INTERNATIONAL JOURNAL OF RESEARCH IN COMMERCE, ECONOMICS & MANAGEMENT

IJRCM

A Monthly Double-Blind Peer Reviewed (Refereed/Juried) Open Access International e-Journal - Included in the International Serial Directories

Indexed & Listed at:

Ulrich's Periodicals Directory ©, ProQuest, U.S.A., EBSCO Publishing, U.S.A., Cabell's Directories of Publishing Opportunities, U.S.A.,
Open J-Gage, India [link of the same is duly available at Inflibnet of University Grants Commission (U.G.C.)],
The American Economic Association's electronic bibliography, EconLit, U.S.A.,
Index Copernicus Publishers Panel, Poland with IC Value of 5.09 & number of libraries all around the world.
Circulated all over the world & Google has verified that scholars of more than 4255 Cities in 176 countries/territories are visiting our journal on regular basis.
Ground Floor, Building No. 1041-C-1, Devi Bhawan Bazar, JAGADHRI – 135 003, Yamunanagar, Haryana, INDIA

http://ijrcm.org.in/

CONTENTS

CALL FOR MANUSCRIPTS

We invite unpublished novel, original, empirical and high quality research work pertaining to recent developments & practices in the areas of Computer Science & Applications; Commerce; Business; Finance; Marketing; Human Resource Management; General Management; Banking; Economics; Tourism Administration & Management; Education; Law; Library & Information Science; Defence & Strategic Studies; Electronic Science; Corporate Governance; Industrial Relations; and emerging paradigms in allied subjects like Accounting; Accounting Information Systems; Accounting Theory & Practice; Auditing; Behavioral Accounting; Behavioral Economics; Corporate Finance; Cost Accounting; Econometrics; Economic Development; Economic History; Financial Institutions & Markets; Financial Services; Fiscal Policy; Government & Non Profit Accounting; Industrial Organization; International Economics & Trade; International Finance; Macro Economics; Micro Economics; Rural Economics; Co-operation; Demography: Development Planning; Development Studies; Applied Economics; Development Economics; Business Economics; Monetary Policy; Public Policy Economics; Real Estate; Regional Economics; Political Science; Continuing Education; Labour Welfare; Philosophy; Psychology; Sociology; Tax Accounting; Advertising & Promotion Management; Management Information Systems (MIS); Business Law; Public Responsibility & Ethics; Communication; Direct Marketing; E-Commerce; Global Business; Health Care Administration; Labour Relations & Human Resource Management; Marketing Research; Marketing Theory & Applications; Non-Profit Organizations; Office Administration/Management; Operations Research/Statistics; Organizational Behavior & Theory; Organizational Development; Production/Operations; International Relations; Human Rights & Duties; Public Administration; Population Studies; Purchasing/Materials Management; Retailing; Sales/Selling; Services; Small Business Entrepreneurship; Strategic Management Policy; Technology/Innovation; Tourism & Hospitality; Transportation Distribution; Algorithms; Artificial Intelligence; Compilers & Translation; Computer Aided Design (CAD); Computer Aided Manufacturing; Computer Graphics; Computer Organization & Architecture; Database Structures & Systems; Discrete Structures; Internet; Management Information Systems; Modeling & Simulation; Neural Systems/Neural Networks; Numerical Analysis/Scientific Computing; Object Oriented Programming; Operating Systems; Programming Languages; Robotics; Symbolic & Formal Logic; Web Design and emerging paradigms in allied subjects.

Anybody can submit the **soft copy** of unpublished novel; original; empirical and high quality **research work/manuscript** ***anytime*** in ***M.S. Word format*** after preparing the same as per our **GUIDELINES FOR SUBMISSION**; at our email address i.e. infoijrcm@gmail.com or online by clicking the link **online submission** as given on our website (***FOR ONLINE SUBMISSION, CLICK HERE***).

