 2021). The developing economies allocate their resources to creating new attractions or building infrastructure at an increasing rate assuming tourism as a major driver for growth and employment (Du, Lew and Ng, 2016). However, causal links on the empirical relationship between the tourism sector and economic growth are different for different countries and a considerable amount of literature offer contradictory findings (Dritsakis, 2004; Kim, Chen and Jang, 2006; Sequeira and Nunes, 2008; Narayan et al., 2010; Eugenio-Martin, Martín Morales and Scarpa, 2011; Bal, Akça and Bayraktar, 2016; Bento, 2016; Salifou and Haq, 2017; Tabash, 2017; Oh, 2005; Antonakakis et al., 2015; Ekanayake and Long, 2012).

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Tourism as a non-factor service sector can support export diversification in developing countries. For example, the contribution of the travel and tourism to the Gross Domestic Product (GDP) of India, China, Malaysia and Thailand are 6.8%, 11.3%, 11.5% and 19.7% respectively in 2019 whereas the International Visitor Impact of India, China, Malaysia and Thailand are 5.6%, 4.9%, 9.4% and 21.1% respectively of total exports in 2019 (General Economics Division (GED), 2020a). International tourist spending, as a whole, is considered as export income for a destination. The international travel receipts in these countries are high which is reflected in the service account of the balance of payments.

Nevertheless, not all developing countries are that successful in the thriving tourism sector, including Bangladesh, which is blessed with so many natural and archaeological tourist spots along with the longest natural beach and the largest mangrove forest in the world. According to the World Travel & Tourism Council (WTTC), the total contribution on travel and tourism to GDP is 2.7% and 1.7% of the total economy only for the years 2019 and 2020 respectively and the total contribution of travel and tourism to employment are 2.9% and 2.3% of total employment for the same period (WTTC, 2021). The international tourist spending was BDT30.3 billion and 12.2 billion in 2019 and 2020 respectively. (WTTC,2021). Thus, international visitors impact only 0.7% of total exports in Bangladesh (General Economics Division (GED), 2020a). Despite being receiving low international travel receipts, domestic tourism has been booming in recent past years in Bangladesh. The domestic tourists spent BDT686.5 billion and 453.8 billion for the years 2019 and 2020 respectively (WTTC, 2021) . Therefore, in total tourist spending, domestic tourist spending is playing a vital role for Bangladesh.

The role of tourism in economic growth is recognised by the 2030 Agenda for Sustainable Development Goals (SDGs). The target 8.9 of SDGs aims to “by 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products”. The indicator of this target 8.9.1 is “tourism direct GDP as a proportion of total GDP and in the growth rate”. Bangladesh has already integrated the 169 targets of SDGs with the current 8th Five Year Plan (2021-2025). The alignments of SDGs with national plans reflect the Bangladesh government’s commitment and priorities to implement SDGs. The Bangladesh government set the target for the indicator 8.9.1 as 5% tourism direct GDP as a proportion of total GDP by 2030 (General Economics Division (GED), 2020b).

By recognising the importance of the tourism sector, a large and growing body of literature has investigated the contribution of this sector in the overall economic development in Bangladesh(Mahboob Ali and Parvin, 2010; Das and Chakraborty, 2012; Hassan, Ullah and Chowdhury, 2013; Aktar, Sadekin and Saha, 2014; Sultana, 2016; Hafsa, 2020; Hossain and Wadood, 2020).However, these studies do not use time-series data to investigate the

causal link between the tourism sector and the economic growth of Bangladesh. Hence, the causal links between the tourism sector and economic growth are still undermined in Bangladesh. This study, therefore, set out to assess the contribution of domestic and international tourism to economic growth. It uses domestic tourist spending (DTS) and international tourist spending (ITS) as preferred variables which are used as an aggregate measure of tourism activity. It highlights that the tourism sector has growth potential. This study tries to find out whether the development of domestic as well as international tourist demand contributes to the economic growth of the country and whether there is any link between domestic and international tourist spending. The purpose of this study is to evaluate the long-run impact of the development of both domestic and international tourism on the economic growth of Bangladesh so that the government can take the appropriate development plans or programmes for the tourism sector for the long term.

