

CAPITAL UNIVERSITY OF SCIENCE AND  
TECHNOLOGY, ISLAMABAD



# Investigating the Impact of Tourism on Economic Growth: Evidence from ARDL Approach

by

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degree of Master of Science

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*I want to dedicate this achievement my parents, teachers and friends who always  
encourage and support me in every crucial time*



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## *Acknowledgement*

In the Name of Allah, The Most Gracious, The Most Merciful. Praise be to God, the Cherisher and Sustainer of the worlds. All thanks to Almighty Allah, The Lord of all that exist, who bestowed me with His greatest blessing i.e. knowledge and Wisdom to accomplish my task successfully.

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**Sehrish Irum Arshad**

## *Abstract*

This study Investigates the Impact of Tourism on Economic Growth. The study employs the data of 44 Asian countries from 1990 to 2019, using an autoregressive distributed lag (ARDL) bounds testing approach to demonstrate the effects of long-run and short-run relationships on tourism in Asia and their impact on economic growth. To check the stationarity of variables an augmented Dickey–Fuller unit root test, PP - Fisher Chi-square, Levin, Lin & Chu, and Im, Pesaran, and Shin W-stat employed. The study finds that international tourism and passenger transportation expenditures have a significant influence on economic growth. According to the findings, Long-run dynamic demonstrates that international tourism expenditures for travel items, international tourism receipts for passenger transport items, and international tourism receipts for travel items all have a direct influence on economic growth.

**Keywords:** Tourism, Expenditures, Economic growth, ARDL, ADF, Asia.



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# Abbreviations

<b>ADF</b>	Augmented Dickey–Fuller
<b>ADF</b>	The Augmented Dickey–Fuller
<b>ARDL</b>	Autoregressive Distributed Lag
<b>EU</b>	European Union
<b>FDI</b>	Foreign Direct Investment
<b>GDP</b>	Gross Domestic Product
<b>GDPPC</b>	Gross Domestic Product Per Capita
<b>GMM</b>	Generalized Method of Moment
<b>ITE</b>	International Tourism Expenditures
<b>ITEFPTI</b>	International Tourism Expenditures for Passenger Transport Items
<b>ITEFTI</b>	International Tourism Expenditures for Travel Items
<b>ITRFPTI</b>	International Tourism Receipts for Passenger Transport Items
<b>ITRFTI</b>	International Tourism Receipts for Travel Items
<b>OLS</b>	Ordinary Least Square
<b>TLGH</b>	Tourism-Led Growth Hypothesis
<b>TR</b>	Tourist Receipts
<b>VAR</b>	Vector Auto-Regression
<b>VECM</b>	Vector Error Correction Model
<b>VECM</b>	Vector Error Correction Model

# Chapter 1

## Introduction

Tourism is the fourth largest exporter after food, fuels and chemicals of the world, and it is a huge cultural and social phenomenon with a considerable economic influence on countries (Curry, Dustdar, Sheng, & Sheth, 2016). Over the last three years, the average level of tourism interaction has increased intensely in Pakistan. In the 1980s, there were 41 million tourists in the world. In the 1990s the figure was 45 million. Over the last ten years, 196 million people have visited to different countries. Tourism was the world's fifth largest industry in 2015, with 11.86 million individuals travelling worldwide and the worldwide tourism sector producing US\$1.51 trillion in export income.(UNWTO, 2016). Furthermore, from the perspective of policymakers, for exporters, foreign travel investment is an important determinant of origin and destination nations for macroeconomic stability in many countries, particularly in emerging countries (Eugenio-Martin & Campos-Soria, 2014).

In providing direct or indirect support to tourist destinations the role of marketing is a significant feature of tourism expansion. Live promotions also take the form of organizing, selling, or rewarding activities such as booklets, television commercial, brochures and catalogs that encourage people to travel. However, the indirect or implicit type of promotions are a lucrative outsourcing, excluded from the export of television shows, movies, music, reality shows, bilateral agreement and visas. Citizens are lured to international locations to learn about the attractiveness of a foreign government policy or civilization, according to the essential concept

(Connell, 2012; Portegies, 2010). Sönmez & Graefe, (1998) concentrated on the indirect influence of prior foreign knowledge on potential actions. The essence of previous visits frequently determines future travel behavior.

In Turkey Gunduz & Hatemi (2005) investigated a hypothesis concerning the evolution of travel leadership. The findings of our study show that there is a one-way association between tourism management and economic development. Similarly, Dritsakis (2004) finds a bidirectional relationship between economic expansion and tourism in Greece. He found evidence for the idea of modern tourist development in Spain using a multivariate Granger causality study. Using time series annual data from 1960 to 2005, Khalil et al., (2007) investigated the association between Pakistani economic growth and tourism.

Adnan, Hye & Ali (2012) examined the hypothesis of “growth in Pakistan’s tourism leadership using annual time series data from 1971 to 2008. The results show that there is a long-term link between tourism revenue and Pakistan’s economic growth. Similarly, like exports, domestic tourism will promote economic growth. Tourism, for example, contributes a great deal to foreign exchange reserves, which help to incorporate modern technology into the development process. Tourism promotes modern technology, intellectual resources and innovation in competition” (Adnan Hye & Ali Khan, 2013).

Financial stability is becoming a major engine of economic growth when compared to other elements driving economic growth (Shahbaz, Kumar, Ivanov, & Loganathan, 2017). In most tourist destinations, numerous efforts have been made to improve the tourism sector’s competitiveness. Several research have been carried out to better understand the Tourism output, renewable power use, economic expansion, and tourism revenues have a relationship with foreign policy uncertainty, trade balance, and currency exchange (Dogru, Isik, & Sirakaya-Turk, 2019; Isik, Dogru, & Turk, 2018).

Many countries are seeing an increase in tourism. One of the reasons why policymakers are paying more attention to the link between economic growth and tourism revenues (Momeni, Janati, Imani, & Khodayari-Zarnaq, 2018), (Yousaf & Xiucheng, 2018). The goal of this research is to provide a better knowledge of

tourism costs. The ADF unit roots test was used to check the variables' stationary validity, while the ARDL (Automatically Distributed Interval) Bound Testing technique was utilized to investigate the variables' long-term and short-term causes. Furthermore, a novel perspective on the interaction of independent and dependent factors is offered.

The relationship between tourism receipts, tourism spending, and growth has been studied for the past three decades. As a result, the TLG growth hypothesis in tourism has been proposed, implying that tourism might lead to economic development. Both tourism revenues and expenditures are theoretically linked to economic development in this setting (Papageorgiou, Saam, & Schulte, 2017). Tourism receipts can be considered an alternative source of export earnings with a variety of benefits, including job creation, a better balance of payments, a better foreign exchange balance, and more tax revenue. Davis, Allen, and Cousinsa, 1988; Davis, Allen, and Cousin As a result, tourist money can help a country's economic development by having a favorable influence on the economy as a whole through spillover effects and other external factors (Marin, 1992).

Tourist spending, on the other hand, can boost investment in various aspects of tourism development, resulting in the arrival of new international tourists, says the report (Katircioglu, 2009). This, in turn, may result in economic development. To summaries, both revenue and expenditure from tourism can contribute to economic growth. TLG's counter-theory is development -led tourism, or GLT, which claims that a country's economic growth leads to increased tourism (Oh, 2005). According to (Payne & Mervar, 2010), a country's tourist development is the consequence of well-formulated economic policy, governance frameworks, human resource expansion, and effective investment application. All of this contributes to a favorable economic climate that encourages and benefits tourism. The helpful association between economic and tourism development (Pablo-Romero & Molina, 2013) is still ambiguous and hotly contested.

A huge number of scientists believe in the TLG hypothesis (Lee & Brahmaasrene, 2013). Only a few researchers, on the other hand, oppose TLG (such as Payne & Mervar, 2010). Simultaneously, researchers are debating whether the causal

association between tourism and economic progress is unidirectional (Ridderstaat, Croes, & Nijkamp, 2013).

In recent years, policymakers and analysts have focused on tourism revenue and growth as a driver of economic development. Policymakers recently concurred and came to the conclusion that the development of tourism not only enhances foreign exchange revenues but also creates jobs and helps the tourism industry's growth. As a result, total economic growth is stimulated (Balaguer & Cantavella-Jorda, 2002; Bouzahzah & El Menyari, 2013). As a result, the development of tourism has become an essential part of macroeconomic goals for most private entities, mostly among policy makers, governments, and others.

According to the World Tourism Organization's (2000) research and forecasts, the travel and tourism industry will see a surge in international tourists to 1602 million by 2020 (based on a forecast). The amount of money spent on tourism has increased by nearly \$200 billion.

Furthermore, according to estimates from the (WTTC, 2013), the tourism industry accounted for roughly 10.5 percent of global GDP in 2004, up 0.5 percent from the previous year to around 11 percent. When all aspects of the tourist industry were considered in 2014, The tourism sector's earnings climbed by about 6% to around \$6 trillion, comprising exports, government expenditure, investments, and tourism consumption. According to (Dritsakis, 2004), the tourist sector is expected to rise by nearly US \$10 trillion over the next ten years. As a result, for policymakers, government, and corporate organizations, complete research and evaluation of every facet of tourist revenue / growth and its influence on economic growth is unavoidable and critical. The long-term connection between economic expansion and tourism has been extensively researched. Early studies such as (Helpman & Krugman, 1987; Komiya, 1967) and (Sinclair, 1998), among others. Argue between that the development of tourism increases revenue.

In their study of the association among economic welfare and tourism growth, (Hazari, 1993) claimed that the increase of tourism could have a negative influence on welfare, particularly in monopolistic situations. Higher education and International tourism have an inelastic and beneficial influence on real income



growth, according to (Katircioğlu, 2010). In the instance of Northern Cyprus, his research validated both higher education-driven and tourism-driven growth.

Recent studies such as Dritsakis (2004), CC Lee and Chien MS (2008), which, to mention a few, reported a positive effect on economic growth, along with other determinants of income growth / growth from tourism.

Tourism development involves the hosting of tourists as well as the usage of various modes of communication and transportation, all of which are dependent on a variety of services of infrastructures such as power, roads, trains, airports, and ports, all of which arouse consumption of energies. According to Lee and Brahma-srene (2013), the construction of resorts and restaurants has major environmental and ecological implications for infrastructures development and the development of tourist destinations. The fact is that tourists are choosing to explore tourist destinations in their vehicles, which has a significant influence on environmental degradation (see (Akadiri, 2019), they showed that the effects of global warming are visible and climate change is expected, while Scott (2006) argues that these changes have a significant influence on tourist destinations, including mountainous regions, includes lakes and coastal areas.

Tovar and Lockwood (2008), examined that the growth of tourism has caused to widespread environmental degradation, habit, and socio-cultural fragmentation(Tovar & Lockwood, 2008). On the other hand, Martn-Cejas and Sánchez (2010) investigated tourist usage of road transportation and its implications for the development of sustainable tourism. He pushed for sustainable tourism transportation activities in tourist destinations based on his results. Tsang and Yip (2007) suggest that the level of foreign direct investment (FDI) influences the rate of economic growth, this is also examined by Ekanayake, Vogel, and Veeramach-eneni (2003). Meanwhile, while Hsiao and Shen (2003) claimed that economic development is a crucial factor in attracting foreign direct investment, Zhang (2011) claimed that the direction of the association between FDI and economic development is determined by particular nation variables.

According to Lee and Brahma-srene (2013) FDI encourages economic development and also has a substantial effect on consumption of energy of energy which in turn

raises carbon emission. They stated that while designing energy policies and emissions reduction initiatives, the relationship between these variables should be taken into account, particularly when policymakers and/or the government use FDI to stimulate economic growth. Furthermore, Catircioglu (2009) demonstrated that economic growth enhances net FDI inflows, whereas international tourism benefits Turkey in the long run, supporting the bilateral causal relationship between FDI and economic growth (Katircioglu, 2011).

Consumption of energy's is linked to economic development ; the further energy consumed, the faster the economy grows. Economic up serge is linked to consumption of energy (EC); the more energy consumed, the faster the economy grows. It's also possible that increasing economic up serge will result in more efficient energy use and, as a result, lower consumption of energy. The direction of the cause between the variables can be found by deduction, but not the direction of consumption of energy and economic development. Before the Industrial Revolution, economic growth and energy use were related, according to Baisiot and Norman (1999). Meanwhile, this link has contributed to increased environmental pollution due to carbon emissions, as well as increased industrial production due to the consumption of fossil fuels to maintain economic growth. (Anatasia, 2015). According to Halicioglu (2009), economic development requires increased consumption of energy or output to sustain genuine productivity levels. According to Katirciolu (2014a, 2014b), A rise in tourism-related activities raises energy requirements. In their research, De Vita, Katircioglu, Altinay, Fethi, and Merican (2015) established a long-term relationship in Turkey among visitor arrivals, economic expansion, energy usage, and CO2 emissions. He believed that environmental policies should not be undertaken at the price of tourism development. Consumption of energy will have a positive influence on tourism and thus create a strong link among tourism revenue and economic development. The debate focuses on the influence of tourism on economic development, given the relevance of the connection among the variables.

After gasoline, chemicals, and food, tourism has risen to become the world's fourth largest export business (Tugcu, 2014). Tourism, in example, represents for 6%

of overall global trade products and services exports, compared to 30% of international trade in services in 2014. Domestic tourism's influence on national economies has grown significantly during the same period, owing to the expanding size of the sector tourist market. In this respect, Balaguer and Cantavella-Jordá (2002) present the growth in tourism-led development (TLGH) hypothesis, which indicates that financial growth is fueled by an expansion in global tourist activities. The acronym TLGH is derived from well Export Growth Assumption (ELGH), which claims that economic expansion can be improved not just by increasing human resources and infrastructures, but also by increasing productivity. but also, by boosting foreign exchange, which is directly based on tourism expansion.

