

## The Nature of Relationship between International Tourism and Trade: A Panel Data Perspective

Anam Tariq<sup>1</sup>, Zahid Ahmad<sup>2</sup> and Jaffer Hussain<sup>3</sup>

### Abstract

This research paper determines the international trade and tourism relationship of South and South East Asian Region countries for the period 1998-2009. The research study examines four variables in total including three independent trade variables i.e. imports, exports and total trade and one dependent tourism variable i.e. number of tourist arrivals. International trade variables have been measured in terms of current US \$ and tourism variable has been measured in terms of US Growth Domestic Products (GDP) Deflator. A study of international trade and tourism relationship is done by using Restricted model of Ordinary Least Square Pooled Regression model, Unrestricted model of Fixed Effect Model (FEM), Random Effect Model (REM) and Co-integration has been checked by using Granger Causality test. The Pooled Restricted Ordinary Least Square model showed that imports and exports have a negative and positive significant relation with the tourism of South and South East Asian Region countries, respectively. Data become stationary at lag 3 then firstly, one way Causality runs was found from imports to tourists arrivals and secondly, exports to tourists arrivals. The study revealed that the imports and exports play a significant role in promoting tourism industry of South and South East Asian Region countries.

### Keywords

International trade, Tourism, Co-integration test, Granger causality test, Fixed effect model, Random effect model

---

<sup>1</sup>Business Studies Department, Kinnaird College for Women, Lahore, Pakistan.  
Email: [anamtariq111@gmail.com](mailto:anamtariq111@gmail.com)

<sup>2</sup>Associate Professor, Faculty of Commerce, University of Central Punjab, Lahore, Pakistan.  
Email: [zahid\\_69@hotmail.com](mailto:zahid_69@hotmail.com)

<sup>3</sup>Chairperson, Department of Statistics, GC University, Lahore, Pakistan.  
Email: [jafferfarooq@hotmail.com](mailto:jafferfarooq@hotmail.com)

## 1. Introduction

Tourism and trade relationship has been found significant in the economic development of a country. Tourism industry plays an important role in the modern economic development. Tourism is defined as sum of commercial activities which produce all those goods and services that are consumed by foreign tourists (Hanafiah and Harun, 2010). Trade is defined as an act of transferring the goods and services ownership from one person to another. People tend to visit various places for different reasons, for instance, exploring new places of the world, business trips, to see big buildings and experiencing different cultures etc. Tourism plays a significant role in the development of a country as well as in the trade balance of a country. It is important to study the empirical impact of tourism and trade on the economic growth of a country. Moreover, tourism and trade help to reduce the poverty and bring more employment opportunities side by side in a country. In 2010, compared to the last year, there is a tremendous increase i.e. 6.6% in the tourists arrivals with almost 940 million international tourists all over the world.

South Asian Association for Regional Cooperation (SAARC) plays a crucial role in encouraging South Asian Region countries to trade freely and promote their economic growth and development of South Region (Kulendran and Wilson, 2000). Since 1960s, globalization tends to bring huge changes in the exports and imports of large number of countries all over the world. Increasing international trade helps to open more business opportunities for developing nations and these increasing number of business trips will tend to promote the development and growth of businesses, Gross Domestic Product (GDP), balance of payment, foreign exchange earnings and transportation in a country. According to Gallego et al. (2011), tourism effects trade in various ways, for instance, tourism enhances tourists destinations, opens new opportunities for trade and promotes products and services of a country. This study has the following objectives:

- To study the empirical link between international trade and tourism.
- To analyze the short run relationship of top ten GDP ranking countries of South and South East Asian Region.
- To analyze the long run relationship of top ten GDP ranking countries of South and South East Asian Region.