The structure of the rest of the paper is organized in the following manner. The objectives of this study are presented in section 2 followed by an overview of the empirical literature of the study in section 3. Section 4 presents the data sources and variable description and methodology used in the study, and consequently, section 5 presents the results and discussion. Finally, some concluding remarks are presented in section 6.

2. Objectives

The broad objective of this study is to find out the causal relationship between tourism and economic growth in Bangladesh. The specific objectives of this study are as follows:

- i. to study whether domestic tourists promote the economic growth of Bangladesh;
- ii. to study whether international tourists promote the economic growth of Bangladesh;
- iii. to find out the direction of the causal link between domestic tourist and economic growth;
- iv. to find out the direction of the causal link between international tourists and economic growth; and
- v. to find out the direction of the causal link between domestic tourists and international tourists.

3. Review of Related Literature

Recently, considerable literature has grown up around the theme of the causal relationships between the tourism sector and economic growth, which show the long-run relationship by using cointegration and causality analysis. These studies, administered for both developed and developing countries, different estimation techniques are used for the national and regional levels. These studies use different types of data set like time series, cross-section and panel data and also use univariate and multivariate econometrics techniques like Johansen cointegration approach, ARDL approach, Granger causality, Toda-Yamamoto

approach to Granger non-causality, input-output models, social accounting matrix and general equilibrium models. However, studies investigating the causal relationships between Tourism, and economic growth get mixed results. Some studies support the tourism-led economic growth (Dritsakis, 2004; Kim, Chen and Jang, 2006; Sequeira and Nunes, 2008; Narayan et al., 2010; Eugenio-Martin, Martín Morales and Scarpa, 2011; Bal, Akça and Bayraktar, 2016; Bento, 2016; Salifou and Haq, 2017; Tabash, 2017), whereas others support economic-driven tourism growth (Oh, 2005; Antonakakis et al., 2015; Ekanayake and Long, 2012).

Dritsakis (2004) examined the long-run impact of tourism and the economic growth of Greece. He used cointegration and Granger causality test for quarterly data from 1960 to 2000. In this study, he found that Greece has a bidirectional causal relationship between international tourism earnings and economic growth.

Kim, Chen and Jang (2006) studied the causal link between tourism expansion and economic development in Taiwan by using data from 1956 to 2002. They used cointegration and Granger causality test to observe the causal link. Their study results show a long-run equilibrium relationship between the two variables and also show both ways causal link between them. According to this result, these two factors reinforce each other in Taiwan.

Sequeira and Nunes (2008) used panel data for some countries. This study also found a positive association between tourism and economic growth. It also discovered that tourism specialization always brings benefits for poor countries because they get two-way benefits; one from arrivals and the other in the form of return.

Narayan et al. (2010) investigated the long-run relationship between real GDP and real tourism exports for Pacific Island countries (PICs). They use panel data from 1988 to 2004 and also use Pedroni's panel cointegration test. The result of the study uncovered that in the long run if tourism export increase by 1% then GDP will increase by 0.72% and in the short run this effect would be 0.24%.

Eugenio-Martin, Martín Morales and Scarpa (2011), by using data from 1985 to 1998, investigated the relationship between the tourism sector and economic growth for Latin American countries. They applied the panel data approach and the Arellano-Bond estimator for dynamic panels. They found that for medium or low-income countries, the tourism sector is sufficient for economic growth which would not be true for developed countries. The study result also showed that for tourist attraction low-income countries need a sufficient amount of infrastructure, education and development and medium-income countries need high levels of social development.

Bal, Akça and Bayraktar (2016) conducted a study to see the contribution of tourism in economic growth in Turkey by using annual time series data from 1972 to 2014. By using

the Johansen Cointegration test and Granger Causality test, this study finds that there is a unilateral causality running from tourism to GDP in Turkey. This research also recommends the tourism led growth for the country.

Bento (2016) investigated the causal link between tourism and economic growth for Portugal by using data from 1995 to 2015. He used a disaggregated approach by dividing tourists into domestic and foreign ones and investigates the impact of both tourists on economic growth in Portugal. By using the time series cointegration method, he found that long-run unidirectional causality runs from domestic tourists to real GDP. This study supports tourism-led economic growth and also suggests that domestic tourism stimulates economic growth.

Salifou and Haq (2017) tested the tourism led hypothesis for selected 11 countries of West African States (ECOWAS). They applied the panel cointegration technique by using data from 1990 to 2010 and found that among ECOWAS tourism-led growth hypothesis is present.

