

Review Article

Thai Tourism and Economic Development: The Current State of Research

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ABSTRACT

This paper reviews previous studies relating to tourism development and economic growth. The researchers argue that tourism development not only stimulates the growth of the industry, but also triggers overall economic growth. As a result, most developing countries use promotion of the tourism industry as an important economic development strategy to enhance economic growth. Therefore, a number of previous studies have focused on examining the relationships between tourism development and economic growth in various countries. Thailand is one of the leading tourist destinations in Southeast Asia since it embraces rich cultures and traditions, a tropical climate and famous hospitality. Despite the great importance of the Thai tourism industry to the Thai economy, since it accounts for millions of jobs and a substantial fraction of export earnings and a wide range of other industries, there has been no previous study exploring the effect of the tourism sector on economic expansion in the Thai context.

Keywords: tourism, economic development, Thailand

บทคัดย่อ

บทความนี้ทำการทบทวนวรรณกรรมที่ทำการศึกษาคือความสัมพันธ์ระหว่างการพัฒนาการท่องเที่ยวและการเจริญเติบโตทางเศรษฐกิจของประเทศ นักวิจัยในหัวข้อนี้กล่าวว่า การพัฒนาการท่องเที่ยวไม่ได้ก่อให้เกิดการพัฒนาโดยตรงเฉพาะอุตสาหกรรมการท่องเที่ยวเท่านั้น แต่ยังครอบคลุมไปถึงการกระตุ้นให้เกิดความเจริญเติบโตต่อภาวะเศรษฐกิจในระดับประเทศอีกด้วย และด้วยเหตุผลดังกล่าว ประเทศกำลังพัฒนาทั้งหลายจึงได้ใช้การท่องเที่ยวเป็นกลยุทธ์ที่สำคัญในการพัฒนาประเทศ กล่าวคือ รัฐบาลพยายามพัฒนาและส่งเสริมอุตสาหกรรมการท่องเที่ยว

เพื่อเป็นการกระตุ้นการเจริญเติบโตทางเศรษฐกิจ ดังนั้น จึงได้มีงานวิจัยจำนวนมากที่มุ่งเน้นตรวจสอบความสัมพันธ์ดังกล่าวในบริบทของประเทศต่างๆ หัวข้อการวิจัยดังกล่าวมีความสำคัญและมีที่มาจากหลายองค์ประกอบ ได้แก่ ประเทศไทยเป็นจุดหมายหนึ่งที่มีความนิยมเป็นอย่างมากจากนักท่องเที่ยว ทั้งนี้เนื่องจาก ประเทศไทยเป็นประเทศที่มีวัฒนธรรมประเพณีที่หลากหลายและเป็นเอกลักษณ์ สภาพภูมิอากาศเฉพาะตัวแบบร้อนชื้นและชื่อเสียงในบริการของโรงแรมและสิ่งอำนวยความสะดวกต่างๆ นอกจากนี้ยังพบว่า ในแง่เศรษฐกิจ อุตสาหกรรมการท่องเที่ยวของประเทศ นำไปสู่การจ้างงานในธุรกิจที่เกี่ยวข้องจำนวนมาก ทั้งยังก่อให้เกิดเม็ดเงินจากการส่งออกใน

อุตสาหกรรมอื่นที่เกี่ยวข้องกับอุตสาหกรรมการท่องเที่ยวเหล่านั้น ซึ่งแสดงให้เห็นถึงความสำคัญของการพัฒนาการท่องเที่ยวที่สอดคล้องเศรษฐกิจของประเทศ ดังนั้น ประเด็นการวิจัยจึงมีว่า การพัฒนาการท่องเที่ยวมีความสัมพันธ์ต่อการเจริญเติบโตทางเศรษฐกิจของประเทศไทยอย่างมีนัยสำคัญหรือไม่ ซึ่งจากการวิเคราะห์เอกสาร พบว่า ไม่มีงานวิจัยใดที่ผ่านมาทำการตรวจสอบประเด็นการวิจัยนี้ในบริบทของประเทศไทย

