Implications of Paradigm Shift in Tourism Policy: An Evidence of Bhutan

First Author:
Dr. Bidyut Ghosh

Associate Professor
Department of Commerce, MIT Campus,
Manipal Academy of Higher Education,
Manipal - 576104, Karnataka, India
Email: bidyut.ghosh@manipal.edu

ORCID: https://orcid.org/0000-0002-7835-8171

Corresponding Author:
Dr. Suman Chakraborty
Associate Professor
Department of Commerce, MIT Campus,
Manipal Academy of Higher Education,
Manipal - 576104, Karnataka, India
E-mail: suman.chakraborty@manipal.edu
ORCID: https://orcid.org/0000-0002-3999-7181

Abstract

The study intends to examine the impact of major changes in the tourism policy of Bhutan adopted in 2005 as a 'Sustainable Tourism Development Policy'. A genuine effort was made to investigate the possible presence of a long-run relationship between tourism and economic growth using the Johansen method of cointegration and vector error correction mechanism. The international tourists' arrival and GDP per capita were used as proxies for tourism expansion and economic growth respectively. The finding confirms that tourism has expanded significantly after Bhutan's policy shift from a more restrictive regime to a more pragmatic 'sustainable tourism development policy'. There is concrete evidence of a long-run relationship between tourism expansion and economic growth. However, in the short-run, there is no such strong evidence. The move from a restrictive tourism regime to a more open tourism regime is found to be economically beneficial for a small land-locked economy and provides better economic and social integration with the neighboring countries over a long-run period. The study is the first attempt to apply the time series cointegration and vector error correction method for examining the impact of tourism policy change on Bhutan's economic growth.

Keywords: Tourism, Economic growth, Cointegration, VECM model, Sustainability

JEL: L83, O47, C49, Q01

1. Introduction

Over the years, tourism led economic growth has been on the rise in many parts of the globe as the faster tourism growth can create opportunities for household income generation and also, increases government revenues through a chain of multiplier effects in the economy. As such, the development of tourism has usually been considered a key strategic factor for economic growth. The direct link between tourism and economic growth is global phenomena, however, it is more applicable for giant economies like the USA, China, Japan, Germany, and the UK as they collectively representing 47 percent of the global Travel & Tourism GDP in 2018 (World Travel & Tourism Council, 2020). The sector contributed 10.4 percent of the global GDP and 319 million jobs which absorbed 10 percent of the total labor force in 2018 (World Travel & Tourism Council, 2020).

The tourism industry has the capability of boosting revenue generation, direct employment generation, infrastructure development, and thereby stimulates the overall economic growth. Hence, boosting economic growth through the development of the tourism industry has been often considered as a development strategy by numerous countries. And for obvious reason, there has been an increasing interest among the academician and policymakers to explore the causal relationship between tourism and economic growth.

However, the scenario was a little bit different for Bhutan, one of the smallest land-locked economies in the globe. Officially, the country approved tourist only in 1972 when the first group of 287 official tourists visited Bhutan in 1974 (Dorji, 2001). Since it opened the gate of the nation to global tourism, Bhutan has followed a uniquely sustainable approach of “High Value, Low Volume” which was a reflection of consistent effort for ensuring the cautious tourism growth so as not to disturb the carrying capacity of the nation’s physical, socio-cultural and natural environment. The tourism policy was framed in line with the overall development philosophy of Gross National Happiness (GNH) as the country stood at 97th in the global ranking in happiness index which is much higher than other south Asian countries like India (144), Bangladesh (125), Nepal (100) and Sri Lanka (125) (Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020). Accordingly, the entry was restricted only to higher-quality tourism.

However, over the years tourism has become an important and dynamic economic sector contributing significantly towards socio-economic development of the country through revenue and foreign exchange earnings, creation of employment opportunities, conservation of natural and cultural heritage, and contributes to the realization of the national development goals – Gross National Happiness (GNH) and Sustainable Development Goals (SDG) (DOT, 2005).

In 1999, the Royal Government of Bhutan has changed the tourism policy significantly as it welcomed more foreigners for tourism, although "cultural and environmental" values should be preserved. The new tourism policy was renamed "High value, Low impact". Further in 2005, to get more foreign tourists, the policymakers of the country have argued to showcase Bhutan as an exotic niche tourist destination to wealthy tourists through its unique cultural and environmental life (DOT, 2005).

It is also evident from the number of tourists arrival over the years has increased considerably since the early years of this century. In 2000, the total number of tourists arrival stood at 7600, which raised to 9200 in 2004. However, from 2005 it has started growing at a very high pace. In 2005, the figure jumped to 13600 which further continues to grow every year. Finally, in 2018, a total number of 274000 tourists visited Bhutan. Another important point is that the recent growth in tourists' arrival was primarily generated from the pocket of the Asia-Pacific market, mainly from India, Thailand, Vietnam, Philippines, Australia, Japan, China, Singapore, Bangladesh, Malaysia, Maldives, and South Korea. This signifies a better integration of the Bhutan economy with its regional economies. Also, the western markets have gradually expanded, especially from the United States, the United Kingdom, Germany, and France (National Council of Bhutan, 2016).