**1.1 Hypotheses:** This research study has the hypotheses to test (on next page):

- 
1.  $H_1$ : International trade and tourism have significant relationship.  
 $H_0$ : International trade and tourism have no significant relationship.
  2.  $H_2$ : International trade and tourism variables of top ten GDP ranking countries of South and South East Asian Region have short run Causality.  
 $H_0$ : International trade and tourism variables of top ten GDP ranking countries of South and South East Asian Region have no short run Causality.
  3.  $H_{3a}$ : Imports does Granger cause tourist arrivals and vice versa.  
 $H_0$ : Imports does not Granger cause tourist arrivals and vice versa.  
 $H_{3b}$ : Exports does Granger cause tourist arrivals and vice versa.  
 $H_0$ : Exports does not Granger cause tourist arrivals and vice versa.  
 $H_{3c}$ : Trade does Granger cause tourist arrivals and vice versa.  
 $H_0$ : Trade does not Granger cause tourist arrivals and vice versa.  
 $H_{3d}$ : Exports does Granger cause Imports and vice versa.  
 $H_0$ : Exports does not Granger cause Imports and vice versa.  
 $H_{3e}$ : Trade does Granger cause imports and vice versa.  
 $H_0$ : Trade does not Granger cause imports and vice versa.  
 $H_{3f}$ : Trade does Granger cause exports and vice versa.  
 $H_0$ : Trade does not Granger cause exports and vice versa.

The rest of the paper is organized in a way that Section 2 is the literature review, theoretical framework of Tourism and Trade Analysis is provided in Section 3, Section 4 describes the data description and discussion of results is in Section 5. Finally, the conclusions and recommendations are given in Section 6.

## **2. Literature review**

After the liberalization period of 1990s, a demand of international trade arises. Flow of goods and services increases with time as per increase in the consumption pattern of goods and services by people of a country. Some countries of the South Asian Regions i.e. Bangladesh, Bhutan, India, Maldives, Nepal and Pakistan have greater demand of international trade in between them which ultimately expand their way to economic development (World Bank, 2010). South Asian Region has made growth up to 7% and 8% in the year 2010 and 2011, respectively. A study by Kiyong (2010) used Fixed Effect Model (FEM) and Random Effect Model (REM) in order to show the Korea trade flows. Kiyong (2010) found that trade and tourism flow depend upon the income pattern and geographical distance of the countries whereas Khan and Lin (2002) studied 23 years data and indicated that business tours promote the international trade and tourism of a country.

---

According to the study of Gallego et al. (2011), tourism industry enhances the international flow of goods and services among the countries. The authors used Co-integration techniques and found a long run relationship between trade and tourism. A research of Pernia and Quising (2003) found that the international trade brings more openness and opportunities for the growth of tourism industry and lead towards regional development. Alwis (2011) investigated the tourism barriers and indicated that the seller of the South Asian Region must focus on the consistency, quality and integrity of goods and services.

According to Sugiyarto et al. (2002), tourism development leads to the reduction in the price levels of goods and services, increases international trade and availability and consumption of goods and services in a country. A study of Sequeira and Campos (2005) used FEM and REM estimators and found insignificant relationship between tourism and economic growth of Malaysia. Moreover, a study of Kadir and Jusoff (2010) does not go with the significant results of long term relationship between trade and tourism of Malaysia. As, Malaysia has a large number of tourists arrivals and departures in the South Asian Region.

Tourism industry needs to be focused in order to enhance the international trade of a country (Ledesma et al., 2003). The authors highlighted the significance of tourism i.e. the longer the foreign tourists stay in a country, the better quality of tourism industry of country will be revealed. Khan and Toh (2005) used Granger Causality test and found that Causal relationship exists between trade and tourism but this relationship cannot be the same for all countries. Balaguer and Cantavella (2002) worked on Time Series data and their study found significant long run relationship between tourism industry and economic growth of a country. In addition, Ericson and Ronning (2008) indicated that tourism can affect trade both positively as well as negatively. Tourism can be a source of generating revenues for a country; it can also exploit the culture of a country. A study of Ryngnga (2011) found that the South Asian Region countries have potential, leverage and opportunities for international trade and economic growth and development.

### **3. Theoretical framework**

According to Webster et al. (2007), theories of international trade i.e. Absolute and Comparative Advantage, Heckcher Ohlin Theorem, New Trade Theory and Intra Industry Theory have great impact on the tourism sector of a country. All over the world, countries are specialized in producing differentiated products

---

which ultimately attract international tourists from various countries to visit, stay and consume products of a country. Hence, through its products, tourism industry of a country can grow and flourish which can show the economic growth and development of a country.

Trade theories signify the production and export of local, cheap and abundant products and imports of foreign, expensive and scarce products. Butler (1980) showed a Tourism Areas Life Cycle model focused on six stages. According to Butler (1980), tourism industry must be supported by appropriate strategies in order to enhance and promote the tourism industry at different stages i.e. exploration, investment, development, consolidation, stagnation and decline.