Tabash (2017) also found a long-run relationship between the tourism sector and economic growth in Palestine using the data from 1995 to 2014. In this study, the author used the Johansen Cointegration approach and Pairwise Granger Causality test to see the causal relationship among the variables. This study finds a unidirectional causality running from international tourism receipts and GDP which indicates a long-run association between the tourism sector and economic growth.

Oh (2005) investigated the causal relationship between tourism development and economic growth for Korea. In this study, the author used quarterly data from 1975 to 2001 and used Engle and Granger two-stage approach and a bivariate Vector Auto regression (VAR) model. This research shows that between these two series there is no long-run equilibrium relationship exists. This study also finds unidirectional causality running from economic growth to tourism development which indicates economic driven tourism growth for the country.

Ekanayake and Long (2012) studied relationships between tourism development and economic growth. They studied over 140 developing countries using data from 1995 to 2009 and used the heterogeneous panel cointegration technique and Granger causality tests in a multivariate model. The result of this study does not support the tourism-led growth hypothesis.

Antonakakis et al. (2015) by using data from 1995 to 2011 on 113 countries and applied a panel VAR approach and found that economic-driven tourism growth hypothesis exist in maximum cases especially for developing countries instead of tourism-led economic growth hypothesis.

For Bangladesh, the contribution of the tourism sector in economic development has received substantial attention starting in the last decade and generated a significant amount

of literature in the tourism studies(Mahboob Ali and Parvin, 2010; Das and Chakraborty, 2012; Hassan, Ullah and Chowdhury, 2013; Aktar, Sadekin and Saha, 2014; Sultana, 2016; Hafsa, 2020; Hossain and Wadood, 2020). These studies regarding the impact of the tourism sector on economic growth focus on the description of the tourism sector, tourist spots, problems and possible solutions for this sector, data on various issues on travel and tourism and their graphical representation, t-test and so on.

Mahboob Ali and Parvin(2010) carrying out their investigation on the tourism sector's contribution to the economy suggested that by developing the tourism sector, the GDP of the country would increase which ultimately develop the whole country.

Das and Chakraborty(2012), by using data from 2004-2005 to 2009-2010, analysed the contribution of tourism on GDP in Bangladesh. The authors have done the hypothesis testing by using paired sample test and found that the tourism sector is an emerging sector and also has a significant contribution to GDP.

Hassan, Ullah and Chowdhury(2013) used tourist receipts data and tried to find out its impact on the economy by the growth analysis. This study finds a strong correlation between the tourist receipts volume and the economic development of the country.

Aktar, Sadekin and Saha (2014) studied the relationship between tourist arrival

and foreign exchange earnings. The authors used foreign exchange earnings as a proxy of the tourism sector's contribution to economic growth. By using monthly data from 2004 to 2010, the authors applied Johansen's multivariate cointegration procedure. This study finds a long-run relationship between the study variables. This study also argues that tourism has a positive effect on economic growth by earning a lot of foreign currency.

Sultana (2016) conducted a descriptive study to investigate the current scenario of the tourism industry of Bangladesh and the contribution of this industry to GDP. This study finds the tourism sector of Bangladesh as a growing sector and it has a significant contribution.

Hafsa (2020) found through her study that the travel and tourism industry is a growing industry and also has high potentiality for Bangladesh.

Hossain and Wadood (2020) studied the potential effects of tourism on economic growth. The authors use annual data from 2009 to 2017 and used descriptive statistics for the analysis of data. The study result shows the positive effect of the small share of tourism revenue on economic growth.

Lincoln (2020) examined the travel and tourism sector's contribution to Bangladesh economy. This study argues that recently the economic contribution of tourism export is adequate and shows a positive trend over time which indicates that the tourism sector of Bangladesh is showing a positive trend for sustainable economic development.

4. Methodology and Model Specification

4.1 Data Sources and Variables

This study employs secondary data and uses annual time series data from 1995 to 2019. The World Bank's World Development Indicators data (2021) and Open Trade and Competitiveness data (2021) are used to compile the data. Here, the growth rate of GDP (GGDP) is used as a proxy of economic growth. In this study, the tourism variable is not aggregated. It is decomposed into two components namely, domestic tourist spending (DTS) and international tourist spending (ITS). Domestic tourist spending (DTS) and international tourist spending (ITS) are utilized as a proxy of aggregate measures of tourism activities. All the data are expressed in constant price.