At present, the tourism industry significantly contributes more than 9 percent to GDP, secures the highest hard currency reserves, and creates the highest employment opportunity in the country (Bureau, 2018). The World Bank also pointed out that the maximization of the growth potential of the tourism sector could significantly contribute to more employment and income generation, especially among the rural poor and low-skilled labour force (The World Bank, 2020). By looking at the performance of the hotel and restaurant sector of the country which is mainly influenced by the number of tourist arrivals in the country. With the increased inflow of tourists, the sector recorded a growth of 15.20 percent in 2017, contributing 0.24 percentage points to the GDP growth. Despite its steady growth in the recent past, the contribution of the hotel and restaurant sector to GDP remained low as it contributes only 1.92 percent of GDP in 2016 and it marginally increased to 2.11 percent in 2017 (Bureau, 2018).

Evidence from the review of previous literature and survey undertaken establishes that the tourism industry has grown significantly in Bhutan during the last decade, but researchers have not paid due attention to the empirical assessment of contributions of the tourism sector to Bhutan's economy. The authors first identified and highlighted the two most relevant questions to prepare the design of the present research and methods to achieve the objectives set for this study.

The study was undertaken to answer two questions. First, is there a long-run equilibrium relationship between tourism expansion and economic growth in Bhutan? Second, if a long-run relationship exists, what is the direction of a causal relationship between these two variables? The remainder of this paper is organized as follows: Section 2 covers empirical studies of the relationship between economic development and tourism expansion followed by Section 3 which describes data and specification of econometric methods; Section 4 provides the results and discussion of the study. Finally, the article concludes with a summary of the main points and suggestions for future research.

2. Review of Literature

The relationship between tourism and economic growth has three propositions – tourism-led economic growth which indicating a unidirectional causal effect from tourism amplifications to economic growth, economic-driven tourism growth implying a unidirectional causal relationship from economic growth to tourism amplification, and reciprocal causal relationship between the two indicating a bidirectional causality between them. It is necessary to find out the causal relationship between economic growth and tourism expansion as it can give rise to useful implications for relevant policy decisions. In case if there is no causal relationship between tourism amplifications and economic growth, still it gives an insight into the efficacy of tourism promotion strategies.

There are mixed opinions among the researchers regarding the empirical validation of the above mentioned three propositions. The tourism-led economic growth hypothesis is supported by Balaguer and Cantavella-Jordá (Balaguer & Cantavella-Jorda, 2002), Risso, Barquet, & Brida, 2010 (Risso, Barquet, & Brida, 2010), Ghartey, E. E. (Ghartey, 2010), Katircioğlu, Fethi, & Kilinç (Katircioğlu, Fethi, & Kilinç, 2010), Kreishan, F. M. (Kreishan, 2010), Zortuk, M. (Zortuk, 2009), Brida, Pereyra, Risso, Devesa, & Aguirre (Brida, Pereyra, Risso, Devesa, & Aguirre, 2008), Kaplan, M. & Celik (Kaplan & Çelik, 2008), Fayissa, Nsiah, & Tadasse (Fayissa, Nsiah, & Tadasse, 2008), and Mishra, Rout, & Mohapatra (Mishra, Rout, & Mohapatra, 2011), Dritsakis, N. (Dritsakis, 2012), Sanchez Carrera, Brida, & Risso (Sanchez Carrera, Brida, & Risso, 2008).

On the opposite hand, there are also plenty of empirical shreds of evidence in favour of economic-driven tourism growth such as He, L. & Zheng, X. (He & Zheng, 2011), Payne, J. & Mervar (Payne & Mervar, 2010), Kadir, N. & Jusoff (Kadir & Jusoff, 2010).

Few studies have shown the evidence of the third proposition as well such as Tang, C. F. (Tang, 2011), Lee, C. & Chien, M. (Lee & Chien, 2008), Khalil, Kakar, Waliullah, & Malik (Khalil, Kakar, Waliullah, &

Malik, 2007), Samimi, Sadeghi, & Sadeghi (Samimi, Sadeghi, & Sadeghi, 2011), Apergis and Payne (Apergis & Payne, 2012), Oh, Chi-Ok (Oh, 2005).