Domestic tourism, according to exporters, can help improve economic growth in a variety of ways. Tourism, for example, makes a significant role to foreign exchange reserve, which helps with the adoption of new technologies into the industrial process (McKinnon, 1964). Second, tourism promotes the development of new infrastructures and human capital, as well as enhanced competitiveness (Lemmetynen and Go, 2009).

The tourism and travel industry has grown to become one of the world's largest in the twenty-first century as a result of globalization, population movement, and advancements in transportation and communications technologies. Due to its potential to generate money, taxation, cash payments, and jobs, tourism has made a considerable influence to the economy of many countries around the world. (Dwyer & Forsyth, 2008). Tourism can contribute to sustainable development, according to Bramwell and Lane (1993), when it uses natural capabilities for natural resources regeneration and future development.

According to a tourism study, four European Union (EU) member nations, Germany, France, Spain and Austria, are among the top 133 stats in the tourism and travel competitiveness global index. (Blanke, Chiesa, & Herrera, 2009). Governments prioritize tourism through establishing supportive regulations, promoting the country's presence at international tourist exhibitions, forums, fairs, and promoting tourism destination marketing initiatives.

As a result, tourism has evolved into a significant component of the European economy. The tourism and travel business contributes US\$1248 billion, or 7.8% of total GDP, to the EU's gross domestic product (GDP) (World Travel and Tourism Council, 2011). The travel and tourism business in the EU employs roughly 9.7 million people, accounting for 8.4% of total employment in 2011, according to the council. This data is useful in understanding the connection between tourism and economic growth because the tourism industry in the EU is prioritised as a big source of revenue, economic growth and employment.

## 1.1 GAP Analysis

A large number of studies have looked into the influence of international tourism on growth in the economy. Most of researcher's studies that the effect of tourism on economic growth and CO2 and some researcher focus the role of trade, tourism, renewable energy carbon dioxide emissions on economic growth with different countries also different sample period and method. But no study relates these concerns the influence of international tourism expenditure and its connection on economic growth in Asian countries using ARDL bounding testing technique. Therefore, this empirical research work focuses to inspect the international tourism activities on economic growth in 44 Asian countries .

## 1.2 Research Question

RQ1: What is the relationship between economic growth and international tourism?

RQ2: How the long- and short-run effects of foreign tourism in Asian countries, as well as their influence on economic growth?

## 1.3 Research Objective s

1. To examine the influence of international tourism expenditure on economic growth in Asian countries.

2. To highlight the long- and short-run effects of foreign tourism in Asian countries, as well as their influence on economic growth.

## 1.4 Significance of Study

Using the ARDL boundary testing technique, the current study will look into the influence of international tourism expenditure and its link to economic growth. With the passage of time, economic activity expands. This development could raise energy demand in both developing and developed countries. Tourism is vital to the existence of many economies throughout the world. Tourism benefits host cities in a variety of ways. Tourism boosts the economy, creates tens of thousands of jobs, improves infrastructures, and promotes cultural exchange between residents and visitors.

The economic benefits of the tourism industry are plenty. The tourism business employs a large number of people, therefore investments in this sector have a fast payback period. At the same time, tourism development benefits the local economy as a whole, because tourist destinations tend to have more developed urban services and infrastructures. Tourists increase demand for services and consumer products, stimulating the tertiary sector of the economy (commerce, services, cottage industries, etc.). Other key branches that profit from tourism development include the transportation and real estate sectors.

## 1.5 Contribution of Study

The majority of researches have focused on the association between global economic expansion and tourism, while some have looked at tourism expenditures and revenues in key nations. However, this study has been able to explain the impact of international tourism on Asian economic growth. Using the ARDL bounds testing approach, this study adds to the body of knowledge by studying international tourism expenditure and its relationship to economic growth in selected Asian countries.

## **1.6 Scheme of Study**

Chapter tow is consist of literature review, methodology section is consist on chapter three, in the chapter all the analysis has been done and conclusion is consist on chapter five.

# Chapter 2

## Literature Review

Both developing and developed countries have collaborated extensively in the system of economic growth in the tourism profits during the previous few decades. The causal association between economic growth in the tourism income is becoming a significant resource for policymakers as tourism grows in many countries (Sokhanvar et al., 2018). As a result of globalization, the tourism industry has grown faster than it has ever before in the twenty-first century. It has also shifted a growing number of people from developed to developing countries in search of medical treatment. Furthermore, developed countries are anticipated to expand their tourism sectors in order to expand their market share (Fetscherin & Stephano, 2016). Tourism is an important part of the service business, since it helps to create hotels, restaurants, transportation, and other related services. A number of tourist policies are being developed by the state and the federal government. A significant sum of money has indeed been invested in the expansion of tourism. Tourism also contributes to the economy by creating jobs and boosting GDP (Kumar & Kumar, 2013).

In terms of job generation, currency exchange gains, government revenues, and poverty reduction, the tourism sector has witnessed rapid growth and is now a significant and economically competitive sector (Yap & Saha, 2013). Tourism has had a substantial indirect influence on the economy through adding to the market, enhancing human living standards, raising government income through revenue and taxes, and even expanding the manufacturing of goods, in addition

to the direct benefits. (Jin, 2011). It should be noted that any country's tourism ministry tries to stimulate and grow the country's tourist sector, which can also play a significant part in the country's economic growth (Nag, 2018). Tourism has become a significant part of the economies of both developed and developing countries. In addition to skills, education, and occupational training, the labor force as a factor of production encompasses all variables that can improve efficiency and competitiveness (Assaf & Tsionas, 2018; Wu & Wu, 2019).

Tourism is, without a doubt, a significant business sector around the world. The fact that it increases money, encourage the private sector, provides jobs and developing infrastructures demonstrates the importance of this industry "(World Tourism Organization [Madrid] et al., 1997). Economists have proposed various avenues by which the tourism sector can contribute to a country's economic growth. The Competition among domestic enterprises and global tourism destinations, as well as local firms that offer economies of scale, has spurred economic growth (Bhagwati & Srinivasan, 1979; Krueger, 1980). The consistent flow of international tourist traffic over the last few decades has demonstrated the global tourism industry's strength and expansion (Shahzad et al., 2017). Until the global economic crisis, Pakistan received more than 50,000 international visitors per year. The entire proportion of travel and tourism in the gross domestic product is 6.5 percent, according to the World Economic Forum (GDP)." Furthermore, travel and tourism generated around 3.4 million job openings in 2011, accounting for 5.7 percent of total employment. In 2011, travel and tourism accounted for 86 billion rupees in exports. It's also worth noting that it improved its ranking from 125 in 2009 to 113 in 2010. (World Economic Forum, 2011).

More and more developing governments are "using foreign tourism as a strategic engine of economic growth to stifle the growth of other sectors and the economy as a whole. This has an influence on foreign exchange earnings and career advancement (Holzner, 2011; Payne & Mervar, 2010). Furthermore, tourism's contribution to the balance of payments, as a percentage of total exports, is particularly high for small islands. Overall, there is evidence that small islands are highly specialized in tourism activities, ranking among the top in terms of tourism's contribution to the gross domestic product (GDP) (H. J. Kim & Chen, 2006; Schubert et al.,



2011). More tourism spending may result in increased activity in allied businesses, resulting in a larger overall influence than the initial injection. If this effect is engaged, tourism and agriculture, fishing, manufacturing tourism construction, and other services are some of the finest ways to increase economic efficiency (Castro-Nuo et al., 2013; Cernat & Gourdon, 2012). The true significance of tourism is not only that it contributes to overall economic growth, but also that it has the potential to influence economic, social, and cultural progress, as well as improve the welfare of the local population, given the right structural conditions” (Chou, 2013; Rosentraub & Joo, 2009).

Not only in developing countries of the world, tourism is one of the largest industry of the world and a vital driver of economic development and social and economic advancement, but also in industrialized ones like the United States. Aslan, 2014; Falk, Sequeira & Maçs Nunes, 2008) have used panel data to investigate the causal connection among economic growth and tourism. “The inefficiency of single-country time series data in displaying actual relationships has been highlighted by panel data research (Po & Huang, 2008). Panel data studies, on the other hand, have yielded inconsistent results on the association between tourism and economic growth, which are dependent on the nation group/s being studied. For example, Lee and Chang (2008) used FMOLS to examine the relationship between growth and tourism in OECD and non-OECD nations, concluding that tourism development had a significant influence on both OECD and non-OECD countries’ GDP”. In OECD nations, however, they discovered a unidirectional correlation between tourism and growth in economy, while in non-OECD countries, they discovered a bidirectional causality.

Sequeira and Maçs Nunes (2008) used the GMM estimator (Blundell & Bond, 2000) and the LSDV estimator to examine the association between economic development and tourism (Bruno, 2005). These estimators were applied to a wide sample of nations that were separated into sets based on their degree of tourist expertise. The findings suggested that the size of a country has no bearing on the prospect of economic development fueled by the country’s tourism expertise. The country’s level of specialization in tourism, on the other hand, may encourage tourist-driven economic development. Holzner (2011), for example, collected

data from 143 nations to conduct a comprehensive investigation of the TLG hypothesis utilizing panel data methodologies and the trans log production function. The majority of the findings revealed that tourism had a beneficial influence on a country's overall output. Because there has been significant research on specific Asian countries in terms of tourism development and economic development, [such as Malaysia (Tang & Tan, 2015), Korea (Oh, 2005), and Sri Lanka (Srinivasan, Kumar, & Ganesh, 2012), no study that uses panel data on a homogeneous group of Asian countries has been conducted.

This is noteworthy since the direction of causality between tourism development and economic development differs depending on the nation group analyzed, according to Dumitrescu and Hurlin (2012). Furthermore, most cross-country panel data study has only included tourism revenues (Sequeira & Maçs Nunes, 2008), not tourism revenues and expenditures in the same study (as noted by Pablo-Romero & Molina, 2013). To the author's knowledge, Tugcu (2014) is the only study that includes both tourist receipts and expenditures, and it only includes Mediterranean countries. Tugcu (2014), on the other hand, did not estimate effect sizes but rather looked into their presence or absence. The current study incorporates both tourist receipts and expenditures to obtain a full understanding of the tourism-growth relationship in the SAARC region.

Yuan, Kang, Zhao, and Hu (2008) inspected the association between energy use and Chinese economic development. The study included the from 1963 to 2005. Using a holistic and heterogeneous approach to consumption of energy, the study looked at the relationship between energy use and the state of the Chinese economy. Johansson received the findings of the experimental study using the integration and vector error correction model (VECM) technique. The results of the study suggested that all variables are linked in the long run, but that electricity and oil use are only one-sidedly related to economic development. Furthermore, the experimental research demonstrated an increase in overall energy, coal, and oil consumption, as well as an increase in China's overall energy, oil, and coal GDP. This is crucial because, according to Dumitrescu and Hurlin (2012), the direction of causality among tourism and growth in economy varies per nation group. Furthermore, most cross-country panel data analyses have only included tourism

revenues (Sequeira & Maçs Nunes, 2008), rather than combining tourism revenue and expenditures in the same study (as noted by Pablo-Romero & Molina, 2013). To the author's knowledge, Tugcu (2014) is the only study that includes both tourist receipts and expenditures, and it only covers Mediterranean countries. Some instances of specialized national studies are listed below.

Dritsakis (2004) used the Granger causality test to inspect the long-term effects on economic development and discovered a cointegration among GDP, international tourism income and exchange rate, between 1960 and 2000. They employed error correction models to show that there is a bidirectional relationship between economic development and international tourism (ECMs). Similarly, Greece's economic development and exchange rate, as well as the population gap between the exchange rate and the population from international visitors, were all noted throughout this time period.

Between 1975 and 2001, there was no substantial long-term relationship between economic development and tourism profits in South Korea, according to Oh (2005). According to the data, there is only a one-way relationship between tourism and growth in economy. As a result, South Korea's economic success leads to an increase in tourism. He also discovered that a variety of factors, including the size of the country's economy and degree of openness, as well as physical factors like travel limitations, could alter the causal relationship between tourism and growth in economy. Other factors that may alter the direction of reason between these two variables include the degree of dependency on tourism, the economic development rate and the tourism destination, among others.

During the period 1959-2003, Lee and Chen (2008) investigated the changes that affected the reliability and stability of the long-term relationship between GDP and tourism development in Taiwan. They looked at the multivariate model, tested the unit root, and estimated the structural interval using integration tests. They looked at international tourist receipts and international tourism arrivals, which are two separate types of tourism. The association between economic expansion and tourism is abundantly demonstrated by experimental evidence. Finally, the tourism sector is controlled by political and economic shocks, and some policies

undermine the credibility of the link between economic development and tourism development.

Krishan (2010) investigated from 1970 to 2009, there was a causal association between Jordanian tourism development and economic development. Using a vector auto-regression (VAR) technique, he discovered a favorable correlation between tourism and the Johansson and Jocelyn cointegration and Granger coagulation tests. Tourism, which led to economic expansion in Jordan, was the relationship between the two variables.

Georgantopoulos (2013) looked into causality's existence and direction. He tested the direction and existence of the causation between productivity and TE for India from 1988 to 2011, both as a whole and in subcategories (i.e. leisure Travel and Tourism Expenses (LTS) and Commercial Travel and Tourism Expenses (CTTE)) (BTS). PhillipsPerron and KPSS unit root tests, Johanneson integration tests, VAR models with error correction terms, impulse response generated from VAR / VECM models, variance decomposition, and experimental evidence of predictions were all employed for this purpose. Despite the fact that the model does not show a significant relationship between India's total output and total TE, the results suggest that all variables eventually return to their long-term equilibrium relations.