#### **4. Data and methodology**

This study shows the Panel Data analysis of tourism and trade of top ten GDP ranking countries i.e. Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka, Thailand and Vietnam. Secondary data has been collected for 12 years over the period of 1998-2009. The data consists of four variables including one tourism dependent variable i.e. number of tourists arrivals and three independent variables of trade i.e. imports, exports and total trade of the sample countries. Simple Probability Random Sampling technique has been applied on the data. The data has been extracted from the 'The World Bank Indicators' and 'International Monetary Fund' (IMF) economic data sources websites.

Number of tourists arrivals consists of those people who travel and visit home nation. Number of tourists arrivals has been measured in terms of US GDP Deflator. Imports (Exports) refer to the goods or services which are brought (shipped) at a port of home nation whereas total trade refers to the net amount of imports and exports of a country. Three variables of trade have been measured in terms of Current US \$. More generalized results of the analysis will be made if tourism variable data for long time period is available.

Panel Data Regression observes large Cross Sectional units over a smaller number of time periods (Gujrati and Porter, 2008). Panel data considers periodical time interval. It examines issues that cannot be analyzed using Time Series and Cross Sectional data alone. It deals with heterogeneity in the micro units, creates more variability and improves Multicollinearity problems. Estimation techniques of

Panel data are Pooled Regression model, Fixed Effect Model and Random Effect Model.

**4.1 Pooled Regression Analysis:** Pooled Regression is the Grand Regression. Pooled Ordinary Least Square (OLS) model is the Restricted model where Regression coefficients are same for all subjects. Pooled Regression model considers a common Intercept value. In addition, this model neglects the Cross Sectional and Time Series nature (Gujrati and Porter, 2008).

Table 1 shows a Restricted Ordinary Least Square Regression model by taking tourists arrivals as dependent variable against three independent variables of trade i.e. imports, exports and total trade.

$$\text{Tourists Arrivals} = 2096777 + 0.000257 \text{ Exports} - 0.000232 \text{ Imports}$$

Above model indicates that the only two out of three variables of trade i.e. imports and exports are found to have negative and positive relationship with tourism variable i.e. number of tourists arrivals, respectively. Total trade is found to have insignificant relationship with number of tourists arrivals. Regression results indicate that the flow of trade in a country brings changes in the growth and development of tourism industry. Moreover, foreign tourists increase the revenue of a country by staying and consuming goods and services in a country.

**4.1.1 Fixed Effect Model:** In Fixed Effect Model, each subject has its own Intercept value because of some special feature of dummy variables that avoid perfect collinearity situations in the data. Total coefficients include in Fixed Effect Model are common Intercept, subject dummies (variables), time dummies and slope coefficient (Gujrati and Porter, 2008).

Table 2 shows the Fixed Effect Model econometrics results. None of the trade independent variables i.e. imports, exports and total trade are found to have significant relationship with the tourism of South and South East Asian Region countries over the period 1998-2009.

**4.1.2 Random Effect Model:** According to Gujrati and Porter (2008), Random Effect Model allows that the Intercept values randomly selected from large population. This model includes time invariant variables along with economical degrees of freedom.

---

Table 3 shows the Random Effect Model econometrics results. Data shows that all of three trade independent variables i.e. imports, exports and total trade have insignificant relationship with the tourism variable i.e. number of tourists arrivals of South and South East Asian Region countries over the period of 12 years i.e. 1998-2009.

In Table 1, Pooled Regression results show that all Regression coefficients except total trade are statistically significant with  $R^2 = 52\%$ . The estimated Durbin Watson statistic is very low i.e. 0.117031 indicate that there is autocorrelation or spatial correlation in the data. Computed F-value of Regression Analysis is statistically significant indicate that model is good. Tables 2 and 3 show that all differential Intercept coefficients are highly statistically insignificant. Durbin Watson statistic value in Table 2 is 0.322152; it is higher than the value in Table 1: Pooled Regression Analysis i.e. 0.117031. It indicates that as time invariant variables are considered in Fixed Effect Model so, as a result, autocorrelation on the data has been reduced. On the other side, Durbin Watson value in Table 3 Random Effect Model i.e. 0.056130 is lower than the value of Durbin Watson value in Table 1: Pooled Regression Analysis i.e. 0.117031 shows that more autocorrelation is found in the data. In Table 3, Random Effect Model,  $R^2$  is 44% suggests that imports, exports and total trade explain about 44% of the variation in the number of tourists arrivals.