There are methodological differences among the researchers giving different kinds of opinions regarding the three hypotheses relating to tourism and economic growth. There are multiple ways of analyzing these hypotheses in the time series framework. Most of these authors have used either the ARDL Bound Test approach or Johanson and Juselius (JJ) method for cointegration. For instance, Kreishan, F. M. (2010), Zortuk, M. (2009), Brida, J. G., et al. (2008), Kaplan, M. & Celik (2008), Tang, C. F. (2011), Mishra, P.K. (2011) have adopted the Johanson and Juselius (JJ) method for checking their hypotheses. Simultaneously, Ghartey, E. E. (2010), Katircioğlu, S., Fethi, S., & Kilinç, C. (Katircioğlu, S., Fethi, S., & Kilinç, C., 2010) have used the ARDL method. The empirical studies involving multiple countries such as Fayissa, B., Nsiah, C., & Tadasse, B. (Fayissa, B., Nsiah, C., & Tadasse, B., 2007), Samimi, A. J., Sadeghi, S., & Sadeghi, S., (Samimi, A. J., Sadeghi, S., & Sadeghi, S., 2011) have mostly adopted the panel data method while drawing their conclusion. Also, there are shreds of evidence of using a simple VAR model as well, for example, Samimi, A.J. et al. (2011), He, Li-hua & Zheng, Xun-gang (He, Li-hua & Zheng, Xun-gang, 2011)., Brida, J. G. et al. (2010), however, have relied simply on graphical exploration to arrive at their conclusion of tourism-led economic growth.

As mentioned earlier that a tightly state-controlled tourism activity was implemented in Bhutan to maintain the country's own cultural and environmental uniqueness and at the same time it provided scope for economic growth to happen (Kent, Politics of Gross National Happiness, 2017). Indeed, "the monarchical regime demonstrated a willingness to subordinate economic interests to cultural and environmental concerns" when necessary (Nishimizu, 2008). This protectionist approach was in practice for a long time up to the end of the nineteen-eighties of the last century. When the number of tourists increased to 3000 per year, the government increased the daily tariff to US$200 per day per tourist intending to slow down the inflow of tourists. However, there was a significant shift in the tourism policy of the government when the government slowly started the privatization of tourism activities at the beginning of the early nineties of the last century. A complete paradigm shifts in tourism policies happened in 1999 when the government went for complete privatization and new a set of government regulations and a code of conduct were developed to ensure private tourism companies undertook their work in a manner consistent with Gross National Happiness. Soon there was a "growing policy conflict over the nature of tourism governance and the appropriate operational balance of the socio-economic, cultural, and environmental dimensions of GNH" (Kent, Politics of Gross National Happiness, 2017).

Privatization of the tourism industry resulted in a significant increase in the tourists' arrivals and by the end of the last century tourism was viewed as an engine of growth and employment generator of the economy. This might be ignited more by the growing urbanization in the country and a gradual shift away from an agricultural economy. In this connection, it could be mentioned that the urbanization rate in Bhutan during 2000-2010 was the highest among the eight South Asian nations (The World Bank, 2020). Planning Commission of Bhutan has replaced the "high value, low impact" tourism policy with "high value, low volume" tourism policy which was further coined as "Sustainable Tourism Development Strategy" in 2005 by the DoT by reaffirming a commitment to integrating the socio-economic, cultural, and environmental pillars of GNH. At the same time, by showcasing the country's culture and environment to the western world, the DoT tried to promote Bhutan as an "exotic niche destination attractive to wealthy tourists".

3. Data and Methodology

The study is based on the secondary data collected from different sources such as the Statistical Handbook of Bhutan, published by Planning Commission, Royal Government of Bhutan, World Development Indicators, published by the World Bank and Tourism Statistics of United Nation World Tourism Organisation.

To examine the objectives, the study uses the GDP per capita as a proxy for measuring the economic growth of the people. The GDP per capita is measured at the constant prices of US$ 2010. For measuring the development of the tourism industry, the number of tourist arrivals per year is considered. The data for these two variables are compiled for 39 years (1980-2018).

As most of the economic time series data is non-stationary, the application of the Ordinary Least Squares method to check the long-run association may lead to a spurious regression phenomenon and thus, incorrect causality conclusion may be drawn.

To overcome the deficiency of the OLS method mentioned above and to deal with non-stationary time series, Co-integration theory in dynamic econometrics has been applied in the study. The first step for the cointegration theory is to check the order of integration of the time series variables. For this purpose, the Augmented Dicky Fuller test has been used.

To examine the cointegration relationship between GDP per capita and tourists' arrival, the study utilizes the procedure developed by Johansen (Johansen, Statistical analysis of cointegration vectors, 1988) and Johansen and Juselius (Johansen & Juselius, Maximum likelihood estimation and inference on cointegration—with applications to the demand for money, 1990) to conduct the Vector Autoregression (VAR)-based cointegration test. The Johansen procedure proposed two test statistics for testing the number of cointegrating vectors, a trace test (Tr), and a Max-Eigenvalue test (MAX) statistics. The Vector Error Correction Mechanism has been deployed to look into both the short-run and long-run behavior of economic growth and tourism. Before applying all these techniques, both series are converted to their natural logarithm form to smooth the data and get the final interpretation in terms of elasticities form. So, the variables are considered as below:

$$lgdp = Natual\ logarithm\ of\ GDP\ per\ capita\ measured\ in\ US\$\ at\ 2010\ prices$$