From 1975 to 2011, Khushnavis Yazdi and Masturakis (2014) examined the association between global tourism arrivals and economic expansion in Iran. The ARDL approach was employed in this study. The long-term association test demonstrated that the variables were linked over time. The development of global tourism was chosen as the most important element for economic development amongst other variables such as international trade, physical capital, REERs and energy.

Mustafa (2014) examined the long and the short linkages among tourism development and economic development in Sri Lanka using annual data from 1978 to 2011, employing Engle-Granger cointegration and the Granger causality test for causal correlations. The results of the study show a link among long-term tourism receivable and economic development. Granger Causality's results indicate that tourism profits aided growth in the economy. A quick review of the relevant literature on the global nexus of tourism development, the association between tourism and

financial growth, and the application of the tourism-led development hypothesis in India is required.

For TLGH, Pablo-Romero and Molina (2013) compiled a detailed literature review. Various pieces of literature on the tourism-development nexus are included here to prevent repetition. First, Brida, Carrera, and Risso discuss the dynamics of the tourism-economic development nexus (2008). Tourism-led development is a hypothesis. However, Oh (2005), among others, argued that economic progress fosters tourism, not the other way around. The premise of this area of literature is development -led tourism. However, some research suggests a feedback relationship between tourism and development (e.g., Katircioglu, 2009).

Singh (2008) studied the influence of a country's size on the association between tourism and development and discovered that only small nations excel at tourism. In contrast, Sequeira and Nunes (2008) discovered that the size of a country has no bearing on the connection between economic expansion and tourism. According to tourism does not aid development in developing countries, but it does in developed countries (Cárdenas-Garca et al., 2015). Tourism has a favourable influence on growth in both developed and developing countries, with the latter having particularly strong growth effects.

## **2.1 Tourism and Financial Development**

Below is the literature of a few researchers that looked into the relationship between tourism and financial development.

The Autoregressive distributed lag model was used by Song and Lin (2010) to examine the effects of the 2007 financial crisis on tourism in Asia. According to him the financial crisis had a negative influence on both international tourism and domestic in Asia.

To see if money supply cycles in the UK, the US and Canada, affected tourism demand cycles in Barbados and Aruba, Ridderstaat and Croes (2015) employed cointegration, causality and unit root tests. They revealed that money supply

cycles can have an unbalanced influence on the cyclical movement of international tourism, based on the stage of the cycle's development.

From 1995 to 2010, Bařarir and Akir (2015) looked studied the causal connection between growth in economy, tourism, carbon emissions, and energy usage in Turkey and the four European Union countries of Italy, Greece France and Spain. They established a association among tourism development and growth in economy. From 1975 to 2013, Shahbaz et al. (2016) investigated the "tourist industry nexus" in Malaysia, integrating financial trade and employment openness. Their results indicate bidirectional causation between per capita output and tourism, financial sector development and tourist industry, and openness to trade and tourisms demand, indicating a feedback or mutually supportive influence between the variable and illustrating the importance of tourism in enhancing key sectors and as a whole income level.

Ngoasong and Kimbu (2016) used a micro-ethnographic technique to look into the role of unofficial microfinance institutions on the development of Cameroon's tourist industry. They found that by collaborative action through informal financial intermediaries, company participants might build small tourism firms.

For the period from 1981 to 2009, Kumar and Kumar (2013) used the ARDL Bound Approach to investigate how tourism interacted with other contemporary variables such as financial growth and urbanization in Fiji's economic development. They discovered that tourism accounts for 0.13 percent of worker output, with financial growth accounting for 0.71 percent of each 1 percent rise in the long term.

Kumar (2014) uses the ARDL Bound Testing Model to investigate the dynamics of the interaction between information communication technology (Alekhina & Yoshino), financial development and tourism in Vietnam's growth in economy from 1980 to 2010. It was discovered that there is a bidirectional link between tourism and per capita output, implying that tourism and per worker production are mutually beneficial. Furthermore, according to this study, tourism has a short-term influence on per capita output, whereas ICT and financial expansion have a

long-term influence. Financial expansion has an influence on growth in economy and tourism.

## **2.2 Tourism and Economic Growth**

Tourism improves growth in the economy in EU countries, according to previous research (Albalade & Bel, 2010). They proposed a tourism-led economic expansion theory, according to which tourism will be a significant contributor to long-term growth in the economy. Mihalic (2002) outlined several advantages of tourism as a growth plan when compared to the trade of goods and services. According to Sahli and Nowak, several countries have invested in development of tourism in order to expand their economies (2007).

International tourism creates export profits and is a major source of foreign exchange earnings. Foreign exchange profits, jobs, and income are the main economic benefits gained from tourism (West, 1993; Archer, 1995). According to Tang and Jang (2009), tourist-related industries have a temporal hierarchy, and tourism can spark the development of other businesses and the entire economy (Sequeira & Nunes, 2008; Holzner, 2011). According to Lee and Chang (2008), tourism development not only supports the sector's growth, but also triggers a country's total growth in economy. These studies show that tourism has a favourable influence on the economy.

Tourism is dependent on a wide range of infrastructures services, including airports, ports, highways, railheads, and telecommunications, for the transportation and hosting of tourists. Infrastructures development and auxiliary tourist destination development, such as resort and restaurant development, have a high range of ecological and environmental consequences. Tourists are increasingly choosing to explore on their own vehicles (Hyer 2000).

Tourism, according to Tovar and Lockwood (2008), has led positively to environmental deterioration, negative socio - cultural effects, and habitat degradation. Many tourism locations' ecological and socio-cultural surroundings have been

harmed as a result of inadequate tourist planning (Hall & Lew, 1998). These unfavourable adverse effects have prompted increased concern about natural resource conservation, human well-being, and community long-term commercial feasibility. Hall (1998) looked at rural tourism as a vehicle for long-term development in Southeastern Europe, and discovered that the region's potential for rural tourist development is still limited by instability in the region.

Martín-Cejas and Sánchez (2010) used an ecological footprint indicator to evaluate the environmental influence of road transportation on Lanzarote (Spain) and its implications for maintainable tourism growth. Car usage on the island contributes to climate change in this way. Environmental change is unavoidable as a result of tourism growth, which includes the creation of hotel and tourist attractions. The natural resources of a site are directly responsible for a major share of conventional tourist activities. Global environmental changes, according to Gössling and Hall (2006), are already observable, and further drastic changes, notably climatic changes, are expected. These variations have a significant influence on a variety of tourism locations, including alpine regions.

Tourism involves travel, and fossil fuels are used to transport visitors to and from destinations, as well as within lodging accommodations and for a variety of tourist activities. Greenhouse emissions are connected to coal and oil. Bode, Peeters, and Gössling (2010) did comprehensive study on tourism-related energy use and its consequences for environmental issues like greenhouse gas emissions and global warming. According to a study bespoke by the United Nations World Tourism Organization, tourism-related CO<sub>2</sub> emissions are expected to account for roughly 5% of total global emissions (UNWTO, 2008). The majority of these emissions are caused by tourist transportation, particularly air travel. As a result, the tourism industry's contribution.

The potential hazard of growing CO<sub>2</sub> emissions linked with tourism was presented even more gloomily by Scott et al. (2010). They predicted that tourism would become a main source of greenhouse gas emissions in the future. On the other hand they revealed, that bulky policy and practise reforms in air travel may pointedly reduce emissions. Tourism's ability to familiarise to climate change is vigorous to its long-term viability (Scott, 2011; Weaver, 2011). Despite continued increase



in the number of tourists, a new policy direction that encourages a low-carbon economy, or the introduction of new lower-emission technology, both could assist keep CO<sub>2</sub> emissions down. CO<sub>2</sub> emissions could be decreased by using novel, additional energy-efficient planes or rules that limit the numbers of flight. A plausible association between tourism and CO<sub>2</sub> is established based on this research.

According to Po and Huang, the 2nd strand of literature consists of studies that use cross-section or panel data to evaluate the relation between tourism development and growth in economy because time series data are ineffectual at expressing the long-run connexion between tourism and growth in economy (2008). According to Aslan (2013), contradictory findings on the connection between tourism growth and growth in economy might be drawn depending on the nation group studied.

In various ways, the current study, as a supplement to another element of the literature, varies from earlier investigations. First and foremost, this study contributes to theory by categorising tourism-driven expansion into four main theories (i.e., feedback, neutrality, growth and conservation). This new arrangement, which has not been used in any previous studies, clarifies the causal relationship by explaining why tourism stimulates growth in economy in some nations but not in others. Second, given the sample's cross-sectional dependence and heterogeneity, the panel causality analysis used in this work is innovative in the tourism-led growth literature.

In this regard, Dumitrescu and Hurlin (2012) developed a panel Granger causality analysis that outperforms previous panel Granger causality tests in terms of producing effective outcome even in panels with tiny amounts, being relevant in poorly balanced and/or cross-sectionally dependent panels without any proper assessment, and enables various lag orders for each cross-section component.

Finally, with one exception, the causal association between growth in economy and tourism in Mediterranean Sea countries has never been explored in a panel setting. Using a Hurlin panel causality analysis, Aslan (2013) explores the causative relationship among tourism receipts and real GDP in 12 Mediterranean coastline nations (2007). However, there are significant differences between this study and Aslan's (2013). This study, for example, considers tourism-driven growth using

a modern the growth, preservation, feedback, and indifference hypotheses are all considered in one methodology, but the conventional hypothesis is only considered in the other. In addition, this study employs real GDP per capita development to represent growth in the economy, following Barro (2002), who claims that per capita GDP is the best proxy for growth in the economy.

Furthermore, in this study, tourism is proxied by two variables (tourism earnings and tourist expenses), whereas Aslan (2013) only used tourism receipts as an indicator. These distinctions are significant for two reasons. To begin with, estimating the influence of tourism on the level of actual revenue is not acceptable because growth in economy reflects real income growth. As a result, employing real GDP per capita growth as the dependent variable meets the required criteria for estimating tourism's causal influence on growth in economy. Second, a larger number of independent variables could aid scientists in better understanding the growth, protection, feedback, and neutrality hypotheses of tourism-driven expansion. Furthermore, the current analysis considers geographical placements to limit the influence of variation throughout the sample.

Aslan (2013), on the other hand, combines the sample (i.e., 12 Mediterranean coastal countries) into a single panel, which may result in a significant degree of variability, reducing the robustness of policy recommendations extrapolated from the results. Furthermore, segmenting the sample into Asian, European, and African parts may make it easier to evaluate the influence of tourism on growth in the economy and suggest policies related to the tourist-growth nexus. Finally, the method used in this research is an upgraded version of Aslan's (2013) methodology, which allows for various lag ordering for each cross - section unit.

It is one of the requirements for doing a panel Granger causality study that takes cross-sectional dependency into account, according to Dumitrescu and Hurlin (2012). Another strategy to ensure the robustness of policy implications is to avoid cross-sectional reliance. If the sample countries are likely to be cross-sectionally dependent, Dumitrescu and Hurlin (2012) appears to be a better choice than Hurlin (2007). As a result, the causal connexion between economic and tourism development in Mediterranean coastal nations is explored in the next section.

Within a sample of 143 nations, Brau, Lanza, and Pigliaru (2003) evaluated The relative growth in economy of 14 tourism-related states was examined, and it was discovered that tourism-related nations grow quicker than all additional sub-groups (Oil Exporting, OECD, LDC, Small). As a result, numerous emerging nations have started to see tourism as a key and basic component of their economic expansion and employment strategies, as it provides limited job creation, cash resources, technical assistance and foreign exchange revenues, and (Dieke, 2004).

According to Chen and Devereux, tourism, on the other hand, may decrease welfare in trade policies subject by export tariffs or import subsidies (1999). They demonstrate, Tourism-related foreign direct investment is, for most part, positive, and tourist immiseration is also possible in Sub-Saharan Africa, according to a conceptual framework. As a result, we cannot forecast the direction of the influence of tourist receipts (TRPit) on the growth in the economy of Sub-Saharan African economies based on the logic outlined above.

Ghali (1976) was the first to use time series data to assess the connexion among growth in economy and tourism, and he used OLS to do it (ordinary least square). Personal revenue in Hawaii would have reduced in the absence of tourism expansion from 1953 to 1970, according to Ghali (1976). Following that, Balaguer and CantavellaJorda (2002) studied Spanish data from 1975 to 1997 using a triradiate model “(foreign tourism receipts, real GDP and the effective real exchange rate) and found a link between growth in economy and tourism. Furthermore, the Granger causality test (1988) revealed that tourism contributed to Spain’s growth in economy. They did not, however, find any evidence of reverse causality. Balaguer and Cantavella-Jorda (2002)” supported governmental policies that focused on the tourism industry’s supply adaptation and demand promotion.

Dritsakis (2004) “utilised a similar approach for Greece, while Durbarry (2002) used the same method for Mauritius data. Both researchers employed Johansen’s (1995) cointegration and Granger causality analyses to find evidence of a bidirectional causal link among international tourism revenue and economic development. Dritsakis (2004) revealed that whereas both tourism receipts and the real exchange rate had a strong causal association with economic growth, tourism receipts had only a simple causal relationship with both economic growth and the real exchange

rate. From 1959 to 2003, Lee and Chien (2008) looked at the relationship between Taiwan's GDP, tourism (as measured by tourism receipts and international tourist arrivals), and the real exchange rate. Lee and Chien (2008) established a bidirectional causal link between tourism and growth in Taiwan." According to their analysis, exogenous variables such as economic crises, political reforms, or tourist disasters could have a major influence on the stability of this link.