**4.2 Granger Causality test:** Granger Causality test is used to find out long run relationship between the variables under study (Gujrati and Porter, 2008). Granger test deals with the dependency of one variable on other variables. It proves Causality or direction of influence. In addition, Granger test results either in Uni-directional Causality or Bi-lateral Causality relation between variables by checking stationary at different lagged values to avoid spurious results.

Large number of previous studies including studies of Kadir and Jusoff (2010), Narayan and Smyth (2004) and Philip (2010) has made use of Granger Causality test on the Causal relationship between trade and tourism variables. In order to determine the Causal Bi-lateral trade and tourism between South and South East Asian Region countries, the international trade and tourism variables are integrated at different lagged values to check the stationarity and to avoid spurious results.

Table 4 shows that none of the tourism and international trade variables has Causal relationship at first order. For true Bi-lateral or Uni-lateral relationship

---

between international trade and international tourism variables of countries, variables need to be stationary at second order.

Table 5 shows that none of the tourism and international trade variables has Causal relationship at second order. At second order, only trade variables have Bi-directional relationship i.e. exports and imports, trade and imports and, lastly, trade and exports. For true Bi-lateral relationship between trade and tourism variables, data need to be stationary at third order.

Table 6 shows the Granger Causality relationship between trade and tourism at 3rd lagged value. Table 6 shows exports and imports variables have Directional Causality with tourism variables. It is evident from Table 6 that some of the Co-integrated series are showing a Causal relationship with significant p-values. There is Uni-directional relation firstly between tourists arrivals and imports and secondly, tourists arrivals and exports. The econometric results indicated that the stable nations have a capacity to generate more revenues through international trade and tourism industry. A Causality test discovers strong Causal connections at 5% level of significance.

Dependency of one variable on another variable is rarely instantaneous. The Bi-lateral long run Causality relationship between international trade and tourism is analyzed at different lagged values to generate stationary data. Tables 4 and 5 show no Causal relation between imports, exports, total trade and number of tourist arrivals. Data become stationary at lag value 3 with significant p-values. Table 6 shows that a Causal relationship between international trade and tourism is found at lag value 3.

## **5. Conclusions and recommendations**

Regression results show that the productivity of a country enhances with the availability and production of domestic product. Income of a country increases when large number of tourists arrive and stay in a country for a longer time period and consume the goods and services of a country. Besides, the business trips also play a significant role in generating revenues for a country and bring more opportunities for a nation to export domestic products. Countries export those products which are not produced by other countries and have great demand by tourists. Top ten GDP ranking countries of South and South East Asian Region have close links with their neighbor countries. Hence, there exists a long run relation in between trade and tourism of South and South East Asian Region.



**Table 1:** Regression Analysis

Dependent Variable: TOURISTA  
Method: Panel Least Squares  
Sample: 1998-2009  
Periods included: 12  
Cross-sections included: 10  
Total panel (balanced) observations: 120

	Coefficient	Std. Error	t-Statistic	Prob.
C	2096777.	471277.9	4.449130	0.0000
IMPORTS	-0.000232	0.000102	-2.287169	0.0240
EXPORTS	0.000257	0.000102	2.524289	0.0129
TRADE	-0.000109	9.51E-05	-1.140735	0.2563
R-squared	0.518992	Mean dependent var		4805967.
Adjusted R-squared	0.506552	S.D. dependent var		5041461.
S.E. of Regression	3541417.	Akaike info criterion		33.03072
Sum squared resid	1.45E+15	Schwarz criterion		33.12363
Log likelihood	-1977.843	Hannan-Quinn criter.		33.06845
F-statistic	41.72008	Durbin-Watson stat		0.117031
Prob (F-statistic)	0.000000			

**Table 2:** Fixed Effect Model

Dependent Variable: TOURISTA  
Method: Panel Least Squares  
Sample: 1998-2009  
Periods included: 12  
Cross-sections included: 10  
Total panel (balanced) observations: 120

	Coefficient	Std. Error	t-Statistic	Prob.
C	2723678.	304557.0	8.943083	0.0000
IMPORTS	-7.00E-06	5.85E-05	-0.119670	0.9050
EXPORTS	2.96E-05	5.83E-05	0.508437	0.6122
TRADE	3.48E-05	5.85E-05	0.595089	0.5530
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.904539	Mean dependent var		4805967.
Adjusted R-squared	0.893833	S.D. dependent var		5041461.
S.E. of Regression	1642671.	Akaike info criterion		31.56355
Sum squared resid	2.89E+14	Schwarz criterion		31.86553
Log likelihood	-1880.813	Hannan-Quinn criter.		31.68618
F-statistic	84.48986	Durbin-Watson stat		0.322152
Prob (F-statistic)	0.000000			