This study investigates the causal relationship between GGDP, DTS and ITS. To test the association and causality between tourism and economic growth, this study uses three tests. Firstly, testing stationarity of the data, the Augmented Dickey-Fuller Test (ADF) and Phillips–Perron (PP) test is applied. If the variables are non-stationary then first differencing is needed to transform them into stationary. Secondly, testing the association between the variables, the Johansen cointegration test is conducted. If the variables are cointegrated then there is causality between the variables (Maddala and Kim, 2004). When two variables are cointegrated it can be said that the variables have a long-run relationship among them (Gujarati, 2004). If there is cointegration among the variables, then the Granger causality test on the vector error correction model is more worthwhile (Engle and Granger, 1987). Granger, (1988) shows that in the presence of cointegration, there will be at least one direction of causality among the variables. Finally, to see the direction of causality, the Granger causality test is examined. All econometric analysis of this study is done by using EViews software.

4.2 Unit Root Test

For using time series data in a study the first step is to test the stationarity of the data. If the variables of interest are stationary or show a unit root problem then it would not be appropriate to use the procedures of conventional econometric technique (Engle and Granger, 1987; Enders, 2015). Because in the case of non-stationary variables the OLS regression might be spurious regression and give rise to biased and meaningless results (Granger and Newbold, 1974). That is why, to construct an econometric model and to develop an appropriate methodology, it is important to test the unit root of time-series data (Engle and Granger, 1987). The test is done for both level and differenced data using a model with intercept and a model with intercept and trend. Mathematically the equations can be written as follows:

$$\Delta y_t = \alpha_1 + \alpha_2 y_{t-1} + \sum_{j=1}^p \beta_j \Delta y_{t-j} + \varepsilon_t \text{ (with intercept) } \dots\dots\dots(1)$$

$$\Delta y_t = \alpha_1 + \alpha_2 t + \alpha_3 y_{t-1} + \sum_{j=1}^p \beta_j \Delta y_{t-j} + \varepsilon_t \text{ (with trend and intercept) } \dots\dots\dots(2)$$

Where Δ is the difference operator, $\Delta y_t = y_t - y_{t-1}$, y_t represents the dependent variable; α_1 is constant and α_2 are the coefficients which are used as parameters; t represents the deterministic trend, p is the number of lags in the dependent variable y_t , and ε_t is the stochastic disturbance term.

To check the unit root the following null and alternative hypotheses are tested:

$H_0: A = 0$ (y_t is non-stationary or contains the unit root)

$H_1: A < 0$ (y_t is stationary or contains no unit root)

The test statistics value is compared with the critical value. When the value of the test statistic is more than the critical value, then the null hypothesis is rejected. On the other hand, when the value of the test statistic is less than the critical value, then the null hypothesis is accepted.

4.3 Lag length Criteria

The optimum lag order selection can be done by using the minimum information criterion, such as sequential modified LR test statistic, Final prediction error (FPE), Akaike information criterion (AIC), Schwarz information criterion (SCC), and Hannan-Quinn information criterion (HQC).

4.4 Cointegration Test

A cointegration test is used to detect the dynamic relationship among the variables. Different cointegration techniques can be used to determine the long-run relationship between time series data. Among these techniques, this study uses the Johansen cointegration technique. Because the Johansen test is used when several variables in time series data are integrated into order 1 that is $I(1)$. The advantage of the Johansen test over other cointegration tests is that this test can handle more time-series variables whereas the other cointegration test could handle only one cointegrating relationship (Oumarou and Maiga, 2019). To find out the number of cointegrating relationships, the Johansen test depends on the maximum eigenvalue and trace test. The equation for the Johansen co-integration test is given below:

$$y_t = a + B_1 y_{t-1} + \dots + B_p y_{t-p} + \varepsilon_t \dots\dots\dots(3)$$

Where y_t represents $n \times 1$ (n by 1) vector which are integrated of order 1 that is $I(1)$, and $n \times 1$ vector of innovations is represented by ε_t .