The TLG hypothesis has also been put to the test in a single-country situation. Tourism receipts had an effect on economic development in Spain, according to Balaguer and Cantavella-Jorda (2002). Between 1980 and 2004, Demiroz and Ongan (2005) investigated the causal association between economic development and tourism revenue in Turkey and discovered a bidirectional causal relationship. Gunduz and Hatemi-J (2005) performed leveraged bootstrap causality testing on time series data for Turkey from 1963 to 2002. They discovered a one-way causal association between foreign tourism and economic growth (measured as a function of global tourist arrivals).

The relative weight of tourism inside the financial system of the state under study, according to Gunduz and Hatemi-J (2005), is likely to be a relevant factor influencing the above-mentioned causal link. Following this, Kaplan and elik (2008) discovered that tourism and GDP in Turkey have a steady unidirectional relationship. They also stated that tourism's increased relative importance in the Turkish economy has made it one of the country's primary sources of foreign money. They emphasised that tourism was a strategic sector that required long-term support in order to have an influence on economic growth. Similarly, Solarin (2016) examined TLG for data from Mauritius and discovered that TLG was present for certain, but not all, of the country's tourism markets (six markets showed TLG while four did not).

Tourism and economic growth have been found to have bidirectional causal links in several studies. Kim and Chen (2006), for example, used double period analysis to look at data from Taiwan from 1971 to 2003 and discovered a bidirectional causality that supported the theories of TLG and export-led tourism. Similarly, Katircioglu (2009) examined time series data for Cyprus (1960–2005) on

foreign tourism, international trade (both collectively and separately), and economic growth. Katircioglu (2009) showed evidence of a long-term association between international trade growth, economic growth and the number of international tourist arrivals using the autoregressive distributed lag approach. However, studies that contradict the TLG hypothesis. Oh (2005), for example, utilised a bivariate Granger causality model to analyse data from South Korea from 1975 to 2001 and found no long-term connotation between growth and tourism.

Sequeira and Maçs Nunes (2008) explored the causal association among tourism and economic growth using panel data. Panel data research has emphasised the inefficiencies of single-country time series data in revealing genuine linkages (Po & Huang, 2008). Panel data studies, on the other hand, have yielded mixed results on the association between economic expansion and tourism, depending on the country group or countries analysed. Lee and Chang (2008) used FMOLS to look at the relationship among growth and tourism in OECD and nonOECD nations, indicating that tourist development had a significant influence on GDP in both. However, they identified a unidirectional association between growth in OECD countries and tourism, while they discovered a bidirectional causality in non-OECD countries.

Sequeira and Maçs Nunes (2008) used the GMM estimator (Blundell & Bond, 2000) and the LSDV estimator to investigate the association between economic expansion and tourism (Bruno, 2005). These estimators were applied to a wide sample of countries that were separated into sets based on their degree of tourism expertise. The findings suggested that the size of a country has no bearing on the prospect of economic growth fuelled by the country's tourism expertise. The country's level of specialisation in tourism, on the other hand, may encourage tourism-driven economic growth. Holzner (2011), for example, used data from 143 countries to conduct an extensive investigation on the TLG hypothesis utilising panel data methodologies. The majority of the findings revealed that tourism had a beneficial influence on a country's overall output.

“The economic contribution of the tourism sector to industrialised countries has been thoroughly explored in the literature since Lanza and Pigliaru [2020] first experimentally investigated the causal relationship between tourism and economic

growth. The literature can be divided into three sections based on the sorts of data sets used in previous investigations. The first branch of research looks at the relationship between tourism and economic growth using time series data. He used data from 1975 to 1997 to show that tourism has a beneficial influence on economic growth and so validate the TLG hypothesis for Spain. A bidirectional causal association between tourism and economic growth has also been discovered by certain academics.”

Kim et al. (2003) “discovered bidirectional causality between tourism and economic growth in Taiwan, implying that both the TLG hypothesis and its inverse, the economic growth driven tourism hypothesis, were confirmed. on the other hand, discovered no link between tourism and economic growth in Turkey and Brazil, respectively. Furthermore, panel data analysis has been widely used to study this problem. Further, he investigated the relationship between tourism and economic growth for a variety of OECD and non-OECD countries using panel data analysis. Their findings revealed a unidirectional connection between tourism and economic growth in OECD countries, as well as a bidirectional causality between tourism and economic growth. He looked examined the influence of tourism on economic growth using regional data from Portugal and found that tourism had a favourable influence on economic growth.”

Similarly, CortesJimenez [28] discovered that in coastal locations, both international and domestic tourism have a minor influence on economic progress, whereas internal, only national tourism seems to be important. Finally, some studies looked at the relationship using cross-sectional analysis (e.g. [29]). Overall, while the literature on this topic yielded varied results, most studies tend to support the TLG concept. Numerous studies imply a unidirectional relationship between tourism and the economy (also referred as the tourist-led growth in the economy (TLEG) hypothesis) or the economic and tourism (also known as the economic-driven eco-tourism development (EDTG) hypothesis). The empirical investigations of Parrilla, Font, and Nadal (2007) in Spain confirm the TLEG hypothesis, meaning that tourist specialisation enhances general growth rates in these nations. In France, Chatziantoniou et al. (2013) argue that state economies’ economic growth is what propels tourism development.

Slight islands that rely substantially on foreign tourism income and everywhere the tourism industry has largest outbreak government backing are a few examples (Louca, 2006). All of the top ten nations in relations of contribution of tourism to GDP are small islands (Houston, 2008). Many countries have turned their attention to tourism as a means of development, and a huge number of small steamy island economy has shifted their production strategy away from old-style export standbys like bananas and sugar and toward huge tourism growth, related financial and construction services. Because of their various constraints, it's not unexpected that many small states have preferred tourism industry as engine of their development. Lack of diversification due to shortage of resources, revenue instability due to export absorption, severe openness, slight market size, and huge transportation costs are among them.

In comparison to the product export and old-style services, (Mihalič, 2014) identified numerous rewards of tourism as a progress policy. Few of these advantages include (a) sociocultural attraction and natural; (b) locally produced products can grasp a greater price when sold out to visitors locally rather than when transferred; and (c) few fragile products can be sold out to tourists in homebased market. According to (Croes, 2006), tourism benefits a country in three ways in order to overcome its small size. First, it offers the size to offset inadequate market demands, allowing for higher efficiency and economy of scale for more products and services, lowering production item costs. Second, by encouraging new entries into the market, it enhances competition, which has a favorable influence on the stock price of good and given services. Thirdly, tourism industry can boost the of living standard and hence advance the life quality in a smaller state by giving scale and competitiveness, as well as more consumer choice and trade openness. In tiny economies, there is considerable signal of a significant association among economic development and tourism growth, according to numerous empirical studies.

(McElroy, 2006) provides pragmatic evidences that effective tourism-driven tiny island are a unique inward-looking development al event and a viable alternate to bureaucracy, remittances, aid and immigration. Despite the reasons and opinions that tourism has a significant impact on financial development, there are many

growths model that include tourism industry as a segment and analyses the effects of variations in tourism development on lasting economic development. This study, look at how a surge in growing rate of demand of global tourism affects the economic development of a slight tourism-driven economies. The study gives a formal model as well as empirical data. The approach is a subset of tourism-led development model allows for external debt on the global financial market to support consumption and investment, as well as addressing the empirically significant issue of transitional dynamics.

A vast population of intertemporally optimizing go-betweens and an expertise reflecting tourism industry are the components of the dynamic model. The model demonstrates that as tourism demand grows, transitional dynamics emerge, with steadily growing economic development and higher relations of trade. The case study of Antigua and Barbuda is used in the empirical approach of this work to evaluate the reliability of the theoretical results. An econometrical methodology is used to analyses yearly data from 1970-2008. The study used a cointegration scrutiny to see if there is a long-run association between economic development, real exchange rate and overseas tourism incomes.

Tourism development is thought to have a favorable impact on the economy. (Balaguer & Cantavella-Jorda, 2002), on the other hand, discovered tiny evidences that supports the tourism-led economic development hypothesis, revealing the ambiguity surrounding the association between economic and tourism development. According to additional recent study (Adamou & Clerides, 2009), contribution of tourism to economic development is dependent on the amount of tourist specialization, and hence the connection among tourism development and economic development should not be measured direct.

How can a non-linear connection among tourism development and economic development be confirmed at a certain point is an essential concern that arises? Relatively than arrogant a cut-off argument at random (such as economic levels or state size), this research investigates the link using endogenous threshold regression analysis. By using panel threshold model, (Chang, Khamkaew, & McAleer, 2012) find some evidence of a crossover impact in the tourist industry development and economic growth in a cross-country population. The research goes on to look



into the verge impact of tourism-driven development in a certain state. Two reasons are there why the Chinese tourism-led industry's experience is of attention. First, the Asia-Pacific area, particularly China, has seen a significant increase in foreign visitor arrivals in current years.

China was ranked third in domestic visitor arrivals and fourth in inbound tourist spending by the United Nations World Tourism Organization (UNWTO) in (2010, 2011). Given the importance of inbound tourism in China, estimating the situation probable input to the Chinese economy is critical. Second, due to a variety of socioeconomic, economic geographical, and political reasons, China's province economies have become highly diverse. The Chinese tourist industry is a suitable case study for establishing whether global tourism has the same effect on economic growth in regions with various degrees of tourism reliance because of the appropriate structure of regional economies in which it functions.

Several empirical research have looked into the TLGH, with several econometric analyses providing experiential sustenance for the hypothesis. For example, Balaguer and Cantavella-Jordá (2002) investigated the character of tourism on Spain's long-term economic development, supporting the TLGH's rationality in this situation. A multivariate Granger causality test and cointegration techniques to study the TLGH in Spain and Italy. They indicate that exports cause long-term growth in both nations, but tourism appears to be a component that influences long-term economic growth only in Spain. (Dritsakis, 2004) used causality analysis to analyze the influence of tourism industry on Greece's long-run economic development and revealed evidences of bidirectional causality among global tourism and economic development. Further, they used leveraged bootstrap causality tests to experimentally corroborate the TLGH in the case of Turkey. They discovered a one-way link between international tourist arrivals and economic growth. Using cointegration and Granger causality testing, they examined the effect of tourism industry on Turkey's long-run economic development. Equally in the long run and short run, they discovered bidirectional causality among Turkey's economic and tourism development. (Katircioglu, 2009), on the other hand, found no evidence of cointegration between and long-run economic development and global tourism in Turkey, and hence dismissed the TLGH for the economy of Turkey.

(Durberry, 2004) used cointegration and causality tests to support the validity of TLGH for a number of tiny islands, consisting Cyprus, Mauritius, Japan's Amami island, and the islands of South Pacific. Although there is no long-term equilibrium connection between both the indicators, there is a uni-directional causal correlation between financial tourist development and the relevant factors, according to Oh (2005), who studied the TLGH in Korea. As a result, in the case of the Korea, the TLGH is not supported. More, they investigated Taiwan's TLGH and discovered a long-term balance association as well as bi-directional causality among the two variables.

To put it another way, tourism and economic development in Taiwan are mutually beneficial. Similarly, (Lanza, Temple, & Urga, 2003) showed that tourism (via accommodation capacity) has a beneficial impact on per capita income growth in Portuguese areas. using the case of China to study the causal links amongst global tourist and global trade streams. They show that the two variables have two-way Granger causality. Further, they looked at the case of Mexico, finding that tourism expenditure, real exchange rates and real GDP, all had one cointegrated vector with positive elasticities. Using cointegration and causality testing, they show that tourist spending and real effective exchange rate are moderately exogenous to GDP Growth and that causality flows uni-directional from tourism spending and real effective exchange rate to GDP Growth. The goal of this study is to look into the TLGH for the Italian province of South Tyrol.

Despite the fact that the tourism sector in South Tyrol has developed greatly, tourism scholars have remunerated little consideration to a pragmatic valuation of the industry's input to the economy of South Tyrolean. The following questions are the focus of this research. First, is there really a long-run equilibrium connection among tourism development and economic development in South Tyrol? Second, supposing a steady deep connection, what is the nature of a causal association between these two variables? We look at the long-term co-movements and causal relations among tourist industry (reveals that the number of foreign tourist arrivals (T)), economic expansion (evaluated by South Tyrol's real GDP), and price levels (RP) in South Tyrol and Germany (Hayashi, 1982).

Some scholars discovered that the causal association among the economy and tourism is a bidirectional, in addition to the unidirectional hypothesis. The bidirectional hypothesis, which asserts that Chen and Chiou-Wei (2009) in South Korea and Ridderstaat, Croes, and Nijkamp (2016) in Aruba both agreed that mutual influences occur across the tourism-economy nexus. All the above hypotheses sometimes are refuted, as in the studies of Katircioglu (2009) in Turkey and Tang and Jang (2009) in the U.s, which found no causal connection between the two factors. Antonakakis, Dragouni, and Filis (2015) also discovered that the tourist industry development link is not consistent over time and is vulnerable to large changes in the economy. It becomes obvious that the current literary work lacks a comprehensive analysis of the tourism-economic relationship. It's also worth mentioning that the vast bulk of relevant research focuses on certain case study subjects.

On the other side, researchers like Dritsakis (2012), Lee and Chang (2008) argue that a cross-sectional study of tourism economy dynamics provides for a more in-depth and comprehensive examination of different groups of countries. Furthermore, considering individual country effects, reverse causality, omitted variables, and measurement error, it is plausible to claim that using panel data can reduce endogeneity. Indeed, there is a huge amount of work that takes a panel data approach. Typically, studies along this line group countries together based on their geographic proximity. Narayan et al. (2010), for example, look at four Pacific islands, whereas Dritsakis (2012) looks at a number of Mediterranean destinations. Both works propose the TLEG hypothesis using panel cointegration testing. Apergis and Payne (2012) also chose to look into nine Caribbean states where the panel error correction model revealed bi-causal relationships.