คำสำคัญ: การท่องเที่ยว การพัฒนาเศรษฐกิจ ประเทศไทย

INTRODUCTION

The tourism industry is currently the world's largest and most diverse business sector since it serves as a primary source for generating revenue, employment, private sector growth, and infrastructure development for many countries. Researchers have argued that tourism development not only stimulates the growth of the industry, but also triggers overall economic growth (Lee and Chang, 2008). Hence, enhancing economic growth by promoting the tourism industry has become an important economic development strategy in most developing countries (Chen and Chiou-Wei, 2009). This belief is consistent with one of the three relevant hypotheses regarding the relationship between tourism development and economic expansion—namely, the tourism-led economic growth hypothesis, the economic-driven tourism growth hypothesis, and the reciprocal causal hypothesis.

Economists emphasize the economic effects of tourism on the economy. The speedy growth of tourism causes an increase in household incomes and government revenues through multiplier effects, improvements in the balance of payments, and growth in the number of tourism-promoted government policies. As such, the development of tourism has usually been considered a positive contribution to economic growth (Lim, 1997; Oh, 2005). To date,

there has been a vast amount of research conducted on the economic impact of tourism activity but the literature provides mixed results, with different studies arriving at different conclusions. Some of these studies, such as Ghali (1976), Balaguer and Cantavella-Jorda (2002), Dritsakis (2004a), Oh (2005), Kim *et al.* (2006), Lee and Chien (2008), reported results regarding the relationship between tourism and economic growth, but an explicit result is not obvious. A careful empirical analysis, such as the one shown in this study, is desirable for any country that may want to focus on the tourism industry as part of its national economic development policy.

Thailand embraces a rich diversity of cultures and traditions. With its proud history, tropical climate and renowned hospitality, Thailand offers great potential for the development of tourism (Tourism Authority of Thailand, 2008a). Henkel *et al.* (2006) provide an extensive discussion of the various studies that have been conducted to determine the perceptions of international visitors about the image of Thailand. The results found that Thai residents and international visitors confirmed that cultural sightseeing, friendly people and food were significantly important when thinking of Thailand as a tourist destination, while international visitors felt that nightlife and entertainment were significantly more important than that of Thai residents. As McKinnon (1964) argued, international tourism brings foreign exchange that can be used to import intermediate and capital goods to produce goods and services, which in turn leads to economic growth.

Foreign tourism is Thailand's largest export industry. Sales of tourism goods and services to international visitors averaged US\$10.2 billion in 1998–2005 on more than 10 million annual visitor arrivals. During 1998–2005, on average, Thai tourism directly and indirectly accounted for 13 percent of Gross Domestic Product (GDP) and 10 percent of employment which is approximately 3 million jobs and 12 percent of investment. Using the industry's GDP share as a measurement, Thailand

was ranked 60 out of 174 countries in the World Tourism and Travel Council's Tourism Satellite Accounts in 2005 (Wattanukuljarus and Coxhead, 2008).

Thailand has always been a great travel destination for business travelers and tourists from neighboring countries. Over the period 1998–2007, the total number of tourist arrivals to Thailand increased from 7.76 to 14.46 million. International tourism revenue in Thailand increased from 242,177 million baht in 1998 to 547,782 million in 2007 (Tourism Authority of Thailand, 2008b). Further analysis shows that international visitors came from countries within the neighboring Asian region, which provided nearly 53.91 percent of all visitors in 2007. The top five countries of residence for Thailand's inbound tourists in 2007 were Korea (9.44%), Japan (9.09%), Malaysia (7.32%), the United Kingdom (5.55%) and China (5.47%).