GUIDELINES FOR SUBMISSION OF MANUSCRIPT

1. **COVERING LETTER FOR SUBMISSION:**

DATED: _____________

THE EDITOR

IJRCM

Subject: **SUBMISSION OF MANUSCRIPT IN THE AREA OF ______________________.**

(e.g. Finance/Mkt./HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)

DEAR SIR/MADAM

Please find my submission of manuscript entitled '____' for possible publication in one of your journals.

I hereby affirm that the contents of this manuscript are original. Furthermore, it has neither been published elsewhere in any language fully or partly, nor is it under review for publication elsewhere.

I affirm that all the co-authors of this manuscript have seen the submitted version of the manuscript and have agreed to their inclusion of names as co-authors.

Also, if my/our manuscript is accepted, I agree to comply with the formalities as given on the website of the journal. The Journal has discretion to publish our contribution in any of its journals.

NAME OF CORRESPONDING AUTHOR :
Designation :
Institution/College/University with full address & Pin Code :
Residential address with Pin Code :
Mobile Number (s) with country ISD code :
Is WhatsApp or Viber active on your above noted Mobile Number (Yes/No) :
Landline Number (s) with country ISD code :
E-mail Address :
Alternate E-mail Address :
Nationality :

__NOTES__:

a) The whole manuscript has to be in ***ONE MS WORD FILE*** only, which will start from the covering letter, inside the manuscript. ***pdf. version is liable to be rejected without any consideration***.

b) The sender is required to mention the following in the **SUBJECT COLUMN of the mail**:

New Manuscript for Review in the area of (e.g. Finance/Marketing/HRM/General Mgt./Engineering/Economics/Computer/IT/ Education/Psychology/Law/Math/other, please specify)

c) There is no need to give any text in the body of mail, except the cases where the author wishes to give any **specific message** w.r.t. to the manuscript.

d) The total size of the file containing the manuscript is expected to be below **1000 KB**.

e) **Abstract alone will not be considered for review** and the author is required to submit the **complete manuscript** in the first instance.

f) ***The journal gives acknowledgement w.r.t. the receipt of every email within twenty four hours*** and in case of non-receipt of acknowledgment from the journal, w.r.t. the submission of manuscript, within two days of submission, the corresponding author is required to demand for the same by sending a separate mail to the journal.

g) The author (s) name or details should not appear anywhere on the body of the manuscript, except the covering letter and the cover page of the manuscript, in the manner as mentioned in the guidelines.

2. **MANUSCRIPT TITLE**: The title of the paper should be **bold typed**, **centered** and **fully capitalised**.

3. **AUTHOR NAME (S) & AFFILIATIONS**: Author (s) **name**, **designation**, **affiliation** (s), **address**, **mobile/landline number** (s), and **email/alternate email address** should be given underneath the title.

4. **ACKNOWLEDGMENTS**: Acknowledgements can be given to reviewers, guides, funding institutions, etc., if any.

5. **ABSTRACT**: Abstract should be in **fully italicized text**, ranging between **150** to **300 words**. The abstract must be informative and explain the background, aims, methods, results & conclusion in a __**SINGLE PARA**__. ***Abbreviations must be mentioned in full***.

6. **KEYWORDS**: Abstract must be followed by a list of keywords, subject to the maximum of **five**. These should be arranged in alphabetic order separated by commas and full stop at the end. All words of the keywords, including the first one should be in small letters, except special words e.g. name of the Countries, abbreviations.

7. **JEL CODE**: Provide the appropriate Journal of Economic Literature Classification System code (s). JEL codes are available at www.aeaweb.org/econlit/jelCodes.php, however, mentioning JEL Code is not mandatory.

8. **MANUSCRIPT**: Manuscript must be in __***BRITISH ENGLISH***__ prepared on a standard A4 size __***PORTRAIT SETTING PAPER***__. *It should be free from any errors i.e.* ***grammatical, spelling*** *or* ***punctuation.*** *It must be thoroughly edited at your end*.