Similarly, Lee and Brahmašreṇe (2013) use both methodologies to confirm the favourable benefits of tourism on financial development in 27 European Union member countries. Also, there are a few studies that use panel data from around the world. Holzner (2011) examines 134 nations and concludes that tourism has a positive effect on national economies, albeit not to a great extent. In furthermore, Ivanov and Webster (2013) looked at the influence of globalisation on tourism's contribution to the economy in 167 nations and found no significant influence.

Although emphasizing on a huge number of nations has its benefits, sensitivity analysis, which breaks countries into groups, may provide a deeper understanding of the tourism-growth relationship. Some publications categorise their sample nations built on specific criteria in this regard. In addition to a geographical classification, Lee and Chang (2008) classify their 55 sample states into non-OECD and OECD members (Latin American, Sub-Saharan African destinations and Asian). Although there are certain advantages to focusing on a broad number of countries, sensitivity analysis, which breaks nations into groups, may provide a more in-depth insight of the tourism-growth association. In this sense, certain publications categorise their sample countries according to specified criteria. Lee and Chang (2008), for example, divide their 55 sample nations into non-OECD and OECD members, as well as a geographic classification (Asian, Sub-Saharan African and Latin American destinations).

Sequeira and Nunes (2008) separated their case-study areas into tiny (demographic) and poor nations (per capita GDP) to examine if tourism has a considerably bigger economic influence in these clusters than in the international average. They indicate that tourist specialisation has a bigger influence in impoverished nations; however, this is not the case in tiny countries. Both Seetanah (2011) and Chou (2013), who utilise panel Granger causality analyses to limit down their sample selection to transition economies and demonstrate bidirectional connection between economic development and tourism, categorise nations based on their economy type, but no apparent pattern emerges.

Aside from the aforementioned classifications, researchers might use other classifications to narrow their focus on the tourism-economic link. For example, Arezki, Piotrowski, and Cherif (2009) evaluate 127 countries based on their tourist specialisation as measured by the number of UNESCO World Heritage Sites (WHS), finding that specialisation boosts tourism's favourable economic growth influences. Chang, Khamkaew, and McAleer (2012) divide 159 nations into two groups (low and high regimes) based on their investment percentage of GDP, trade openness, and government consumption share of GDP. They show that economies in low-regime nations have a greater TLEG link, but economies in high-regime countries do not necessarily benefit from large tourism benefits.

Scholars have recently voiced a hard desire to study multiple nations rather than isolated events, as stated in the preceding paragraphs. “Regardless, the huge maximum of these studies uses either no classification or a single categorization for model states, such as a geography or economic measure. Only a rare effort have been made to combine many classes into a single study (as in the study of Chang, Khamkaew, and McAleer 2012). Furthermore, all publications that employed panel data and/or country classification established an a priori causal connotation, which could be tied to tourism or even the economy. By employing a PVAR approach and studying a set of six variables that capture the three aspects that determine tourism-growth effects (i.e., socioeconomic, political/governance, and tourism product), this paper hopes to add to this base of information.” Rather of specifying the nature of the relationship a priori, the PVAR method allows the data to disclose the underlying causal way.

Tourism development, on the other hand, has negative economic consequences because economies that become overly reliant on it become more vulnerable to negative demand-side shocks. Inflationary pricing and wages in the host country result from increased foreign demand for tourism services. “Foreign ownership and factor mobility (across industries) likely to erode the benefits of tourism even further. The transfer of domestic factors of production away from the tradable goods sector may lead to a contraction of the industrial sector, as a considerable increase in inbound tourism flows tends to raise demand for (consumption of) non-tradable commodities (intended as locally supplied services) (Copeland 1991). In addition, tourism can have a undesirable influence on income distribution and create domestic market power distortions that reduce welfare (see, for example, Hazari and Sgro 2004; Balaguer and Cantavella-Jordá 2002).”

While empirical indication supporting the tourism-led development hypothesis is growing (see, for example, Hye and Khan 2013; Gunduz and Hatemi 2005), for example, looked at the relationship between the influence of the later on a wider 'economic development and tourism-related 'economic growth construct based on a variety of socio-cultural variables (including life expectancy, infant mortality rate, adult literacy rate, etc.). They concluded that tourism-led growth had a

beneficial influence on socio-cultural financial growth only in states where socio-cultural economic development is already high, based on data from 144 countries from 1991 to 2010.

The study examined a related but unique association between economic growth and tourism specialisation (a measure of development of tourism that is commonly expressed as visitor arrivals as a percentage of population or tourism revenues as a percentage of GDP.) According to Lanza (1998), tourism specialism is defined as a country's competency framework on tourism-oriented policies in terms of improving performance of the economy (measured in terms of rate of change of GDP) through coordinated investment opportunities designed to stimulate inbound tourism advancement returns. The findings of Lanza and Pigliaru's pioneering work are supported by Pigliaru's and Brau, Lanza, (2007; and 2004). Conclusions showing the amount of development of tourism-specializing nations is greater than that of other nations (1995). According to Figini and Vici (2010) and Sequeira and Campos (2007), there is no strong evidence that tourism specialisation leads to higher growth. Adamou and Clerides (2010) and Sequeira and Nunes (2008), on the other hand, find a positive benefit, however the latter study finds that the influence occurs only at low levels of specialisation and diminishes as a country becomes more specialized. Arezki et al. (2009) discovered a link between economic growth and tourism specialisation as well. However, their sample period ends in 2002, despite the fact that it is based on a broad panel of 127 countries. Furthermore, the tool they employed to quantify specialisation (which they define as the share of tourism in exports) is dependent on the number of UNESCO World Heritage Sites per countries, an unusual measurement that makes cross-study comparisons difficult.

Even small countries with adequate natural, historical "or cultural resources and attractiveness, as Adamou and Clerides (2009) pointed out, can create successful tourism economies (see also Croes 2013). Even so, we would make the argument that the scale of gov't and non-governmental (domestic and foreign) investment required for a development growth of the tourism sector (including spending for the provision and management of additional sanitation, power, airports, water, roads, and other infrastructures) at a magnitude that would enable such states to ascend

wealth distribution rankings is really quite significant, and can only be achieved as a result of a very well tourism sector (alongside a deliberate long-term investment strategy). As a result, tourism should have an effect on GDP, the most widely cited quantitative indicator of economic success (GDP). As a result, a body of specialised literature has developed a mechanism for estimating tourism's influence on GDP in order to establish how tourism contributes to economic progress" (Ivanov & Webster, 2006).

"The number of foreign people movements will climb to 1602 million by 2020, with tourist receipts reaching over US\$200 billion," according to World Tourism Organization forecasts (United Nations World Tourism Organization [UNWTO], 2011). Furthermore, according to the World Tourism Travel Council, the global tourism industry would expand to 10.9 percent of global GDP in 2014, up from 10.4 percent in 2004. When all components of the tourist business are taken into account, such as investment, tourism consumption, and exports, government spending, the industry grew by 5.9% in 2004 to reach US\$5.5 trillion. The 10-year growth forecast for 2014 is \$9.5 trillion. For these reasons, it is critical for governments to thoroughly investigate all areas of tourism development and economic progress (Leea & Chang, 2008)".

Tourism has been transformed into the world's largest industry for more than a decade, and it has continued to flourish since then. Today, tourism is a significant source of revenue for many nations, and most governments actively support it. According to data from the World Trade Organization, the tourism industry will employ half of the world's workforce by 2020. (UNWTO). According to the World Tourism Organization, the number of tourists worldwide exceeded 800 million in 2007, generating more than 800 billion dollars in revenue. After the oil and automobile industries, the tourism business is ranked third in the world trades. This industry is among the highest-income and important industries in the world in the twenty-first century, prompting policymakers to pay greater attention to it cultural, political, as an economic and security development strategy, and governments and nations recognise its positive economic and cultural influences (Lashkarizadeh, Keshmir, ParhiziGashti, & BeigpoorShahrivar, 2012).

In the case of Turkey, the most significant changes in the tourism sector began in the mid-1980s. With only about 60,000 bed spaces, tourism's proportion of total fixed investments was under 1% and its share of GDP was 0.8 percent before 1980. In 1985, the sector was included in the newly implemented programme as one of the promoted sectors, allowing it to contribute significantly to economic growth by increasing investment in the industry. The contribution of travel and tourism to GDP increased from 0.8 percent in 1980 to 7% in 2007. In 1980, tourism income was US\$326 million, and foreign travellers numbered 1,288,000; by 1990, the number of foreign tourists had climbed to 23,500,000, and tourism revenue had increased to US\$13,390 million. Table 1 summarises overall tourist arrivals and tourism revenue for Turkish throughout four-year periods from 1970 to 2009, as well as a two-year period from 2010 to 2011.

Educational tourism, as proposed by Ritchie et al., "is a terminologically defined travel tied to education for the sake of brevity (2003). Educational tourism, according to Ritchie et al. (2003), is a mediating contact between tourism and education, with education or learning being the primary or secondary goal of the trip. Rundshagen (2017), on the other hand, links educational tourism to three main contexts: education, science, and vacation. Educational tourism, in the context of education, can be defined as a travel programme aiming to reinforce theoretical insights gained via classroom learning while exposing students to real-world experience. In the context of science, educational tourism refers to a study trip or expedition that allows researchers to visit experimental sites and collect data in real time. Educational tourism, as a vacation activity, is more likely to be associated with cultural tourism, which attracts those interested in immersive cultural endeavours such as foreign language acquisition and learning about the history, architecture, food, customs, and other aspects of both autochthonous and migrant societies. Given these various contexts, educational tourism can be broadly characterised as a type of tourism devoted to acquiring new knowledge, new skills, language, or formal education, with knowledge acquisition or learning serving as the unifying thread that connects these distinct activities. As a result, subsets of the aforementioned contexts include intellectual tourism, historic tourism, spiritual (religious) tourism, ecological tourism, sports tourism, and farm" (agricultural) tourism.



Educational tourism has aroused regulators' and academics' interest as a growing economic sub-sector with ramifications for the educational and tourism industries, as well as the host country's economic growth. Educational tourism research is a subcategory of economic growth and tourism study that focuses on clarifying educational tourism's economic effect. Given the significance of the tourism-led growth (TLG) hypothesis in defining the broader discourse on tourism, any debate of educational tourism-related study must take into account the TLG's positively and negatively ramifications.

### **2.3 The Positive Influence of Tourism on Economic Growth**

Over the last four decades, the favourable influence of tourism on the economic growth has been scrutinised. The two early studies, Archer (1984) and Ghali (1976), aimed to assess the influence of tourism on the economic growth in Hawaii and Barbados, respectively. "By using ordinary least squares (OLS) estimator, both studies found that tourism contributed to growth in the economy. Using Feder's (1983) two-sector economic model in conjunction with the OLS estimator, Modeste (1995) examined the tourist-growth connection in three Caribbean countries. The findings that tourism had a significant positive influence on economic growth. Similarly, using an IO model, Archer (1995) discovered that tourism was a key driver of economic growth in Bermuda, creating job opportunities and raising revenue. To assess the validity of the TLG hypothesis in the Spanish economy, Balaguer and Cantavella-Jordá (2002) used a basic tri-variate model that included tourism, exchange rate and output, as well as cointegration and Granger causality test instruments. They discovered that tourism has a favourable influence on economic growth and that there is a one-way Granger causality between economic development and tourism."

Most tourism-growth research found that the TLG hypothesis was confirmed in a positive way. In their review of papers relevant to the TLG hypothesis, Balaguer and Cantavella-Jordá (2002) discovered that a high number of studies corroborated

the concept that tourism stimulates economic growth. Other studies that followed the mantra of more tourists, more growth discovered a positive causal connexion between economic development and tourism in many regions and countries. The Asian region (Fayissa, Nsiah, & Tadesse, 2008), African continent (Fayissa, Nsiah, & Tadesse, 2008), and the Middle East (Fayissa, Nsiah, & Ta (Tiwari, 2011; Lee & Chang, 2008).

## **2.4 The Negative Influence of Tourism on Economic Growth**

Other research, on the other hand, indicated a negative or even non-existent association between economic growth and tourism, implying that the more tourism, less or no growth was equally valid. These include studies focused on specific regions and countries, such as Barbados (Payne & Mervar, 2010, Jackman & Lorde, 2010).

The nexus between economic development and educational tourism. Few research have looked into the correlation between economic development and educational tourism. They generally support or oppose the positive influence of educational tourism as a determinant of economic development in general. These opposing effects can be attributed to dual nature of educational tourism. Tourism can have a net positive influence via increasing aggregate consumption spending on basic necessities, the entry of foreign cash, the development of job possibilities, and higher capital spending on educational tourism-related infrastructures and services. Incoming educational tourists, on the other hand, can place additional burden on current programs and amenities, lead to job loss, raise rising inflation, and cause socio-cultural disruption (Gibson, 2005; Burke, 2017).

This contradiction was never more evident than in the instance of Spain, Galicia, where MartnezRoget et al. (2013) examined the indirect and direct effects of educational tourism using an IO model. The research looked at foreign students enrolled in formal courses at three Galician universities: the University of

Vigo (UDV), the University of Santiago de Compostela (USC) and the University of A Corua (UAC) (UDC). The statistics found that, while accounting for only 0.2 percent of all tourist arrivals, educational travellers spent four times as much as traditional tourists. López et al. (2016), on the other hand, expanded on MartnezRoget et al. (2013)'s work in the same area by integrating consumer expenditure data from both incoming and exiting students, "as well as utilising international exchange and language students as proxy for educational tourism. They discovered that, while educational tourism had a positive net economic influence in Galicia, the amount of the expenditure multiplier was lower than that of traditional visitors, contradicting Martnez-Roget et al (2013). Matahir and Tang (2017a, 2017b) used cointegration and Granger causality analyses to evaluate the link between economic growth and educational tourism in Malaysia. To use the total number of overseas enrolled students in Malaysian tertiary education institutions as a proxy, the analysis revealed that educational tourism supported Malaysia's growth in the economy, particularly in the long run." They also showed that educational tourism stimulates economic growth, corroborating the idea that "more educational travellers, more economic growth.