As mentioned, the Thai economy depends heavily on the performance of its tourism industries. Specifically, the millions of jobs and a substantial fraction of export earnings and a wide range of other industries are directly or indirectly interdependent with tourism management. Therefore, this paper focuses on reviewing the potential relationship between Thai tourism development and economic growth. There have been a number of empirical studies that have focused on investigating the relationship between tourism development and economic growth both in one country and in a cross-sectional context.

The main purpose of this introduction is to review the general literature on tourism development and economic growth. The remaining four sections of the paper present first, the role of tourism development and economic growth in the Thai economy, followed by two sections covering a literature review of tourism development and economic growth in both first the international and then the Thai context. The last section provides conclusions.

TOURISM SITUATION IN THAILAND

According to the Tourism Authority of Thailand (2008b), the World Tourism Organization estimated that the average growth of international tourists in 2005 would be 5.5 percent (lower than in 2004, when the growth of world tourism experienced a 10 percent expansion), with 808 million international tourists. However, the tourism industry saw a slowdown, as a result of the world economic downturn. The region which was expected to grow at a higher rate was the Asia Pacific (+10%) owing to the fact that tourists paid more attention to finding new attractions in this region, especially in Cambodia, Vietnam, India, and China, where there was high growth in the number of visitors. Other regions with lower expected growth rates were Africa (+7%), the Americas (+6%), Europe (+4%), and the Middle East (+3%).

During 1998–2007, the number of tourist arrivals to Thailand almost doubled both in the international and domestic context (See Tables 1 and 2). Consistent with the increase in arrivals, the international tourism revenue of Thailand almost doubled.

In Thailand, the tsunami disaster and disturbance in the three southern provinces, as well as the increased market competition from new destinations (Vietnam, China, and India) and tourism product creation (Japan, Hong Kong, and Korea) were key factors in Thailand's steady tourism growth in 2005, with 11.52 million inbound visitors. However, this slowdown was not as severe as it could have been, due to the attempts of the public and private sectors to stimulate markets and restore the attractions affected by the disaster as fast as possible. These actions resulted in the slight impact as shown in the above-mentioned statistics of the Thai tourism industry (Tourism Authority of Thailand, 2008b).

Table 1 Domestic tourism in Thailand during 1998-2007

Year	Number of Tourists (Million)	Average Length of Stay (Days)	Average Expenditure/ Person/Day (Baht)	Revenue (Million Baht)
1998	51.68	2.37	1,512.70	187,898
1999	53.62	2.43	1,523.55	203,179
2000	54.74	2.48	1,717.77	210,516
2001	58.62	2.51	1,702.70	223,732
2002	61.82	2.55	1,689.52	235,337
2003	69.36	2.61	1,824.38	289,987
2004	74.80	2.60	1,852.33	317,225
2005	79.53	2.73	1,768.87	334,717
2006	81.49	2.65	1,795.09	365,276
2007	83.23	2.63 ^P	1,767.35 ^P	380,417 ^P

Note: /P=Preliminary

Source: Tourism Authority of Thailand (2008b)

Table 2 International tourism in Thailand during 1998-2007

Year	Number of Tourists (Million)	Average Length of Stay (Days)	Average Expenditure/ Person/Day (Baht)	Revenue (Million Baht)
1998	7.76	8.40	3,712.93	242,177
1999	8.58	7.96	3,704.54	253,018
2000	9.51	7.77	3,861.19	285,272
2001	10.06	7.93	3,748.00	299,047
2002	10.80	7.98	3,753.74	323,484
2003	10.00	8.19	3,774.50	309,269
2004	11.65	8.13	4,057.85	384,360
2005	11.52	8.20	3,890.13	367,380
2006	13.82	8.62	4,048.22	482,319
2007	14.46	9.19 ^P	4,120.95 ^P	547,782 ^P

Note: /P=Preliminary

Source: Tourism Authority of Thailand (2008b)

ROLES OF TOURISM IN THE THAI ECONOMY

Tourism is one of the world's largest industries and one of its fastest growing economic sectors. In many countries, tourism is a main strategy for regional development, as it stimulates new economic activities. Tourism may have a positive economic impact on the balance of payments, on employment, and on gross income and production, but it may also have negative effects, particularly on

the environment. However, unplanned and uncontrolled tourism growth can result in such deterioration of the environment that tourist growth can be compromised (Creaco and Querini, 2003).