$$ltour = Natural\ logarithm\ of\ Tourists\ arrival\ per\ year$$

4. Results and Discussion

4.1 Tabular and Graphical Presentation of Tourists' Arrival and GDP per capita

Table 1 summarizes the main statistics associated with annual tourists' arrival and GDP per capita in Bhutan. The average annual tourist arrival is 39857 with a maximum of 274000 tourists in 2018 and a minimum of 1325 in 1981. In Bhutan, international tourists flow grows at an astonishing rate, and statistics show that it has doubled in less than fifteen years (from 9200 tourists in 2004 to 274000 in 2018). The growth of international tourists has been phenomenal since 2004. Regarding, GDP per capita, the mean is 849.8 dollars, with a maximum of 3128 dollars in 2018 and a minimum of 390.1 dollars in 1980. The per capita GDP has been rising steadily, though at a slow rate.

Table 1: Summary Statistics of GDP per capita and Tourists Arrival

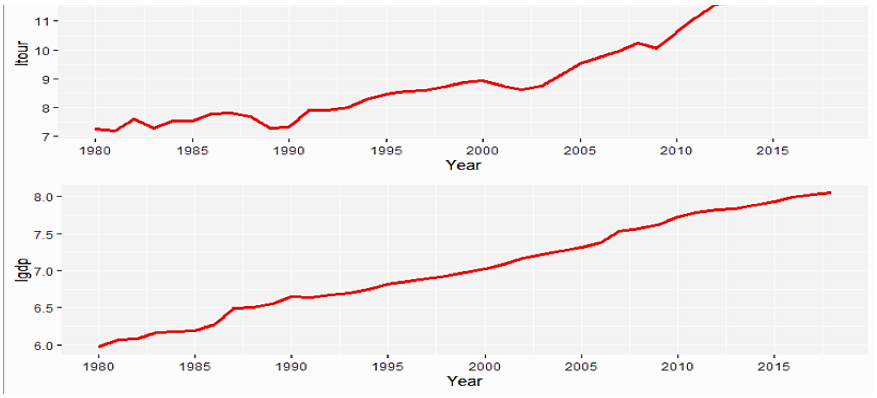
Statistics	Annual Tourists Arrival (actual number)	Per Capita GDP (US$ at 2010)
Mean	39857	1379
Standard Deviation	72042	849.8
Minimum	1325	390.1

Maximum	274000	3128
No of cases	39	39

Source: Government of Sikkim and World Development Indicators

Figure 1 below illustrates the trajectory of the two indicators (after logarithm taking) during the period of our study.

Figure 1: Trajectory of Logarithms of GDP per capita and Tourists Arrival



Source: Author's compilation from secondary data

The empirical investigation of the paper has two dimensions. The first is to examine the long-run relationship between international tourists' arrival and per capita GDP and while the second is to examine the short-run dynamic causal relationship between the two variables. The basic testing procedure requires three steps.

1. The first step is to check the nature of the variables concerning stationarity, that is, to test whether the variables contain a unit root to confirm the stationarity of each variable. This is done by using the Augmented Dickey-Fuller tests.
2. The second step is to test whether there is a long-run cointegrating relationship between the variables. This is done by the use of the Johansen-Fisher methods.
3. Finally, in the last step, if all variables are I(1) (integrated of order one) and cointegrated, short-run elasticities can be computed using the vector error correction model (VECM) method. In this case, an error correction mechanism exists by which changes in the dependent variables are modelled as a function of the level of the disequilibrium in the cointegrating relationship, captured by the error-correction term (ECT), as well as changes in the other explanatory variables to capture all short-term relations among variables.

4.2 Unit Root test: Augmented Dickey-Fuller test

The presence of unit root in the variables has been tested by the Augmented Dickey-Fuller test and the results are displayed in Table 2. The test statistics for the log levels of tourists' arrival and per capita GDP are statistically insignificant. When the unit root test is applied to the first difference of the logarithms of two variables, both tests reject the joint null hypothesis for each variable at the 1 percent level. Thus, from all of the tests, the unit-roots tests indicate that each variable is integrated of order one, I(1).

Table 2: ADF Test Results for ltour and lgdp

Variable	Level		First difference		Order of Integration
	Intercept	Intercept and trend	Intercept	Intercept and trend	
ltour	1.35391	-1.31813	-5.606079*	-5.954099*	I(1)
lgdp	-0.632959	-2.478115	-6.546271*	-6.454853*	I(1)

Source: Author's compilation from secondary data

Note: lgdp implies the natural logarithm of per capita gross domestic product;

ltour implies the natural logarithm of tourist inflow.

4.3 Cointegration Tests and VECM

After checking the integration of the variables at order one, I(1), the optimal lag length of underlying Vector Auto Regression (VAR henceforth) has been found out using the conventional model selection criteria. The Akaike information criterion (AIC) criteria established that the optimal lag length is three.