Despite the fact that there is a large body of research on the importance of tourism in stimulating economic growth, "many of these studies have focused on establishing the influence of traditional tourism rather than measuring the true relevance of educational tourism. In addition, earlier studies on educational tourism focused on identifying monotonic effects at the expense of non-monotonic effects. This deficiency is increased by a scarcity of in-depth analyses of contemporaneous contingency factors. Finally, because educational tourism is a global phenomenon, a global rather than a country-specific focus would have provided a more comprehensive and useful picture. In light of these restrictions," it is necessary to re-examine the influence of educational tourism on economic growth.

Po and Huang (2008) pointed out that "tourism's influence on economic growth is fundamentally nonmonotonic, a point reiterated by Mihali (2013), who stated that tourism's influences are complicated, non-linear, and dependent on a variety

of other factors. Mihali (2013) defended the non-monotonic (non-linear) tourism-growth relationship by stating that in the early stages of development, the influence of tourism on growth is often negligible, owing to insufficient investment in tourism-related infrastructures to support the entrance of international tourists. When tourism-related infrastructures is adequately built, however, a higher number of foreign tourist visits means more tourism consumption, justifying the initial capital outlays. As a result, the rise of the tourism sector is often cited as a key factor in explaining economic growth. As previously stated, there is a dearth of research on the influence of educational tourism on economic growth, whether monotonic or nonmonotonic. To address this shortcoming, we used the panel threshold regression method proposed by Hansen to investigate the threshold effects of two contingent factors, namely research and information technology (see Kumar & Kumar, 2012; Kumar, 2014; Matahir & Tang, 2018) on educational tourism and, as a result, economic growth (1999).” The study’s originality also derives from the inclusion of contingency elements such as the direct and indirect effects of research and information technology on educational tourism and economic growth.

To begin, the tourism-led economic growth (TLEG) hypothesis is the most common interpretation of the tourism-economic growth hypothesis. According to this, there is a flow of economic gains from foreign tourism that spreads through many channels (Schubert et al., 2011). In particular, it is believed , among others, that “tourism (i) increases foreign exchange earnings, which in turn can be used to finance imports (Brida and Pulina, 2010; McKinnon, 1964), (ii) it encourages investment and drives local firms towards greater efficiency due to the increased competition (Ballaguer and Cantavella-Jorda, 2002), (iii) it alleviates unemployment, since tourism activities are heavily based on human capital (Brida and Pulina, 2010) and (iv) it leads to positive economies of scale thus, decreasing production costs for local businesses” (Croes, 2006; Andriotis, 2002).

As a result, it’s plausible to assume that tourism helps to boost income levels and GDP per capita (Sugiyarto, Blake and Sinclair, 2003; Croes and Vanegas, 2006). For all of these reasons, the TLEG hypothesis implies that tourism could be a strategic avenue for boosting destination economic development).

This theory has been supported by recent empirical work from both rich and developing countries. Croes and Vanegas (2008), Fayissa et al. (2011) and Brida et al. (2010) are examples of studies that emphasis on the Latin American region. Brida et al. (2010) analysed quarterly time series data from 1987 to 2006 to demonstrate that tourism spending boosted Uruguay's GDP per capita. Similar results can be found in Croes and Vanegas (2008) for Nicaragua and Fayissa et al. (2011) for a range of destinations. Furthermore, according to Schubert et al. (2011), greater tourism demand in Antigua and Barbuda leads to economic development and improved trade terms.

Dritsakis (2012) examines tourism receipts, tourist industry arrivals, GDP per capita and exchange rates, for seven Mediterranean nations from 1980 to 2007, in order to prove tourism's contribution to economic growth. Eeckels, Filis, and Leon (2012) examine the cyclical components of tourism income and GDP in Greece from 1976 to 2004 and find support for the TLEG hypothesis. In addition, according to Parrilla, Font, and Nadal (2007), tourism has a favourable influence on the development of Spanish regions. Similarly, Mello-Sampayo and Sousa-Vale (2010) affirm that tourism is a major determinant of development in Europe, with a stronger influence in the north than in the south. Surugiu and Surugiu (2013) look at tourism expenditure, Economic growth, and real effective exchange rate from 1988 to 2009 to see if there is a link between tourism and the Romanian economy.

There are several examples from other regions as well. By examining the records of 134 countries around the world, Holzner (2011) found that tourism-based countries have higher than average economic rates. In addition, in 167 countries, the beneficial effect of tourism to real per capita growth was assessed. According to Pratt (2011), the bigger the influence of tourism on the economy of Hawaii, the higher the number of visitors. Finally, he recognises tourism's potential function as a catalyst for economic growth, however he emphasises that other components, such as excellent communication among stakeholders and local community participation, are also essential for growth to evolve into long-term development.

Despite the fact that majority of the recent evidence supports the TLEG, there is a body of literature that suggests the tourism sector is positively affected by

economic changes. The economic-driven tourism growth (EDTG) hypothesis, as explained by Payne and Mervar (2010), holds that a country's development is fueled by well-designed governance structures, economic policies, and investments in both human and physical resources. Given the availability of political stability, and infrastructures, resources these generate a socioeconomic climate that allows tourism activities to expand and develop.

On the empirical side, Narayan's (2004) study on Fiji over the period 1970-2000 reveals that "the rise of per capita incomes raised the number of tourism arrivals in the island. In South Korea, Oh (2005) uses quarterly data from 1975 to 2001 to propose that the country's economic expansion had a shortrun positive effect on international visits. Similar observations are made by Payne and Mervar (2010), who focus on Croatia during 2000-2008 and document a remarkably positive influence of GDP on the country's tourism revenues. Moreover, Tang (2011), by using monthly data from Malaysia between 1995 and 2009, provides evidence that tourism markets support the EDTG hypothesis in the long run. Interestingly enough", Tang (2011) and Payne and Mervar (2010) findings are in conflict with Mello-Sampayo and Sousa-Vale (2010) and Holzer (2011) results, accordingly.

According to generally available data, bidirectional causality (BC) between economic growth and tourism income may also exist (see, Ridderstaat et al., 2013; inter alia, Chen and Chiou-Wei, 2008). A reciprocal tourism-economy relationship, from a policy point of view, indicates that government agendas should promote both areas at the same time. Evidence for this claim can be found, for example, in the study of Apergis and Payne (2012), who identified a short- and long-term bidirectional effect in nine Caribbean countries from 1995 to 2007. These findings, on the other hand, contradict recent TLEG findings reported by Holzner (2011) and Schubert et al (2011). Similarly, Chen and Chiou-Wei (2009) reframe the tourism-economic relationship in South Korea as mutually beneficial, contradicting Oh's (2005) earlier claims in support of the EDTG model.

Furthermore, Lee and Chang (2008) identify "bidirectional relationships in non-OECD countries between the period 1990 and 2002, whereas, Ribberstaat et al. (2013) also conclude to a bilateral causation through their study of Aruba from 1972 to 2011. Seetanah (2011) seconds these findings, confirming a bi-causal

tourism-growth link through a sample of island economies for the time span 1990-2007. Nevertheless, it is worth reporting that his evidence conflicts with this provided by Holzner (2011), Mello-Sampayo and Souza-Vale (2010), Narayan (2011) and Schubert et al. (2011). Finally, there are some studies that do not offer support to any of the aforementioned theories, introducing the no causality (NC) hypothesis. Based on this standpoint, the influence relationship between tourism and economic growth is insignificant. A recent study which maintains the NC hypothesis is this of Figini and Vici (2009), who utilise cross-country data of GDP per capita and tourism receipts over 1980-2005". In contrast to Holzner (2011), Figini and Vici (2009) opine that tourism dependent countries do not grow differently from countries with less developed tourism sectors.

Po and Nuang (2008), as well as Figini and Vici (2009), utilized annual cross-sectional data spanning 1995 to 2005 to draw some intriguing results. In similar countries characteristics, such as a moderate to small size, dispersed incomes, and low service/GDP and forest area/country area ratios, these findings corroborate the NC theory. Furthermore, Katircioglu's (2009) analysis of Turkey from 1960 to 2006 reveals no connection between foreign tourism development and economic growth. Tang and Jang (2009) argue that the NC hypothesis holds true in the United States by looking at the lengthy tourism-growth connection on a subindustry basis.

Some academics have only recently begun to question the lengthy stability of the tourism-economic development and economic growth (see, Lean and Tang, 2010; Tang and Tan, 2013; Arslanturk et al., 2011). According to Arslanturk et al. (2011), who used a rolling-window Vector Error Correction Model, the influence of tourism receipts on Turkish Economy is negative until 1983, then turns favorable after that. Lean and Tang (2010) used monthly time series data on industrial production and global tourism arrivals for Malaysia from January 1989 to February 2009 to conduct rolling subsample TYDL Granger causality analysis. (Toda and Yamamoto, 1995; Dolado and Lutkepohl, 1996).

Despite the fact that their results validated the TLEG theory, they also demonstrated that the tourism-growth connection evolves with time, turning stronger or weaker. Tang and Tan (2013) explored the time-varying relationship among

industrial production and global tourist arrivals in Malaysia to use a recursive Granger-causality test. Their studies revealed that tourism's positive influence on economic growth varies throughout time.

As a result, it is critical to broaden this body of information in order to better understand the time-varying relationship between economic and tourism growth. This study uses a freshly released version of Diebold and Yilmaz's VAR-based spillover indicator (2012, 2009). Total spillovers, as well as directional and net spillover between variables, can all be measured using this method throughout time. The VAR-based spillover indicator has previously received a lot of attention in the economic literature (see, for example, Bubák, Koenda, and Ike, 2011; Antonakakis, 2012; Duncan and Kabundi, 2013; ), and it's now being utilised in the tourism context for the first time. The next section delves into the project's specifics.

The first set of studies focused into the causes of the connection among tourism expansion and economic development in a specific country. "Balaguer and Cantavella-Jorda (2002) explored the correlation between economic growth and tourism development in Spain using Granger's causality test, revealing that development of tourism had a significant effect on economic growth. Dritsakis (2004) investigated the link between Greece's economic growth and tourist expansion, concluding that the two are inextricably linked, with the real exchange rate and foreign tourism revenues having the greatest effect on economic development. Gross domestic fixed capital formation, real international tourism earnings, and trade exports are all examples of gross domestic fixed capital formation. Durbarry (2004) investigated the economic effect of tourist development in Mauritius. According to the data, all three variables had a strong positive influence on the country's economic growth. The influence of tourism development on Fiji's economic growth was researched by Narayan (2004), who discovered that tourism development causes the local currency's exchange rate to appreciate and commodity prices to rise." Kim et al. (2006) looked at the relationship between tourism and economic development in Taiwan, and discovered that economic scale and sectors of the global economy had an effect on the economy.



“The majority of studies in the first category used Granger’s causality test to examine the relationship between tourism development and economic growth; however, due to insufficient sample data, short-term economic fluctuations, and the inability to show features of different countries, this method may lead to biased estimates. To address this issue, some researchers have begun to use panel data to examine the relationship between tourism development and economic growth across countries, which falls under the second type of research. Bilen et al. (2017), looked into the link between tourism development and economic growth in Mediterranean countries. The findings revealed that tourism and economic growth are linked in both directions. In a study of the relationship between tourism development and economic growth in Latin American countries, Eugenio-Martin et al. (2004) discovered that tourism development has a positive influence on economic growth in low- and middle-income countries, but has no influence on economic growth in high income countries.”

When Lanza et al. (2003) “investigated at the relationship between tourism development and economic growth in 13 OECD nations, they discovered that tourism development had a favourable influence on economic growth. Lee and Chang (2008) also looked at the influence of tourism development on OECD and non-OECD nations. Their findings revealed that international tourism receipts had a bigger influence on non-OECD countries’ GDP than on OECD countries’ GDP, and that the currency exchange rate has a considerable influence on both OECD and non-OECD countries’ economic growth. Yen (2010) examined into the top nine most visited countries and discovered that tourism growth has no influence on economic growth. Wang (2012b) investigated the association between tourism development and economic growth in ten countries using the threshold effect (growth rate of international tourism receipts as threshold variable). The findings revealed that currency exchange rates had a beneficial influence on economic growth in high-threshold countries, but inflation suppresses growth in both high- and low-threshold countries.

Although researchers sought to tackle the problem of limited sample data by adding panel data, short-term economic volatility and structural changes could not be removed, as seen by the second group of studies (Po and Huang 2008).”

As a result, some academics began to use a non-linear model to solve the above-mentioned challenge, resulting in the third group of investigations. Po and Huang (2008) used a thresholds vector autoregressive model with tourism specialising as the threshold variable to investigate the association between tourism and economic growth in 88 countries. The 88 countries could be classified into three regimes, according to the results. In Regimes 1 and 3, development of tourism had a significant effect on economic growth (lower than the low threshold and higher than the high threshold). Although the finding that tourism expansion had no significant effect on economic growth in Category 2 (between the higher and lower thresholds), further research found that development of tourism had a considerable effect on economic development in Regime. Chang et al. (2010) used the Panel Threshold Regression Model to look at the relationship between tourism specialising and economic growth in 131 countries, with tourism specialising as the threshold variable. According to the data, the 131 countries can be divided into three groups. In low- and middle-income countries, development of tourism would have a significant positive effect on economic growth, while in high-income nations, it would have no significant influence.