Thai governments have placed great store on earnings from tourism; spending in support of the industry accounts for about 3 percent of total government budget outlays. These expenditures have supported a range of promotional programs; in the past decade; for example, there has been "Visit Thailand Year", "Thailand: the Gateway to Indochina",

“Amazing Thailand” and “Unseen Thailand”. According to Wattanakuljarus and Coxhead (2008), tourism is an increasingly popular component of the development strategy in low-income countries based on three reasons. First, that tourism can serve as a substantial source of foreign exchange earnings, so contributing to economic growth. Second, that tourism services are labor-intensive, so expansion of this industry will create jobs and improve income distribution. Third, that tourism is a “clean” industry, that is, its growth is good for the environment.

Consistently, Diamond (1977) examined the tourism’s role in economic development and confirmed that in search of remedies for persistent balance-of-payments deficits, governments in developing countries and international aid agencies have been attracted to international tourism. The study argued that not only can tourism relieve the shortage of foreign exchange constraining industrial expansion and alleviate the growing problem of urban unemployment, but in the long run tourism will provide a price- and income-elastic substitute for staple exports facing less favorable demand conditions.

Tourism expansion in Thailand certainly creates jobs for unskilled workers, and this has a direct poverty alleviation impact. However, much of the gain from tourism growth accrues to factors other than unskilled labor, so income distribution may actually worsen. In addition, low-skilled jobs in other sectors may be destroyed, and returns to agricultural land, from which the poor derive a considerable share of their income, may fall as tourism expands (Wattanakuljarus and Coxhead, 2008). Government efforts to promote tourism growth may thus be inconsistent with the goal of reduced income inequality.

EMPIRICAL TOURISM RESEARCH IN INTERNATIONAL CONTEXT

According to Oh (2005) and Chen and Chiou-Wei (2010), three hypotheses can be identified

regarding the trade-economic growth relationship—namely, the tourism-led economic growth hypothesis, the economic-driven tourism growth hypothesis, and the reciprocal causal hypothesis. The tourism-led economic growth hypothesis recognizes a unidirectional causal relationship from tourism expansion to economic growth. From the economic-driven tourism growth hypothesis, a unidirectional causal relationship from economic growth to tourism expansion is evident. However, the reciprocal hypothesis maintains that the causal relationship between economic growth and tourism expansion appears to be bidirectional, implying that a push in both areas is beneficial. Even though there is no causal relationship between tourism expansion and economic growth that can be found, it provides a reason to reflect on the effectiveness of tourism promotion strategies.

The results of the causality provide governments with useful information to examine their economic development policy, to adjust priorities regarding economic investment, and to boost national economic growth given limited resources. More resources should be preferentially allocated to the travel and tourism industry if the tourism-led economy hypothesis is supported. On the other hand, if evidence of economy-driven tourism growth exists, then it suggests more resources should be allocated to leading industries rather than the travel and tourism industry, and the tourism industry will in turn benefit from the resulting overall economic growth. When a reciprocal causal relationship is found, an appropriate resource allocation of planning for the travel and tourism industry and other industries is important and necessary (Chen and Chiou-Wei, 2010).

However, the results from previous empirical studies on the causal relationship between tourism expansion and economic growth are inconclusive. The tourism-led economic growth hypothesis was supported by Balaguer and Cantavella-Jorda (2002), Dritsakis (2004b), Durbarray (2004) and Oh (2005), whereas Lanza *et al.* (2003) and Narayan (2004)

focused their analysis on the economic-driven tourism growth hypothesis. Finally, the reciprocal hypothesis was supported by Shan and Wilson (2001) and Kim *et al.* (2006).