Table 3: Lag Selection Criteria for Unrestricted VAR

Lags	Loglik	p(LR)	AIC	BIC	HQC
1	66.73374		-3.68083	-3.40874*	-3.58928*
2	67.71437	0.74288	-3.49784	-3.04435	-3.34526
3	74.78706	0.00685	-3.68406*	-3.04918	-3.47045
4	77.09486	0.32906	-3.58151	-2.76523	-3.30685
5	81.40994	0.07104	-3.6006	-2.60293	-3.26492
6	82.30612	0.77388	-3.41249	-2.23343	-3.01577

Source: Author's compilation from secondary data

Note: BIC implies Bayesian information criterion; HQC implies Hannan-Quinn Information Criterion; LR implies Log-Likelihood Ratio

Following the Johansen method, it is suggested that the joint hypothesis of both the rank order and the deterministic components need to be tested, applying the so-called Pantula principle. The Pantula principle involves the estimation of all three models and the presentation of the results from the most restrictive hypothesis (that is r = number of cointegrating relations = 0 and model 2) to the least restrictive hypothesis (that is r = number of variables entering the VAR − 1 = n − 1 and model 4). The model-selection procedure then comprises moving from the most restrictive model, at each stage

comparing the trace test statistic to its critical value, and stopping only when it is concluded for the first time that the null hypothesis of no cointegration is not rejected.

Table 4: The Pantula principle test results

r	*n− r*	Model 2: with Intercept (no trend) in CE, no intercept or trend in VAR	Model 3: with Intercept in CE and VAR, no trends in CE and VAR	Model 4: with Intercept in CE and VAR, linear trend in CE, no trend in VAR
0	2	34.961	6.6214*	12.658
1	1	7.8519	0.016859	3.7044

Note: * Indicates the first time that the null cannot be rejected.

Source: Author's compilation from secondary data

So, the Pantula principle suggests that the model with intercept (no trend) in the Cointegrating equation, no intercept or trend in VAR should be used. The detailed results of the Johansen test for this model specification are shown below:

Table 5: Cointegration test results (model 2)

Hypothesized No of CE (s)	Trace Statistic	Max-Eigen Statistic
None	34.961(0.0001)	27.110 (0.0003)
At most 1	7.8519 (0.0895)	7.8519 (0.0894)

(value in the parentheses indicate the p-value)

Source: Author's compilation from secondary data

Normalized Eigenvectors (Normalized concerning both ltour and lgdp (These are the cointegration relations) are presented below table 6.

Table 6: Normalized Cointegrating Coefficients

	lgdp	ltour
ltour	-0.30555 (0.056532)	1.0000 (0.00000)
lgdp	1.0000 (0.00000)	-3.2728 (0.47193)
constant	-3.2413 (0.51225)	10.608 (3.2537)

(value in the parentheses indicate the standard errors)

Source: Author's compilation from secondary data

The cointegration tests (Trace test and Max-Eigen value) suggest the existence of one cointegrating vector at 1 percent of significance. Please note that the signs of the coefficients are reversed in the long-run when they are normalized concerning the dependent variable. In the long-run, *ltour* has a positive impact on *lgdp,* on average, ceteris paribus. The coefficient is statistically significant at a 1 percent level of significance. On the contrary, if the normalization is done concerning *ltour, lgdp* has also a significant positive impact on *ltour*. So, the null hypothesis of no cointegration is rejected against the alternative of a cointegrating relationship in the model.

Broadly, the existence of cointegration signifies that there is at least one long-run equilibrium relationship among the variables. In this case, Granger causality exists among these variables in at least one way (Engle & Granger, 1987). But in the short-run, there may be deviations from this equilibrium, and it is required to verify whether such disequilibrium converges on the long-run equilibrium or not. Thus, Vector Error Correction Model is used to generate such short-run dynamics. Error correction mechanism provides a means whereby a proportion of the disequilibrium is corrected in the next period. So, the error correction mechanism is a means to reconcile the short-run and long-run behavior. The estimation of a Vector Error Correction Model (VECM) requires the selection of an appropriate lag length. The number of lags in the model is determined according to the Akaike Information Criterion (AIC). The lag length that minimizes the AIC is 3. Then, an error correction model with the computed t-values of the regression coefficients is estimated and the results are reported in Table 7.

The VECM is used to correct the disequilibrium in the cointegration relationship, as well as to test for long and short-run causality among cointegrated variables. The correction of the disequilibrium is done by the mean of the error correction term (EC).