**Table 3:** Random Effect Model

Dependent Variable: TOURISTA  
 Method: Panel EGLS (Cross-section random effects)  
 Sample: 1998-2009  
 Periods included: 12  
 Cross-sections included: 10  
 Total panel (balanced) observations: 120  
 Swamy and Arora estimator of component variances

	Coefficient	Std. Error	t-Statistic	Prob.
C	2674941.	1134485.	2.357846	0.0201
IMPORTS	-9.40E-06	5.81E-05	-0.161719	0.8718
EXPORTS	3.24E-05	5.79E-05	0.559809	0.5767
TRADE	3.69E-05	5.78E-05	0.637199	0.5253

## Effects Specification

	S.D.	Rho
Cross-section random	3460408.	0.8161
Idiosyncratic random	1642671.	0.1839

## Weighted Statistics

R-squared	0.382892	Mean dependent var	652489.7
Adjusted R-squared	0.366933	S.D. dependent var	2070200.
S.E. of Regression	1647166.	Sum squared resid	3.15E+14
F-statistic	23.99122	Durbin-Watson stat	0.300468
Prob (F-statistic)	0.000000		

## Unweighted Statistics

R-squared	0.442973	Mean dependent var	4805967.
Sum squared resid	1.68E+15	Durbin-Watson stat	0.056130

**Table 4:** Granger Causality test at Lag 1

Pairwise Granger Causality Tests

Sample: 1998-2009

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
IMPORTS does not Granger Cause TOURISTA	110	1.02322	0.3140
TOURISTA does not Granger Cause IMPORTS		2.35547	0.1278
EXPORTS does not Granger Cause TOURISTA	110	0.64788	0.4227
TOURISTA does not Granger Cause EXPORTS		2.68902	0.1040
TRADE does not Granger Cause TOURISTA	110	1.17519	0.2808
TOURISTA does not Granger Cause TRADE		0.70790	0.4020
EXPORTS does not Granger Cause IMPORTS	110	0.11192	0.7386
IMPORTS does not Granger Cause EXPORTS		0.01930	0.8898

TRADE does not Granger Cause IMPORTS	110	0.23988	0.6253
IMPORTS does not Granger Cause TRADE		0.66762	0.4157
TRADE does not Granger Cause EXPORTS	110	0.09552	0.7579
EXPORTS does not Granger Cause TRADE		0.46066	0.4988

**Table 5:** Granger Causality test at Lag 2

Pairwise Granger Causality Tests

Sample: 1998-2009

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
IMPORTS does not Granger Cause TOURISTA	100	1.78377	0.1736
TOURISTA does not Granger Cause IMPORTS		0.76144	0.4698
EXPORTS does not Granger Cause TOURISTA	100	2.80377	0.0656
TOURISTA does not Granger Cause EXPORTS		0.52923	0.5908
TRADE does not Granger Cause TOURISTA	100	1.19486	0.3073
TOURISTA does not Granger Cause TRADE		0.07203	0.9306
EXPORTS does not Granger Cause IMPORTS	100	12.7333	1.E-05
IMPORTS does not Granger Cause EXPORTS		3.56176	0.0322
TRADE does not Granger Cause IMPORTS	100	25.1274	2.E-09
IMPORTS does not Granger Cause TRADE		5.38197	0.0061
TRADE does not Granger Cause EXPORTS	100	10.2833	9.E-05
EXPORTS does not Granger Cause TRADE		3.14995	0.0474

**Table 6:** Granger Causality test at Lag 3

Pairwise Granger Causality Tests

Sample: 1998-2009

Lags: 3

Null Hypothesis:	Obs	F-Statistic	Prob.
IMPORTS does not Granger Cause TOURISTA	90	3.68635	0.0151
TOURISTA does not Granger Cause IMPORTS		0.73967	0.5314
EXPORTS does not Granger Cause TOURISTA	90	4.18617	0.0082
TOURISTA does not Granger Cause EXPORTS		0.82533	0.4836
TRADE does not Granger Cause TOURISTA	90	0.68513	0.5636
TOURISTA does not Granger Cause TRADE		0.47459	0.7008
EXPORTS does not Granger Cause IMPORTS	90	8.46393	6.E-05
IMPORTS does not Granger Cause EXPORTS		2.28647	0.0847
TRADE does not Granger Cause IMPORTS	90	17.2117	9.E-09
IMPORTS does not Granger Cause TRADE		3.73269	0.0143
TRADE does not Granger Cause EXPORTS	90	6.79717	0.0004
EXPORTS does not Granger Cause TRADE		2.45015	0.0692