Several empirical studies have focused on investigating the relationship between tourism development and economic growth. However, the empirical results from previous studies on this issue are mixed. For example, Latzko (2004) employed time series methods to investigate the importance of tourism as a driver of economic activity in Hawaii and found that the Hawaiian economy exhibited significant co-movement between the number of tourists and income and employment, especially at long-run frequencies. Fluctuations in the Hawaiian economy were strongly correlated with fluctuations in the number of tourists. Specifically, tourism accounted for as much as a third of all economic activity in the Hawaiian Islands. Compared to the state's other major industries (federal government activities and agriculture), Hawaii showed substantial co-movement over time between the volume of tourists and income and employment. In addition, Ghali (1976) evaluated the contribution of Hawaii's tourism to the rate and stability of economic growth using an ordinary least squares (OLS) method. The study found that not only was the variability of growth larger with tourism growth, but also the coefficient of variation was larger in the absence of tourism growth. Therefore, it appeared that the growth of tourism contributed to the instability of growth in addition to its contribution to growth. The author concluded that it might be correctly argued that in discussion of growth, the relevant variable is the rate of growth of per capita income and the results will still be valid if population growth can be regarded as exogenous.

Balaguer and Cantavella-Jorda (2002) examined the role of tourism's long-run economic development in Spain. The hypothesis of tourism-led economic growth was confirmed by applying co-integration and causality tests. The results revealed that the earnings from international tourism affected

positively the Spanish economic growth. The strong impact of tourist activity, according to the magnitude of the estimated parameter would reveal the existence of important long-run multiplier effects. The study concluded that the significant impact of tourism on the Spanish economy justified the need for public intervention to promote and increase international tourism demand, providing and fostering the development of tourism supply. In addition, the government should emphasize the warning of possible dangers derived from underestimating the importance of expenditure in tourist infrastructure, undervaluing financial support toward the efforts of entrepreneurial initiative, and minimizing the significance of protecting natural and sociocultural resources.

Consistent with Balaguer and Cantavella-Jorda (2002), the empirical results by Kim *et al.* (2006) also indicated a long-run equilibrium relationship and a bi-directional causality between tourism expansion and economic development in Taiwan using a Granger causality test and co-integration approach. The study indicated that the direction of causality between economic growth and tourism may be determined by various factors. The authors speculated the size of the national economy and the level of openness of the country as well as the level of travel restrictions as feasible factors brought about differences between Taiwan and South Korea. In addition to these factors, the degree of dependence on tourism, the tourism destination life cycle, and the level of economic development may be considered as some other determinants.

Furthermore, Chen and Chiou-Wei (2010) examined the causal relationship between tourism expansion and economic growth in Taiwan and South Korea using a bivariate exponential generalized autoregressive conditional heteroskedasticity in mean (EGARCH-M) model with uncertainty factors. The direction of causality between tourism expansion and economic growth was examined, as well as the impulse impacts of uncertainty on both variables. Although Taiwan and South Korea have experienced similar economic development, and tourism is not

their primary industry, the results of the causality tests confirmed that the tourism-led economic growth hypothesis is supported for Taiwan with a reciprocal causal relationship for South Korea. In addition, the significant impacts of uncertainty on growth were also identified. Specifically, the results showed that economic (tourism) growth uncertainty lowers tourism (economic) expansion from the negative coefficient of conditional variance in the mean tourism (economic) equation as evident in both country cases.