To test for causality, a VECM is specified as follows:

$$\Delta lgdp_t = \sum_{i=1}^{p} \beta_{1i} \Delta lgdp_{t-i} + \sum_{i=1}^{p} \gamma_{1i} \Delta ltour_{t-i} + \lambda_1 ECT_{t-1} + \epsilon_1$$

$$\Delta ltour_t = \sum_{i=1}^{p} \beta_{2i} \Delta lgdp_{t-i} + \sum_{i=1}^{p} \gamma_{1i} \Delta ltour_{t-i} + \lambda_1 ECT_{t-1} + \epsilon_1$$

The estimated coefficient of the error-correction term (EC_{t-1}^{2}) in the *lgdp* equation is statistically significant and has a negative sign, which confirms that there is not only any problem in the long-run equilibrium relationship between the independent and dependent variables at 5 percent level of significance, but its relative value (-0.017) for Bhutan implies that the rate of convergence to the equilibrium state per year. Precisely, the speed of adjustment of any disequilibrium towards a long-run equilibrium is that about 1.7 percent of the disequilibrium in *lgdp* is corrected each year. Furthermore, the negative and statistically significant value of the error correction coefficient indicates the existence of long-run causality between the variables of the study. Similarly, the estimated coefficient of the error-correction term (EC_{t-1}^{1}) is also negative (-0.0877) and statistically significant at a 5 percent level of significance. This implies about 8.77 percent of the disequilibrium in tourists' arrival is corrected each year. So, the study confirms the long-run bidirectional causality between GDP per capita and tourists' arrival in Bhutan.

Table 7:Results of Vector Error Correction Model

Independent variable	$\Delta ltour_t$	$\Delta lgdp_t$
EC_{t-1}	$EC_{t-1}^{1} = -0.08771$	$EC_{t-1}^{2} = -0.01713$
(standard error)	(0.02133)	(0.0054)
(p-value)	(0.000267)	(0.0034)

$\Delta ltour_{t-1}$ (standard error) (p-value)	0.19347 (0.13781) (0.17029)	0.00785 (0.034895) (0.8235)
$\Delta lgdp_{t-1}$ (standard error) (p-value)	0.19481 (0.76255) (0.80005)	-0.02408 (0.193086) (0.9015)
$\Delta ltour_{t-2}$ (standard error) (p-value)	-0.10276 (0.13375) (0.448113)	-0.00328 (0.033866) (0.9236)
$\Delta lgdp_{t-2}$ (standard error) (p-value)	-3.04612 (0.74228) (0.000274)	-0.08503 (0.187953) (0.6541)
	R^2= 0.58 $\overline{R}^2$= 0.51 $F_{(5,31)}$= 8.57 DW= 1.79	R^2= 0.61 $\overline{R}^2$= 0.54 $F_{(5,31)}$= 9.5 DW= 1.87

Source: Author's compilation from secondary sources

All the coefficients of the first and second difference of GDP per capita and tourists' arrival in the GDP per capita equation are statistically insignificant which indicates the absence of short-run causality from tourists' arrival to GDP per capita based on VECM estimates. However, surprisingly the coefficient of the second difference of GDP per capita is found to be statistically significant with a negative sign in the equation of tourists' arrival, but not the first difference of GDP per capita.

To confirm the result of the short-run causality between the $lgdp$ and the $ltour$ based on VECM estimates, a standard Granger causality test is also performed based on the F-value and the results are reported below Table 8.

Table 8: Results of the Granger Causality Test

Null hypothesis	F-statistic	P-value	Decision
$\Delta lgdp$ doesn't Granger cause $\Delta ltour$	F(2,32)= 2.504	0.0976	Reject
$\Delta ltour$ doesn't Granger cause $\Delta lgdp$	F(2,32)= 0.0061	0.9939	Accept

Source: Author's compilation from secondary data

As it is evident that the GDP per capita does not Granger cause the tourist's arrival at a 5 percent level of significance. However, it does so at a higher level of significance (10 percent). But there is no evidence of Granger causality from the tourist's arrival to GDP per capita. Thus, it can be confirmed that the relationship between tourists' arrival and GDP per capita is purely a long-run phenomenon for the Bhutan economy. In the short-run, there is no strong connection between the two.

Managerial and Theoretical Implications:

As the development of tourism has long-run implications on the growth of the Bhutanese economy, the policymakers and other stakeholders should emphasize the development of the core infrastructure of the economy such as hotels, communications including air, roads, and internet service. Also, all the stakeholders who are providing the services to international tourists should be well trained so that they satisfy the needs of the travellers coming from different parts of the globe without sacrificing the fundamental socio-cultural environment of Bhutan which is the key to attract foreign tourists. Proper hands-on training should be provided to all the stakeholders involved in the entire process. Proper marketing and promotional efforts are required for inviting quality tourists as it will result in improved performance of the tourism industry (Mishra & Ojha, 2014)

5. Conclusion

Bhutan's tourism industry has expanded rapidly over the past decade and brought changes to the nation's GDP per capita with strong functional characteristics. The tourism industry absorbs foreign currency at a low cost, improves economic development, and increases economic vitality.

Several industries such as telecommunication, transportation, hotel, and restaurant relating to tourism will automatically be benefited due to the increasing inflow of tourists in Bhutan. This study conceptualized an econometric model of the tourism industry and economic growth for analysis. The results have shown a positive effect on tourism and economic growth for the Bhutan economy.