4.5 The Granger Causality Test

The Granger causality test is used to determine the direction of causality among the variables. The Granger causality test is a technique for examining the usefulness of one time series for forecasting another one. The use of granger causality tests provides the possibility of testing the existence of the relationships among GGDP, DTS and ITS.

The equation of the Granger causality test and the test of hypothesis are given below:

$$y_t = \alpha_1 + \alpha_2 t + \sum_{i=1}^k \gamma_i y_{t-i} + \sum_{j=1}^k \theta_j x_{t-j} + \varepsilon_t \dots\dots\dots(4)$$

$$x_t = \alpha_1 + \alpha_2 t + \sum_{i=1}^k \gamma_i x_{t-i} + \sum_{j=1}^k \theta_j y_{t-j} + e_t \dots\dots\dots(5)$$

H₀: “x_t does not Granger Causes y_t”

H₁: “y_t does not Granger Causes x_t”

Where y_t and x_t equal GGDP, DTS and ITS.

5. Empirical Results and Discussion

5.1 Unit Root Test

To test the presence of a unit root for all study variables, the Augmented Dickey-Fuller (ADF) and Phillips–Perron (PP) tests are done to investigate the long-run equilibrium relationship between tourism and economic growth of Bangladesh. For both of those tests, the null hypothesis tested is that the series has unit root against the alternative hypothesis that the series has no unit root. The unit root test results of both ADF and PP tests are presented in table 1.

Variable	Augmented Dickey Fuller test results				Phillips Perron Unit Root test results			
	Stationarity in levels		Stationarity in first differences		Stationarity in levels		Stationarity in first differences	
	Without trend	With trend	Without trend	With trend	Without trend	With trend	Without trend	With trend
GGDP	-0.7871	-3.1726	-4.4931***	-4.4164***	-0.8174	-2.8418	-4.5543***	-4.4576***
DTS	2.8780	-0.2809	-3.1164**	-4.2248***	2.9649	-0.2859	-3.1164**	-4.2061***
ITS	0.4597	-0.7703	-4.1332***	-4.3062***	0.6249	-0.9276	-4.1118***	-4.2956***

Note 1: GGDP: Growth rate of Gross Domestic Product, DTS: Domestic Tourist Spending, ITS: International TouristsSpending.

Note 2: ****denote significance at the 1% level, ***denote significance at the 5% level.

5.2 Lag length Criteria

Table 2 shows the optimal lag length criteria. The results of Table 2 show that most of the criteria like LR, FPE, AIC, SC and HQ select the first lag as the optimal lag. Though lag one is selected as the maximum lag by the maximum lag selection criterion, lag one is used for the estimation of the model.

Table 2:Lag length Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-30.25986	NA	0.003620	2.892162	3.040270	2.929411
1	40.81432	117.4269*	1.66e-05*	-2.505593*	-1.913161*	-2.356598*
2	49.74513	12.42549	1.75e-05	-2.499577	-1.462821	-2.238836

* indicates lag order selected by the criterion.

LR: sequential modified LR test statistic (each test at 5% level), FPE: Final prediction error, AIC: Akaike information criterion, SC: Schwarz information criterion, HQ: Hannan-Quinn information criterion.

5.3 Johansen Test of Co-integration

As all the three variables of the study are integrated of order 1 that is $I(1)$, the appropriate integration test is the Johansen Cointegration test (Oumarou and Maiga, 2019). The Johansen Cointegration test result is represented in table 3.

Table 3: The Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.622727	33.85292	29.79707	0.0162
At most 1	0.303618	11.43283	15.49471	0.1862
At most 2	0.126479	3.110124	3.841466	0.0778
Trace test indicates 1 cointegrating equation(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.622727	22.42008	21.13162	0.0328
At most 1	0.303618	8.322710	14.26460	0.3469
At most 2	0.126479	3.110124	3.841466	0.0778
Max-eigenvalue test indicates 1 cointegrating equation(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

Table 3 presents the trace and maximum eigenvalue statistics for the whole sample period. Both the maximum eigenvalue and the trace tests show that there is one co-integrating equation at a 5% significance level. That is the co-integration test results rejected the null hypothesis of no co-integration by showing the existence of one co-integration among the variables. It can be said that there is a long-run equilibrium relationship between the tourism sector and economic growth in Bangladesh. Hence, there exists long-run causality because the variables are co-integrated.