Another study in Taiwan was conducted by Lee and Chien (2008), who empirically investigated the co-movements and the causal relationships among real GDP, tourism development variables, and the real exchange rate using unit root tests and co-integration tests allowing for a structural break. Two different tourism variables (international tourism receipts and the number of international tourist arrivals) were included. The results suggested that the causality between tourism and economic growth was bi-directional. The bi-directional causality between tourism and GDP in the long run, which indicates the level of economic activity and tourism development, mutually influenced each other in that a high level of economic growth leads to a high level of tourism development and *vice versa*. Furthermore, the study found the structural breakpoints which matched with corresponding critical economic, political, or tourist incidents. Specifically, the breakpoint in 1992 was for real GDP, because of Taiwan's collapsing bubble economy in 1990. With the end of the U.S. aid program in Taiwan in 1965, plus Japan relaxing its ban on overseas travel in 1964, there was a breakpoint of tourism development variables in 1965 and 1966. The breakpoint of the real exchange rate in 1987 was due to the government of Taiwan releasing foreign exchange controls and altering its foreign exchange rate system.

Furthermore, Dritsakis (2004a) found the existence of a long-run equilibrium relationship among international tourism demand, income, transportation cost, and real exchange rate in Greece.

A number of leading macroeconomic variables were used, including income in origin countries such as Germany and Great Britain, tourism prices in Greece, and transportation cost and exchanges rates between the three countries. Annual data from the three countries covered the period from 1960 to 2000. An Augmented Dickey-Fuller test for unit root was examined in the univariate framework and Johansen's maximum likelihood procedure was used to test the co-integration method and to estimate the number of co-integrating vectors of the vector autoregression (VAR) model. Error correction models were estimated to explain the German and British demand for tourism to Greece. The empirical results provided some useful insights into the effects of income, tourism prices, transportation cost, and exchange rate on international tourism demand to Greece from the two most important origin countries of Europe.

In Turkey, Ongan and Demiroz (2005) investigated the impact of international tourism receipts on the long-term economic growth of Turkey. The study also found that there was bidirectional causality between international tourism and economic growth in this country by using the Johansen technique and vector error correction modeling. The results implied that an expansion in international tourism stimulated growth in the Turkish economy and growth in the Turkish economy stimulated an expansion in international tourism.

In addition, Gunduz and Hatemi-J (2005) supported the tourism-led-growth hypothesis for Turkey. Specifically, the study suggested unidirectional causation from tourism to economic growth by utilizing the leveraged bootstrap causality tests. Contrary to Gunduz and Hatemi-J (2005), Katircioglu (2009) found that the tourism-led-growth hypothesis could not be confirmed for Turkey by employing the bounds test and Johansen approach for co-integration using annual data from 1960 to 2006. The author concluded that the finding was important for policy makers as well as academicians in the field and showed that this issue still deserves further attention

from researchers for comparative purposes, even for Turkey.

However, in South Korea, the tourism-led economic growth hypothesis did not hold according to the research of Oh (2005) who investigated the causal relations between tourism growth and economic expansion for the Korean economy by using the Engle and Granger two-stage approach and a bivariate VAR model. The results indicated that there was no long-run equilibrium relation between the two series, while the one-way causal relationship of economic-driven tourism growth was suggested. In addition, by testing the sensitivity of the causality test under different lag selections along with the optimal lag, the results confirmed that the hypothesis of tourism-led economic growth did not hold for the Korean economy. This was consistent with the study by Cortés-Jiménez and Pulina (2006) which rejected the tourism-led-growth hypothesis in Italy; however, the study supported this hypothesis in the case of Spain by using multivariate co-integration techniques and Granger causality tests.

In addition, some previous empirical studies focused on cross-section analysis rather than a one country context. For example, Lanza *et al.* (2003) used an almost ideal demand system (AIDS) to investigate the long run impact of specialization in tourism in 13 OECD countries. The aim of the study was to examine the characteristics of the demand for international tourism, especially, the implications of patterns of specialization, the relationship between manufacturing consumption and tourism consumption in a world where the potential for productivity growth in the tourism industry systematically differed from that of manufacturing. The results suggested that specialization in tourism may not be deleterious to economic welfare once the terms of trade are considered. Furthermore, the long-run growth may not be harmed by tourism specialization.