The tourism industry has emerged as one of the most important sectors in Bhutan, and it is stimulated by numerous policies set by Bhutan's government that encourage the growth of the tourism industry, as well as the reformation of the Royal Kingdom of Bhutan. International tourists arrivals have grown from a small number into one of its most important sector of the economy of Bhutan, especially after the strategic shift in tourism policy of "high value, low volume" to "Sustainable Tourism Development Strategy" which was adopted in 2005 placing greater emphasis on increasing tourist numbers by showcasing the country's culture and environment to promote Bhutan as an exotic niche destination attractive to wealthy tourists.

Therefore, this study is conducted to check the impact of this vital policy shift on economic growth with time-series analysis for the period of 1980 to 2018. The results of the cointegration analysis show that there exists a long-run cointegration relation between the tourists' arrivals and GDP per capita for Bhutan. The results are consistent with the literature especially for the small economy as the tourists' arrival significantly impacting the GDP per capita in a positive direction. Based on the error-correction mechanism, the short term model, however, indicates a very weak impact of tourism on economic growth but not vice versa.

Thus, the results are significant for the policymaker about tourism in Bhutan as the policymaker should give considerable attention to tourism-led growth in Bhutan. The sustainable approach towards the tourism industry is also vital for the growth of the sector in the long-run as without having any UNESCO world heritage site, the 'universal selling proposition' for Bhutan tourism is its unique culture, environment, and philosophy of 'gross happiness index' of governance.

6. Limitations of the Study and Scope for Further Research

The study mainly concentrates on the core association between the inflow of tourists and the growth of Bhutan from the economic viewpoint. It doesn't include any primary survey to gauge the quality of the tourists coming to Bhutan. This is important to have quality tourists as Bhutan's main policy is to generate more revenue from the tourism sector without disturbing the nation's physical, socio-

cultural, and natural environment. A mere increase in the tourists' number may increase the revenue in the early days, but eventually, it may distort the ecosystem of Bhutan and be unsustainable. Further study can be conducted including a primary field survey to ensure the effective managerial implications of the new tourism policy of Bhutan.

References

Apergis, N., & Payne, J. E. (2012). Tourism and Growth in the Caribbean – Evidence from a Panel Error Correction Model. *Tourism Economics*, 449-456. DOI: https://doi.org/10.5367/te.2012.0119

Balaguer, J., & Cantavella-Jorda, M. (2002). Tourism as a long-run economic growth factor: the Spanish case. *Applied economics, 34*, 877–884. DOI: https://doi.org/10.1080/00036840110058923

Brida, J. G., Pereyra, J. S., Risso, W. A., Devesa, M. J., & Aguirre, S. Z. (2008). The tourism-led growth hypothesis: empirical evidence from Colombia. URL: https://mpra.ub.uni-muenchen.de/25286/

Bureau, N. S. (2018). National Accounts Statistics. *National Accounts Statistics*.

Dorji, T. (2001). Sustainability of tourism in Bhutan. *Journal of Bhutan Studies*. Vol. 3, No. 1. URL: http://www.bhutanstudies.org.bt/publicationFiles/JBS/JBS_Vol3No1/3.tourism.pdf

DOT. (2005). Sustainable Tourism Development Policy. *Sustainable Tourism Development Policy*.

Dritsakis, N. (2012). Tourism development and economic growth in seven Mediterranean countries: A panel data approach. *Tourism Economics, 18*(4), 801-816. DOI: https://doi.org/10.5367/te.2012.0140

Engle, R. F., & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing. *Econometrica: journal of the Econometric Society*, 251--276. DOI: https://doi.org/10.2307/1913236

Fayissa, B., Nsiah, C., & Tadasse, B. (2007). Impact of tourism on economic growth and development in Africa. *Tourism Economics,* 14, 807–818. DOI: https://doi.org/10.5367/000000008786440229

Ghartey, E. E. (2010). Tourism, economic growth and monetary policy in Jamaica. *11 th Annual SALISES Conference in Port of Spain Trinidad-Tobago, 24-26 March*, pp. 1–25.

He, Li-hua & Zheng, Xun-gang (2011). Empirical analysis on the relationship between tourism development and economic growth in Sichuan. *Journal of Agricultural Science, 3*(1), 212. DOI:10.5539/jas.v3n1p212

Helliwell, John F., Richard Layard, Jeffrey Sachs, and Jan-Emmanuel De Neve, eds. 2020. World Happiness Report 2020. New York: Sustainable Development Solutions Network. ISBN: 978-1-7348080-0-1

Johansen, S. (1988). Statistical analysis of cointegration vectors. *Journal of Economic D*ynamics and Control, 12, 231–254. DOI: https://doi.org/10.1016/0165-1889(88)90041-3

Johansen, S., & Juselius, K. (1990). Maximum likelihood estimation and inference on cointegration—with applications to the demand for money. Oxford Bulletin of Economics and Statistics, 52, 169–210.