In particular, Yen (2012) “investigated the relationship between tourism and economic growth in 84 countries using the Panel Threshold Regression Model. The 84 countries were classified into two groups based on the research results: high-threshold nations and low-threshold countries. Both in high- and low-threshold countries, tourism development had a positive influence on economic growth, whereas trade openness had a negative influence. De Vita and Kyaw (2016a) used the system standardised methods-of-moments (SYS-GMM) estimate approach to study the tourism-growth link for a large panel of 129 countries. According to the results, they may be divided into three categories: low-income, middle-income, and elevated countries. One of them was tourism development,” which had a significant positive effect on economic growth in baltic states.

## **2.5 Hypothesis**

**H<sub>1</sub>:** International tourism expenditures for passenger transport items has a significant and positive influence on economic growth

**H<sub>2</sub>:** International tourism expenditures for travel items has a significant and positive influence on economic growth.

**H<sub>3</sub>:** International tourism expenditures has a significant and positive influence on economic growth

**H<sub>4</sub>:** International tourism receipts for passenger transport items has a significant and positive influence on economic growth

**H<sub>5</sub>:** International tourism receipts for travel items has a significant and positive influence on economic growth.

# Chapter 3

## Research Methodology

### 3.1 Population and Sample of Study

The study's population consists of Asian countries, and the sample is composed of 44 countries based on annual data from 1990 to 2019. List of countries is provided in **Table 3.1**. A balanced panel of Asian countries was chosen for this analysis using annual data from 1990 to 2019. The sample selection and countries are determined by the data availability.

TABLE 3.1: List of Countries

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Armenia	Azerbaijan	Azerbaijan
Bahrain,	Bangladesh,	Bhutan
Cyprus Georgia	Hong Kong	India
Indonesia	Iran	Iraq
Israel	Japan	Jordan,
Brunei Darussalam	China	Cambodia
Kazakhstan	Kuwait	Kyrgyz Republic
Mongolia	Myanmar	Nepal
Lebanon	Malaysia	Maldives
Qatar	Saudi Arabia	Singapore
Oman	Pakistan	Philippines
Sri Lanka	South Korea	Syrian Arab Republic
Turkmenistan	United Arab Emirates	Uzbekistan
Vietnam	Yemen	Tajikistan
Thailand	Turkey	

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### 3.1.1 Relationship between Tourism and Expenditure

The U.S. economy's travel and tourism sector is significant and expanding. By 2010, the Travel Industry Association (TIA 2007) predicts that domestic and international travel will generate \$821 billion in revenues, up from an estimated \$700 billion in 2006. The effect is positive for state economies and is felt broadly across the United States. In fact, state tourist authorities frequently highlight the benefits of tourism, noting that it gives locals permanent employment and boosts state and local tax income.

For instance, Texas asserts that 521 thousand employments worth \$15.5 billion were directly supported by travel spending in its state in 2007. (Dean Runyan Associates 2007). Similarly, Nevada claims that state and local tax collections from travel expenditures total \$2.8 billion (Nevada Commission on Tourism 2008). States also consider tourism as an "export" sector that generates tax money from outside their borders and offers a "clean" alternative to manufacturing.

Given these alleged advantages, it is perhaps not shocking that states have become more serious and planned in their battle for tourism dollars. Prior to 1950, only 15 countries promoted travel; by the early 1980s, all states had established state-level tourism development departments (Richter 1985). Budgets for state spending on the promotion of tourism have also increased significantly. States jointly spent over \$29 million on "state advertising" in 1937. To the 2007 price level adjusted for inflation, Kirkpatrick and Brown (1938). Contrarily, the total estimated budget for tourism offices across all 50 states for 2006–2007 was more over \$765 million, an increase of almost 40% from just four years earlier (TIA 2007). A simmering worry among the states about their capacity to "keep up" with their neighbors' spending on tourism development is reflected in this total spending amount. For instance, in an effort to draw residents from other states, Michigan aims to roughly double its budgeted amount for tourism promotion, from \$17.5 million in 2008 to \$30 million in 2009. (Hoffman 2008).

#### Variable Description

## **3.2 Economic Growth: Gross Domestic Product Per Capita (GDPPC)**

“It is the gross domestic product divided by the midyear population in the country, the gross domestic product (GDP) per capita is computed. The entire gross value added of all resident producers, plus any product taxes, minus any subsidies not included in the product value, equals GDP. It is calculated without taking into consideration depreciation of manufactured assets or depletion and deterioration of natural resources. At the time, the figures were in US dollars.”

## **3.3 International Tourism Expenditures for Passenger Transport Items (ITEFPTI)**

All services “provided during international transportation by nonresident carriers to international outbound visitors in other countries are included in international tourism expenses for passenger transportation items. Nonresident carriers’ passenger services inside an economy are also protected. Nonresident passenger services offered by resident carriers within the resident economy are not included; these are included in travel items.

In addition to the services covered by passenger fares including fares that are part of package tours but excluding cruise fares, which are included in travel-passenger services also include charges for excess baggage, vehicles, or other personal accompanying effects, as well as expenditures for food, drink, or other items for which passengers make expenditures while on board carriers-passenger services also include charges for excess baggage, vehicles, or other personal accompanying effects, as well as expenditures for food, drink, or other items for which passengers.” The figures are in US dollars at the time of writing. A simmering worry among the states about their capacity to “keep up” with their neighbors’ spending on tourism development is reflected in this total spending amount.

### **3.4 International Tourism Expenditures (ITE)**

In addition to the services covered by passenger fees, vehicles, or other personal accompanying things, passenger services include costs for extra baggage as well as expenditures for food, drink, or other products for which passengers make expenditures while on board carriers (including fares that are part of package tours but excluding cruise fares, which are included in travel). At the time, the figures were in US dollars.

### **3.5 International Tourism Expenditures for Travel Items (ITEFTI)**

International tourism expenditures are the costs incurred by international visitors who go to another country. The goods and services are either purchased by or on behalf of the traveller, or they are supplied to the traveller for free to use or give away. Expenses incurred by residents travelling overseas as same-day visitors may be included, unless they are so significant as to warrant a separate classification. The international carriage of travellers is not included, as it is covered under passenger travel goods. The figures are in current US dollars.

### **3.6 International Tourism Receipts for Passenger Transport Items (ITRFPTI)**

“International tourism receipts for passenger transportation items are the costs incurred by international inbound visitors for all services rendered by resident carriers in international transportation. Passenger services provided by nonresident carriers inside an economy are also covered. Passenger services provided by resident carriers to nonresidents within the resident economies are excluded; these are included in travel items. Passenger services include charges for excess baggage, vehicles, or other personal accompanying effects.

TABLE 3.2: Variable Description and Data Source

Variable name	Symbol	Description	Data source
“Economic Growth	GDPPC	It is the gross domestic product divided by the midyear population.	World Development indicator
International tourism expenditures for passenger transport items	ITEFPTI	The expenditures of international outbound visitors in other countries for all services provided during international transportation by nonresident carriers.	World Development indicator
International tourism expenditures	ITE	These expenditures may include those by residents traveling abroad as same-day visitors, except in cases where these are important enough to justify separate classification.	World Development indicator
International tourism expenditures for passenger transport items	ITEFTI	The expenditures by international inbound visitors for all services provided in the international transportation by resident carriers. Also included are passenger services performed within an economy by nonresident carriers.	World Development indicator
International tourism receipts for passenger transport items:	ITRFPTI	These may include expenditures by residents traveling abroad as same-day visitors, except in cases where these are so important as to justify a separate classification.	World Development indicator
International tourism receipts for travel items	ITRFPTI	These receipts should include any other prepayment made for goods or services received in the destination country. They also may include receipts from same-day visitors, except in cases where these are so important as to justify a separate classification.”	World Development indicator



As well as expenditures for food, drink, or other items for which passengers make expenditures while on board carriers, in addition to the services covered by passenger fares—including fares that are part of package tours but excluding cruise fares, which are included in travel—passenger services also include charges for excess baggage, vehicles, or other personal accompanying effects, and expenditures for food, drink, or other items for which passengers make The figures are in current US dollars”.

### 3.7 International Tourism Receipts for Travel Items (ITRFTI)

International tourism receipts for travel items are expenditures made by international inbound visitors in the reporting economy. The goods and services are either purchased by or on behalf of the tourists, or they are provided to them for free use or distribution. These receipts should include any other prepayments paid for products or services obtained in the destination country. Unless the receipts are so important that they should be classified separately, they may also comprise receipts from same-day visitors. Tourists’ international carriage is not included because it is covered by passenger travel goods. The figures are in US dollars.

### 3.8 Econometric Model

This section figures out the explanation regarding the panel estimation approach. Based on previous studies this paper adopts the following equation:

$$\begin{aligned} \text{LogGDP}PC_{it} = \alpha_0 + \beta_1 \text{LogITEEPTI}_{it} + \beta_2 \text{LogTEFTI}_{it} + \beta_3 \text{LogITE}_{it} \\ + \beta_4 \text{LogITRFPTI}_{it} + \beta_5 \text{LogITRFTI}_{it} + \mu_{it} \end{aligned} \quad (3.1)$$

Where GDPPC denotes gross domestic product per capita, ITEFTI denotes international tourism expenditures for travel items, ITE denotes international tourism

expenditures, ITRFPTI denotes international tourism receipts for passenger transport items, ITRFTI denotes international tourism receipts for travel items, and  $\epsilon_t$  is the error term. All variables have been changed to natural logarithms in order to disregard the dynamic aspects of this data series (Shahbaz et al. 2016b). The following panel estimate test is employed in this study.

### 3.8.1 Unit Root Test

“Economic growth, international tourism expenditures for passenger transport items, international tourism expenditures for travel items, international tourism expenditures, international tourism receipts for passenger transport items, international tourism receipts for travel items, international tourism receipts for passenger transport items, and international tourism receipts for travel items have all been subjected to the panel unit root test. The Augmented Dickey–Fuller (ADF) unit root test, Im, Pesaran and Shin W-stat and Levin, Lin & Chu  $t$  was used in this study to ensure that the variables were stationary”.

### 3.8.2 Autoregressive Distributed Lag ARDL

To show long-run and short-run analysis among dependent and independent variables, Pesaran et al. employed the ARDL limits testing approach, which was established by Pesaran and Shin (1998) and subsequently extended by Pesaran et al (2001). An ARDL bounds testing approach was used to examine the long-run and short-run dynamical link between international tourism and economic growth.

# Chapter 4

## Data Analysis and Discussion

### 4.1 Descriptive Analysis

On a comparative study, the standard deviation values for all the variables are very much below their mean and median values, indicating the series' level of variability, according to the descriptive analysis shown in **Table 4.1**. LITE has the largest mean and standard deviation of all the variables.

The LGDPPC displays the lowest mean and standard deviation. The values of the other variables are examined in the middle of LITE and LGDPPC, as stated in table 1. LITEFPTI has a mean and standard deviation of 19.047 and 1.898, respectively. LITEFTI's mean and standard deviation are 20.593 and 1.924, respectively. LITRFPTI's mean and standard deviation are 19.104 and 1.821, respectively.

Finally, the mean and standard deviation of LITRFTI were found to be 20.68 and 1.948, respectively. The value of LGDPPC is favourably skewed, while the rest of the variables are negatively skewed, according to the results. Because their kurtosis values are less than or extremely close to 3, all of the variables have a platykurtic distribution.

Because the probability values of these variables are not significant, the Jarque-Bera values imply that all variables are normally distributed throughout the sample period of 1981 to 2014.

TABLE 4.1: Descriptive Statistics

	<b>LGPPC</b>	<b>LITE</b>	<b>LITEFPTI</b>	<b>LITEFTI</b>	<b>LITRFPTI</b>	<b>LITRFTI</b>
Mean	8.068	20.8723	19.0473	20.5928	19.1043	20.68
Maximum	11.3513	24.598	23.2928	24.4474	23.2014	24.8213
Minimum	4.9212	16.3004	13.3046	14.6484	12.6115	13.8155
Std. Dev.	1.4443	1.813	1.8978	1.9242	1.8213	1.9482
Skewness	0.2056	-0.1635	-0.3964	-0.303	-0.352	-0.386
Kurtosis	2.1464	2.3798	3.0938	2.6672	2.7975	3.0095
Jarque-Bera	25.1707	13.7861	17.8696	13.4016	15.0489	16.7143
Probability	3.4217	0.001	0.0001	0.0012	0.0005	0.0002

## 4.2 Correlation Analysis

The correlation of variables is the connection between each variables included the dependent variables and independent variables that being analysis in the research. The results of the correlation analysis is presented in **Table: 4.2**. “The existence of high correlation among the independent variables will lead to the problem of multi-collinearity in the estimations. Still consider these variables because of the panel data estimation which takes care of the collinearity problems. The high value of the correlation means the very good connection between the two variables in this study. Based on the table above the correlation among the variables is stated by the value for each variable between others variables. The results of the research reveal that all of the factors have a positive connexion with LGDPPC and each other. This indicates how closely the independent variables are related to one another.” Most crucially, all of the series’ correlation coefficients are less than 0.90, indicating that there is no concern with multicollinearity among our explanatory series (Pordan, 2013).” The values from 0.5 to 0.9 indicates the strongest correlation, from 0.3 to 0.5 represents the normal correlation and from 0.1 to 0.2 indicates the weak correlation between the two variables.

TABLE 4.2: Correlation Analysis

	LGDPPC	LITE	LITEFPTI	LITEFTI	LITRFPTI	LITRFTI
LGDPPC	1					
LITE	0.6581	1				
LITEFPTI	0.5798	0.8992	1			
LITEFTI	0.6529	0.9875	0.8389	1		
LITRFPTI	0.5898	0.7485	0.7293	0.7285	1	
LITRFTI	0.5301	0.8071	0.7194	0.8166	0.7406	1

As shown in table 2, the largest connection is discovered between the LITEFTI and LITE, with a value of 0.9875, which indicate that it has the strongest correlation among all. while the lowest or weakest correlation is found between the LITRFTI and LGDPPC, with a value of 0.5301.