Eugenio-Martin *et al.* (2004) investigated the relationship between tourism and economic growth for Latin American countries based on a panel-data approach and the Arellano-Bond estimator for

dynamic panels. The study obtained the estimation of the relationship between economic growth and growth in tourists per capita conditional on main macroeconomic variables employing a generalised least squares AR(1) panel data model. The empirical results indicated that tourism development can contribute to the economic growth of medium- or low-income countries, while such a role is unclear for developed countries. The study suggested that low-income countries need adequate levels of infrastructure, education, and development to attract tourists, whereas medium-income countries need high levels of social development, like health services and high GDP per capita levels.

Lee and Chang (2008) re-investigated the long-run co-movements and causal relationships between tourism development and economic growth for OECD and non-OECD countries including those in Asia, Latin America, and Sub-Sahara Africa. The results confirmed that tourism development had a greater impact on GDP in non-OECD countries than in OECD countries. In the long run, the study suggested unidirectional causality relationships from tourism development to economic growth in OECD countries and bidirectional relationships in non-OECD countries but only weak relationships in Asia.

Po and Huang (2008) also investigated the relationship between tourism development and economic growth for 88 countries. The cross sectional data covered 1995–2005 and was included in a threshold regression model. The degree of tourism specialization, defined as receipts from international tourism as a percentage of GDP (q_i), was used as the threshold variable. The results of the tests for nonlinearity indicated that the data from the 88 countries should be separated into three different groups or regimes to analyze the tourism-growth nexus. Specifically, as reported, when the q_i percentage was below 4.0488 percent (regime 1; 57 countries) or above 4.7337 percent (regime 3; 23 countries), there existed a significantly positive relationship between tourism growth and economic growth. However, when the q_i was above 4.0488

percent and below 4.7337 percent (regime 2; 8 countries), there was no evidence of such a significant relationship.

EMPIRICAL TOURISM RESEARCH IN THAI CONTEXT

The previous studies focused on various aspects on Thai tourism; for example Chang *et al.* (2009) evaluated changes in tourism trends by applying Box-Jenkins autoregressive integrated moving average (ARIMA) models to obtain information of inbound trips and the trends in foreign tourist arrivals to Thailand. This study analyzed stationary and non-stationary tourist arrivals series by formally testing for the presence of unit roots and seasonal unit roots prior to estimation, model selection, and forecasting. Various Box-Jenkins ARIMA models and seasonal ARIMA models were estimated, with the tourist arrivals series showing seasonal patterns. The fitted ARIMA and seasonal ARIMA models forecast tourist arrivals from East Asia very well from the first quarter of 2006 until the first quarter of 2008. Total monthly and annual forecasts could be obtained through temporal and spatial aggregation. The study found seasonal unit roots in tourist arrivals from East Asia with varying seasonal patterns of tourist arrivals from all countries except Singapore.

In addition, Howard (2009) investigated standard and special hazards or challenging experiences that tourists had in Thailand by using online survey. Descriptive statistics were reported classified by the demographics of the survey sample, percentage of the total sample reporting problems and major impacts and their nature, reports of what was least liked about Thailand, reports of seeing adverse impacts of tourism and their nature and satisfaction levels, and plans to visit Thailand again. Similarly, Rittichainuwat and Chakraborty (2009) examined tourist concerns about perceived travel risks while traveling abroad and explored whether such perceived risks affected tourist's decisions during crises using both qualitative and quantitative research techniques.

The authors found that perceived disease risk was mitigated by travelers' prior experience in visiting the foreign country.

Recently, Wattanakuljarus and Coxhead (2008) examined whether or not tourism growth would improve income distribution by expanding demand for relatively low-skilled labor in Thailand using a general equilibrium analysis. The results indicated that growth of inbound tourism demand would increase aggregate household income but worsen its distribution. The authors considered that this was because tourism sectors were not especially labor-intensive in the Thai context, and the expansion of foreign tourism demand created general equilibrium effects that undermined profitability in tradable sectors such as agriculture from which the poor derived a substantial fraction of their income. However, no studies have focused on examining the relationship between tourism development and economic growth in the Thai context despite the fact that the Thai economy depends heavily on the performance of its tourism industries. The industry accounts for millions of jobs and a substantial fraction of export earnings and a wide range of other direct and indirect industries (Wattanakuljarus and Coxhead, 2008).