Kadir, N., & Jusoff, K. (2010). The Cointegration and Causality Tests for Tourism and Trade in Malaysia. International Journal of Economics and Finance. Vol. 23 (1)

Kaplan, M., & Çelik, T. (2008). The impact of tourism on economic performance: The case of Turkey. The International Journal of Applied Economics and Finance, Vol. 2, pp13–18. DOI: 10.3923/ijaef.2008.13.18

Katircioğlu, S., Fethi, S., & Kilinç, C. (2010). A long run equilibrium relationship between international tourism, higher education, and economic growth in Northern Cyprus. Economic research-Ekonomska istraživanja, Vol. 23, pp86–96. DOI: 10.1080/1331677X.2010.11517403

Kent, S. (2015). Cultural Values and Sustainable Tourism Governance in Bhutan. Sustainability, 16616-16630. DOI: https://doi.org/10.3390/su71215837

Kent, S. (2017). Politics of Gross National Happiness. Palgrave Macmillan. eBook ISBN 978-3-319-65388-4, DOI: 10.1007/978-3-319-65388-4

Khalil, S., Kakar, K. M., Waliullah, & Malik, A. (2007). Role of Tourism in Economic Growth: Empirical Evidence from Pakistan Economy. The Pakistan Development Review, Vol. 46 (4), pp 985-995.

Kreishan, F. M. (2010). Tourism and economic growth: The case of Jordan. European Journal of Social Sciences, Vol. 15, pp 63–68.

Lee, C.-C., & Chien, M.-S. (2008). Structural breaks, tourism development, and economic growth: Evidence from Taiwan. Mathematics and Computers in Simulations, pp 358-368. DOI: 10.1016/j.matcom.2007.03.004

Mishra, A., & Ojha, N. K. (2014). Need of Marketing of India as a Tourist Destination: Evaluation of India's Performance in Tourism. Prabandhan: Indian Journal of Management, Vol. 7(8). DOI: 10.17010/pijom/2014/v7i8/59360

Mishra, P. K., Rout, H. B., & Mohapatra, S. S. (2011). Causality between tourism and economic growth: Empirical evidence from India. European Journal of Social Sciences, Vol. (18), pp 518–527.

National Council of Bhutan. (2016). Review Report on Tourism Policy and Strategies. National Council of Bhutan. Thimpu: Royal Government of Bhutan.

Nishimizu, M. (2008). Portrait of a Leader: Through the Looking-Glass of His Majesty's Decrees.

Oh, C.-O. (2005). The Contribution of Tourism Development to Economic Growth in the Korean Economy. Tourism Management, pp 39-44. doi:10.1016/j.tourman.2003.09.014

Payne, J. E., & Mervar, A. (2010). The tourism-growth nexus in Croatia. Tourism Economics, Vol. 16 (4), pp 1089-1094. DOI: https://doi.org/10.5367/te.2010.0014

Risso, W. A., Barquet, A., & Brida, J. G. (2010). Causality between economic growth and tourism expansion: empirical evidence from Trentino-Alto Adige. Tourismos: an international multidisciplinary journal of tourism, Vol. 5, pp 87–98.
URL: https://ssrn.com/abstract=1375407

Samimi, A. J., Sadeghi, S., & Sadeghi, S. (2011). Tourism and economic growth in developing countries: P-VAR approach. Middle-East Journal of Scientific Research, Vol. 10(1), pp- 28-32.

Sanchez Carrera, E. J., Brida, J. G., & Risso, W. A. (2008). Tourism's impact on long-run Mexican economic growth. Economics Bulletin, Vol. 23, pp- 1–8. DOI: 10.2139/ssrn.1076225

Tang, C. F. (2011). Tourism, real output and real effective exchange rate in Malaysia: a view from rolling sub-samples. Retrieved from Munich Personal RePEc Archive: https://mpra.ub.uni-muenchen.de/29379/1/MPRA_paper_29379.pdf accessed on November 22, 2020.

The World Bank. (2020, May 14). Leveraging Urbanization in Bhutan. Retrieved from The World Bank: https://www.worldbank.org/en/country/bhutan/brief/leveraging-urbanization-bhutan. Accessed on November 20, 2020

The World Bank. (2020, May 14). The World Bank In Bhutan. Retrieved from The World Bank: https://www.worldbank.org/en/country/bhutan/overview. Accessed on November 20, 2020

World Bank. (2020, May 14). The World Bank In Bhutan. Retrieved from The World Bank: https://www.worldbank.org/en/country/bhutan/overview. Accessed on November 20, 2020

World Travel & Tourism Council. (2020, May 14). Economic Impact Report. Retrieved from World Travel & Tourism Council: https://wttc.org/Research/Economic-Impact. Accessed on November 18, 2020. Accessed on November 17, 2020

Zortuk, M. (2009). Economic impact of tourism on Turkey's economy: evidence from cointegration tests. International Research Journal of Finance and Economics, Vol. 25, pp. 231–239.