5.4 The Test of Granger Causality

The existence of the Granger causal relationship among GGDP, DTS and ITS are given in table 4.

Table 4: Pairwise Granger Causality Tests

Null Hypothesis	Alternative Hypothesis	F-Statistic	Result
ITS does not Granger Cause DTS DTS does not Granger Cause ITS	ITS Granger Cause DTS DTS Granger Cause ITS	5.54887*** 3.59726**	ITS DTS
GGDP does not Granger Cause DTS DTS does not Granger Cause GGDP	GGDP Granger Cause DTS DTS Granger Cause GGDP	0.14635 6.69566***	DTS GGDP
GGDP does not Granger Cause ITS ITS does not Granger Cause GGDP	GGDP Granger Cause ITS ITS Granger Cause GGDP	0.20260 4.68882**	ITS GGDP

Notice: “ ”: bidirectional causality effect, “ ”: unidirectional causality effect.

Note 2: ‘***’denote significance at the 1% level, ‘**’denote significance at the 5% level.

The results of the Granger causality tests are shown in Table 4. The test results show that there is a causal relationship between domestic tourist spending and GGDP. The empirical findings establish a significant long-run unidirectional causality running from domestic tourist spending to GGDP, but not vice versa. On the other hand, the empirical findings also find a causal relationship between international tourist spending and GGDP and establish a significant long-run unidirectional causality running from international tourist spending to GGDP, but not vice versa. Moreover, there is also exist causal relations between domestic tourist spending and international tourist spending in Bangladesh. The empirical findings establish a significant long-run unidirectional causality running from domestic tourist spending to international tourist spending, and vice versa which indicates that domestic tourists spending and international tourist spending reinforce each other. Hence, both domestic tourists and international tourists promote the economic growth of Bangladesh. Moreover, it indicates that both DTS are good predictors for the economic growth of Bangladesh.

Although tourism is not a primary industry for Bangladesh, this study shows that both DTS and ITS reinforce the GGDP. The tourism-led economic growth hypothesis would be true for Bangladesh. Here, the level of openness of the country would be a contributing factor. According to (Kim, Chen and Jang, 2006), the countries which have more open societies are more apparently stimulating both inbound and outbound travels, which in turn increase economic growth. Moreover, the long-run growth for a small open economy would be positively affected by the world demand for tourism(Hazari and Sgro, 1995).

As a long-run equilibrium relationship and uni-directional causality exist between both DTS and ITS to the economic growth of Bangladesh, the tourism sector of the country will enhance the economic growth of Bangladesh.It also seems that the decision of the

Bangladesh government to develop a long-term tourism strategic plan and the overall development of the tourism sector would be the appropriate means to enhance the economic growth of the country. For policy purposes, the development of the tourism sector shows unidirectional causality to economic development, the most appropriate approach is the tourism-led economic growth approach (Bal, Akça and Bayraktar, 2016). In that case, the country needs to specialize in the tourism sector so that the tourism sector can enhance the economic growth of the country.

6. Conclusion

Tourism is not a technologically intensive sector and thus it does not fit well in the endogenous growth theory model (Sequeira and Nunes, 2008). However, countries get comparative advantages in the tourism sector with a relative abundance of natural, cultural and historical resources. Bangladesh, having full of natural beauties, diverse cultural elements and archaeological sites had a good prospect to thrive tourism sector and contribute to the economy.

This study investigates the causal link between the tourism sector and the economic growth of Bangladesh by using a disaggregated measure of tourism activity. This measure provides additional information about the effects of both domestic and international tourist spending on economic growth. The well-known cointegration and Granger causality tests have been used in this study. The results of the cointegration and causality test show that there is a unidirectional causal link between both domestic and international tourist spending to economic growth and also a bidirectional causal link between domestic and international tourist spending.

The study findings indicate that the tourism sector is an important economic growth source for Bangladesh. Thus, the main policy implication of this study is that paying attention to domestic tourism could rapidly increase the tourism sector's share of GDP growth along with inbound tourism. The result of this analysis will help to decide on different tourism-related issues such as the overall budget of the tourism sector, the sanction of government or private tourism projects, worldwide promotion of the country as a tourist destination and so forth. Moreover, for further research, the tourism-led growth hypothesis can be investigated at the local and regional levels with primary as well as secondary data.

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