**Source:** Econometrics results have been extracted from EViews 6.

---

**References**

1. Alwis, R. D. (2011). Promoting Tourism in South Asia: World Bank. *Journal of Applied Public Private Partnerships*, **1(2)**, 259-276.
2. Balaguer, J. and Cantavella, M. C. J. (2002). Tourism as a long run economic growth factor: The Spanish case. *Working Paper*, **2(7)**, 1-16.
3. Butler, R. (1980). Tourism area life cycle. *Contemporary Tourism Reviews*, **2**, 1-33.
4. Ericson, E. and Ronning, A. (2008). Sustainable tourism development in Cambodia. Karlstads Universitet, Faculty of Social and Life Sciences. 1-55. Retrieved from: [kau.diva-portal.org/smash/get/diva2:5714/FULLTEXT01.pdf](http://kau.diva-portal.org/smash/get/diva2:5714/FULLTEXT01.pdf)
5. Gallego, M. S., Rodriguez, F. L. and Rodriguez, J. V. P. (2011). Tourism and trade in OECD countries. A dynamic heterogeneous Panel Data Analysis. *Empirical Economics*, **41(2)**, 533-554.
6. Gujrati, D. N. and Porter, D. C. (2008). *Basic Economics*, 5<sup>th</sup> edition. McGraw-Hill, Univeristy of Southern California.
7. Hanafiah, M. H. and Harun, M. F. (2010). Tourism demand in Malaysia: A cross-sectional pool Time Series analysis. *International Journal of Trade, Economics and Finance*, **1(2)**, 1-4.
8. Kadir, N. and Jusoff, K. (2010). The Co-integration and Causality Tests for tourism and trade in Malaysia. *International Journal of Economics and Finance*, **2(1)**, 138-143.
9. Khan, H. and Lin, C. C. (2002). International trade and tourism: Evidence from Co-integration and Causality Tests by using Singapore data. *The 33rd Annual Conference of Travel and Tourism Association (TTRA)*, Arlington VA, June 23-26.
10. Khan, H. and Toh, R. S. (2005). Tourism and trade: Co-integration and Granger Causality Tests. *Journal of Travel Research*, **44(2)**, 171-176.
11. Kiyong, K. (2010). Tourism flows and trade theory: A Panel Data Analysis. *The Annals of Regional Science*, **44(3)**, 541-557.
12. Kulendran, N. and Wilson, K. (2000). Is there a relationship between international trade and international travel? *Applied Economics*, **32**, 1001-1009.
13. Ledesma, F. J., Navarro, M. and Rodriguez, J. V. P. (2003). Return to tourist destination: Is it reputation, after all? *Working Papers on International Economics and Finance*, **31(1)**, 1-19.
14. Narayan, P. K. and Smyth, R. (2004). Temporal Causality and the dynamics of exports, human capital and real income in China. *International Journal of Applied Economics*, **1(1)**, 24-45.

- 
15. Pernia, E. M. and Quising, P. F. (2003). Trade openness and regional development in a developing country. *The Annals of Regional Science*, **37(3)**, 391-406.
  16. Philip, O. P. C. (2010). The estimation of long run relationship between economic growth, investment and export in Nigeria. *International Journal of Business and Management*, **5(4)**, 1-8.
  17. Ryngha, P. K. (2011). Tourism: A trade link between India's North East and South East Asia. *South Asian Journal of Tourism and Heritage*, **4(1)**, 1-7.
  18. Sequeira, T. N. and Campos, C. (2005). International tourism and economic growth: A Panel Data Approach. *Fondazione Eni Enrico Mattei: Working Papers*, **90(2)**, 1-11.
  19. Sugiyarto, G., Blake, A. and Sinclair, T. (2002). Economic impact of tourism and globalisation in Indonesia. *Journal of Agricultural Economics*, **53(2)**, 1-34.
  20. Webster, A., Fletcher, J., Harrwick, P. and Morakabati, Y. (2007). Tourism and empirical applications of international trade theory: A multi-country analysis. *Tourism Economics*, **13(4)**, 657-674.
  21. World Bank (2010). World Bank South Asia Economic Update 2010. Washington.