LIITE has a 0.6581, 0.8389, 0.728, and 0.741 association with LGDPPC, LITEFPTI, LITEFTI, and LITRFPTI, respectively. LITEFPTI and LITEFTI have a correlation of 0.7293, and LITRFPTI and LITRFTI, LITEFPTI, LITEFTI, LITRFPTI had correlations of 0.807, 0.719, 0.8166, and 0.741, respectively.

### 4.3 Unit Root Test Results

TABLE 4.3: ADF and PP Tests

Variables	ADF - Fisher Chi-square		PP - Fisher Chi-square	
	Level	1st diff	Level	1st diff
	Probability	Probability	Probability	Probability
LGDPPC	0.999	0	0.9993	0
LITE	0.9993	0	0.6554	0
LITEPTI	0.759	0	0.5386	0
LITEFTI	0.9963	0	0.1092	0
LITRFPTI	0.5839	0	0.9014	0
LITRFTI	0.9998	0	0.8207	0

We used the ADF and PP unit root tests for the estimate process indicated earlier in the research methodology section, and the results are shown in **Table 4.3**. All of the series were not stationary at level values or had a unit root, but became stationary after initial differencing, according to the results of the two tests. As a result, all of the variables are integrated of order 1 or I (1), which is useful for cointegration analysis.

The LLC and IPS unit root tests were also used, and the results are shown in **Table 4.4**. All of the series were not stationary at level values or had a unit root, but became stationary after initial differencing, according to the results of the two tests. As a result, all of the variables are integrated of order 1 or I (1), which is useful for cointegration analysis.

TABLE 4.4: LLC and IPS Tests

Variable	Levin, Lin & Chu $t^*$		Im, Pesaran and Shin W-stat	
	Level	1st diff	Level	1st diff
	<b>Probability</b>	<b>Probability</b>	<b>Probability</b>	<b>Probability</b>
LGDPPC	0.078	0	0.9996	0
LITE	0.1823	0	0.9999	0
LITEPTI	0.0192	0	0.9773	0
LITEFTI	0.7259	0	1	0
LITRFPTI	0.0039	0	0.7022	0
LITRFTI	0.0408	0	0.9999	0

## 4.4 Long Run and Short Run Regression Analysis

In the previous section, long-run estimates for panel data were discussed. However, understanding the influence of international tourism on economic growth in different countries is crucial. As a result, this study estimates the long-run elasticity of international tourism on economic growth for panel data from specific nations in our sample. The dynamic ordinary least square model (DOLS) is used for long-run single-country analysis.

TABLE 4.5: Dependent Variable: D(LGDPPC)

<b>Method: ARDL</b>				
<b>Variable</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>t-Statistic</b>	<b>Prob.*</b>
<b>Long Run Equation</b>				
LITE	-2.8661	0.3174	-9.0306	0.0000
LITEFTI	1.9758	0.2182	9.0547	0.0000
LITRFTI	0.1988	0.0665	2.9879	0.0030
LITRFPTI	0.1118	0.0379	2.9516	0.0034
LITEFPTI	1.2306	0.1249	9.8491	0.0000
<b>Short Run Equation</b>				
COINTEQ01	-0.0769	0.0249	-3.0871	0.0022
D(LITE)	-1.3238	1.9647	-0.6738	0.5009
D(LITEFTI)	1.2958	1.5326	0.8455	0.3984
D(LITRFTI)	0.0076	0.0315	0.2413	0.8095
D(LITRFPTI)	0.0490	0.0327	1.4991	0.1348
D(LITEFPTI)	0.3087	0.4520	0.6829	0.4951
C	-0.1512	0.0795	-1.9024	0.0580
Log likelihood	658.8236			

\*Note: p-values and any subsequent tests do not account for model selection.

**Table 4.5** shows the long-term projections. “International tourism expenditures (ITE) has a coefficient value of -2.866, and P-0.000, which suggests that a 1% rise in International tourism expenditures (ITE) will result in a 2.87 percent decrease in Gross Domestic Product Per Capita (GDPPC) over time (Rehman, 2020). Furthermore, the findings revealed that all of the variables are positively related to the Gross Domestic Product Per Capita (GDPPC). However, because the influence of these variables on Gross Domestic Product Per Capita (GDPPC) varies across nations, this result should be interpreted with caution.

The International tourism expenditures for travel items (ITEFTI), on the other hand, has the positive significant coefficient value of 1.9758, which suggests that a 1% increase in international tourism expenditures for travel items (ITEFTI) leads to a 1.98 percent increase in the Gross Domestic Product Per Capita (GDPPC) (Rehman, 2020). The coefficient of international tourism receipts for passenger transport items (ITRFPTI) is the lowest of all, at 0.111, and has a positive and significant link with the Gross Domestic Product Per Capita (GDPPC), indicating that a 1% rise in international tourism receipts for passenger transport items (ITRFPTI) leads to a 0.1 percent increase in the Gross Domestic Product Per Capita (GDPPC) (Sokhanvar, 2019).

The remaining variables are positive and significant in relationship with the GDPPC and has the coefficient values between the LITEFTI and LITRFPTI. International tourism receipts for travel items (ITRFPTI) has a coefficient of 0.199 and a p-value of 0.003, implying that a 1% rise in International tourism receipts for travel items (ITRFPTI) leads to a 0.2 percent increase in Gross Domestic Product Per Capita (GDPPC) (Assaf & Tsionas, 2018).

Furthermore, the coefficient and p-value of international tourism expenditures for passenger transport items (ITEFPTI) are 1.23 and 0.000, respectively, indicating that a 1% rise in international tourism expenditures for passenger transport items (ITEFPTI) leads to a 1.23 percent increase in Gross Domestic Product Per Capita (GDPPC) as Chang et al. (2010) found.”



TABLE 4.6: Pedroni Residual Cointegration Test

	<b>Statistic</b>	<b>Prob.</b>	<b>Statistic</b>	<b>Prob.</b>	
Panel v-Statistic	-2.05058	0.9798	-1.76074	0.9609	
Panel rho-Statistic	2.411676	0.9921	2.791671	0.9974	
Panel PP-Statistic	-0.74280	0.2288	-0.45202	0.3256	
Panel ADF-Statistic	2.519156	0.9941	1.102740	0.8649	
Alternative hypothesis: individual AR coefs. (between-dimension)					
	<b>Statistic</b>	<b>Prob.</b>			
Group rho-Statistic	4.503611	1.0000			
Group PP-Statistic	-0.980193	0.1635			
Group ADF-Statistic	1.153946	0.8757			
Phillips-Peron results (non-parametric)					
<b>Cross ID</b>	<b>AR(1)</b>	<b>Variance</b>	<b>HAC</b>	<b>Bandwidth</b>	<b>Obs</b>
1	0.014	0.0088	0.0096	2	22
2	0.12	0.0489	0.0489	0	22
3	0.234	0.0044	0.0032	3	22
4	0.083	0.0033	0.0019	4	12
5	0.43	0.0044	0.0044	0	22
6	0.484	0.0081	0.0088	1	22
7	0.034	0.0099	0.0100	1	21
8	0.588	0.0347	0.0360	3	21
9	0.551	0.0023	0.0023	0	22
10	0.378	0.0010	0.0008	3	22
11	0.023	0.0015	0.0015	1	22
12	0.337	0.0149	0.0159	1	22
13	0.08	0.0299	0.0299	0	21
14	0.416	0.0084	0.0084	0	20
15	-0.14	0.0012	0.0002	21	22
16	0.125	0.0193	0.0182	2	22
17	0.233	0.0783	0.0782	2	15
18	0.393	0.0145	0.0117	3	22
19	0.143	0.0250	0.0250	0	22
20	0.302	0.0051	0.0048	1	22
21	0.367	0.0066	0.0084	1	22
22	0.743	0.0071	0.0095	2	22
23	0.423	0.0039	0.0046	1	22

Continued Table: 4.6 Pedroni Residual Cointegration Test

	<b>Statistic</b>	<b>Prob.</b>	<b>Statistic</b>	<b>Prob.</b>	
Augmented Dickey-Fuller results (parametric)					
<b>Cross ID</b>	<b>AR(1)</b>	<b>Variance</b>	<b>Lag</b>	<b>Max lag</b>	
<b>Obs</b>					
1	-0.009	0.0075	1	–	21
2	0.227	0.0494	1	–	21
3	0.019	0.0041	1	–	21
4	-0.263	0.0006	1	–	10
5	0.405	0.0045	1	–	21
6	0.492	0.0082	1	–	21
7	0.169	0.0100	1	–	20
8	0.516	0.0345	1	–	20
9	0.461	0.0021	1	–	21
10	0.025	0.0007	1	–	21
11	0.15	0.0015	1	–	21
12	0.155	0.0143	1	–	21
13	0.139	0.0305	1	–	20
14	0.383	0.0086	1	–	19
15	-0.719	0.0008	1	–	21
16	-0.033	0.0185	1	–	21
17	0.143	0.0548	1	–	13
18	0.18	0.0129	1	–	21
19	0.141	0.0262	1	–	21
20	0.417	0.0049	1	–	21
21	0.494	0.0048	1	–	21
22	0.686	0.0068	1	–	21
23	0.257	0.0034	1	–	21

# Chapter 5

## Discussion

### 5.1 Discussion

The main purpose of this study was to see “if there was a link between international tourism and economic growth in Asia. The stationarity of the variables was tested using the ADF unit root test, and the dynamical linkage between the research variables was tested using the ARDL bounds testing approach. International tourism expenditures for passenger transportation products have a beneficial influence on economic growth, according to the long-run analysis results. Long-run dynamics indicated that international tourist expenditures for travel items, international tourism expenditures, international tourism receipts for passenger transport goods, and international tourism receipts for travel items all contributed to economic growth. According to the conclusions of this study, the selected economies may need to focus on the tourism sector in order to strengthen it and to implement better policies in order to attract more foreign tourists.”

Furthermore, “these economies must promote their reputation in conjunction with these initiatives by projecting themselves on various platforms around the world and rewarding them for improving their image. Tourism generates significant revenue for the country while also providing employment for a huge number of people. To attract both domestic and international tourists, more investment in tourist resources is required. The protection concept, on the other hand, implies that when the economy improves, people will spend more money on tourism. As

a result, the government should priorities economic development as a strategy. The government should create chances for tourism in the form of a high-quality transportation infrastructures and tourist-related sectors, such as the growth of tourism services, so that Asia can attract a large number of visitors. Governments should also assure the safety of all tourists and develop tourism policies” that are long-term.

This section also includes a brief discussion of policy implications based on Table 5’s findings. The following concerns for implementation and alternation with respect to amount of elasticity are displayed and described below, and they may be emphasised in development policies.

- 1% increase in International tourism expenditures (ITE) will lead to 2.87% decrease in the goss domestic product per capita (GDPPC)

The outcomes of this study show that International tourism expenditures (ITE) have a considerable positive influence on economic growth. Tourism has accompanied economic expansion in Asian countries such as Singapore, Malaysia, and Thailand. In order to improve tourist quality, policies that reform and reorganise institutions and education, as well as reviewing employment, infrastructures, and public service capacity, are required. It must be accepted that the tourism industry is vital to the region’s economic development. Foreign investors are attracted to large hotel and resort development s by tourism-boosting strategies such as international promotion. Tourism master planning at the national and regional levels is an important aspect of this shift. The reconfiguration of the systems of production, distribution, and consumption of products and services in ways that can provide a firm foundation for future growth is referred to as transformation. To achieve such growth, a change from traditional techniques to economic growth based on more tourism is required.

- 1% increase in International tourism expenditures for travel items (ITEFTI) boosts a 1.98% increase in the goss domestic product per capita (GDPPC).

Furthermore, this research outlined a long-run equilibrium relationship between economic growth and international tourism expenditures for travel-related commodities (ITEFTI). This is an innovative perspective that economic growth fueled by tourism will hasten international tourism expenditures (ITE) environmental influences. In addition to the effects of increased tourism, many Asian countries are agriculturally based, and they may lack capital investment as well as knowledge and skills in the development of environmentally friendly tourism. In such circumstances, the tourism industry may be able to contribute to green growth.

- 1% increase in International tourism receipts for passenger transport items (ITRFPTI) lead an increase of 0.1% in the item goss domestic product per capita (GDPPC).

The outcomes of this study show that International tourism receipts for passenger transport items (ITRFPTI) have a considerable positive influence on economic growth. Tourism has accompanied economic prosperity in Asian countries. In order to improve tourism quality, policies that reform and reorganise institutions and education, as well as reviewing employment, infrastructures, and public service capacity, are required. The reconfiguration of the systems of production, distribution, and consumption of products and services in ways that can provide a firm foundation for future growth is referred to as transformation. To achieve such growth, a shift from traditional techniques to economic growth based on more tourism is required.

- 1% increase in International tourism receipts for travel items (ITRFPTI) lead to a 0.2% increase in the goss domestic product per capita (GDPPC).

The outcomes of this study show that International tourism receipts for passenger transport items (ITRFPTI) have a considerable positive influence on economic growth. In order to improve tourism quality, policies that reform and reorganise institutions and education, as well as reviewing employment, infrastructures, and public service capacity, are required. It must be accepted that the tourism industry is vital to the region's economic development. Foreign investors are attracted to big

hotel and resort developments by tourism-boosting strategies such as international promotion.

- 1% increase in International tourism expenditures for passenger transport items lead to a 1.23% increase in gross domestic product per capita (GDPPC).

A long-run equilibrium relationship between economic growth and International tourism expenditures for passenger transport items was also detailed in this study. Transportation is a critical aspect in tourism; efficient transportation can boost GDPPC and play an important role in economic growth.

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