CONCLUSIONS AND IMPLICATIONS

This paper has described the situation of Thai tourism and its role in the economy of the country. It can be seen that the importance of Thai tourism has increased. The tourism sector has played a significant role in economic expansion. Therefore, researchers have argued that most developing countries use the tourism sector strategically in developing the national economy. As a result, there exists a large amount of literature that has tried to appraise the role of tourism in the economy.

This paper also has reviewed an extensive amount of literature examining the relationship between tourism development and economic growth.

There have been previous empirical studies examining the relationship between tourism development and economic growth in various countries including Taiwan, Spain, and South Korea among others, using various research methodologies such as OLS, the unit root test and the Granger causality test, error correction model. These studies have been conducted both within a single country and in a cross sectional context and the results reported have been mixed.

In Thailand, the previous studies on Thai tourism have focused on various aspects; however, there are no empirical studies that have investigated the relationship between tourism development and economic growth in Thailand despite the fact that the Thai economy depends heavily on the performance of its tourism industries. These account for millions of job and a substantial fraction of export earnings, and a wide range of other industries are directly or indirectly interdependent with them. Therefore, tourism can be used to stimulate overall economic growth. Hence, the question of whether or not tourism can lead economic growth has become an important issue.

To answer the above research question, researchers have investigated the co-movements and the causal relationships between economic expansion and tourism development. More specifically, the question of whether regime changes have broken down the stability of the long-run relationship between tourism development and real GDP in Thailand is still important. To achieve their research objectives, the researchers have examined the co-movements among real GDP, tourism development, and the real exchange rate in a multivariate model. The unit root tests and the co-integration tests allowing for a structural break have been employed in the model to investigate the relation between real GDP, tourism development variables (international tourism receipts and the number of international tourism arrivals), and the real exchange rate. These variables have also been employed in *Kim et al.* (2006) and *Chen and Chiou-Wei* (2010).

The results of the causality will provide

governments with useful information to examine their economic development policy, to adjust priorities regarding economic investment, and to boost national economic growth given limited resources. More resources should be allocated preferentially to the travel and tourism industry, if the tourism-led economy hypothesis is supported (*Chen and Chiou-Wei*, 2010). Nevertheless, different empirical evidence shows different policy implications, which cannot only contribute to distinguishing the innate characters of the tourism industry, but can also be used as the basis for how a government can resolve policies associated with the symbiosis of tourism businesses and economic development. The use of a kind of structural change test as described by *Gregory and Hansen* (1996), which has not been previously applied in this area, will provide policymakers with concrete empirical evidence to support the decision making process by consideration of the multiple impacts of tourism on economic development.

Therefore, researcher may need to conduct research that incorporates other feasible factors in the models and then policymakers can formulate efficient policy taking into account the results. However, in the case of Thailand, the results may lead to a possible policy implication that tourism may not be the main factor driving economic development. Therefore, the Thai government should pay attention to promoting other sectors in addition to tourism to expand economic growth. A careful empirical analysis, such as was applied in the examples discussed in this paper, is desirable for any country that may want to focus on the tourism industry as part of its national economic development policy.

Considering methodology issues, some doubts have been cast on the appropriateness of model specification and the omission of important variables in previous studies. Thus, more future research incorporating other feasible variables is needed for model validation. Such possible variables could include the size of the national economy, the level of openness of the country as well as the level of travel restrictions, the degree of dependence on

tourism, the tourism destination life cycle, and the level of economic development. In addition, researchers may compare multiple countries using the above variables as intervening factors between economic development and tourism activity and may then be able to draw a concrete conclusion regarding tourism-led economic growth theory.

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