9. **HEADINGS**: All the headings must be bold-faced, aligned left and fully capitalised. Leave a blank line before each heading.

10. **SUB-HEADINGS**: All the sub-headings must be bold-faced, aligned left and fully capitalised.

11. **MAIN TEXT**:

__***THE MAIN TEXT SHOULD FOLLOW THE FOLLOWING SEQUENCE***__:

INTRODUCTION

REVIEW OF LITERATURE

NEED/IMPORTANCE OF THE STUDY

STATEMENT OF THE PROBLEM

OBJECTIVES

HYPOTHESIS (ES)

RESEARCH METHODOLOGY

RESULTS & DISCUSSION

FINDINGS

RECOMMENDATIONS/SUGGESTIONS

CONCLUSIONS

LIMITATIONS

SCOPE FOR FURTHER RESEARCH

REFERENCES

APPENDIX/ANNEXURE

__The manuscript should preferably range from ***2000 to 5000 WORDS***__.

12. **FIGURES & TABLES:** These should be simple, crystal **CLEAR**, **centered**, **separately numbered** & self explained, and **titles must be above the table/figure**. **Sources of data should be mentioned below the table/figure**. *It should be ensured that the tables/figures are referred to from the main text.*

13. **EQUATIONS/FORMULAE:** These should be consecutively numbered in parenthesis, horizontally centered with equation/formulae number placed at the right. The equation editor provided with standard versions of Microsoft Word should be utilised. If any other equation editor is utilised, author must confirm that these equations may be viewed and edited in versions of Microsoft Office that does not have the editor.

14. **ACRONYMS:** These should not be used in the abstract. The use of acronyms is elsewhere is acceptable. Acronyms should be defined on its first use in each section: Reserve Bank of India (RBI). Acronyms should be redefined on first use in subsequent sections.

15. **REFERENCES:** The list of all references should be alphabetically arranged. ***The author (s) should mention only the actually utilised references in the preparation of manuscript*** and they are supposed to follow Harvard Style of Referencing. **Also check to make sure that everything that you are including in the reference section is duly cited in the paper**. The author (s) are supposed to follow the references as per the following:

- All works cited in the text (including sources for tables and figures) should be listed alphabetically.
- Use (**ed.**) for one editor, and (**ed.s)** for multiple editors.
- When listing two or more works by one author, use --- (20xx), such as after Kohl (1997), use --- (2001), etc, in chronologically ascending order.
- Indicate (opening and closing) page numbers for articles in journals and for chapters in books.
- The title of books and journals should be in italics. Double quotation marks are used for titles of journal articles, book chapters, dissertations, reports, working papers, unpublished material, etc.
- For titles in a language other than English, provide an English translation in parenthesis.
- ***Headers, footers, endnotes** and **footnotes** should **not be used** in the document.* However, **you can mention short notes to elucidate some specific point**, which may be placed in number orders after the references.

PLEASE USE THE FOLLOWING FOR STYLE AND PUNCTUATION IN REFERENCES:

BOOKS

- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio" Ohio State University, Nigeria.

CONTRIBUTIONS TO BOOKS

- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

JOURNAL AND OTHER ARTICLES

- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

CONFERENCE PAPERS

- Garg, Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–23

UNPUBLISHED DISSERTATIONS

- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

ONLINE RESOURCES

- Always indicate the date that the source was accessed, as online resources are frequently updated or removed.

WEBSITES

- Garg, Bhavet (2011): Towards a New Gas Policy, Political Weekly, Viewed on January 01, 2012 http://epw.in/user/viewabstract.jsp

EFFECT OF ECONOMIC ENVIRONMENT ON INTERNATIONAL TOURISM REVENUE: A CO-INTEGRATION APPROACH

CHENG-WEN LEE
PROFESSOR
DEPARTMENT OF INTERNATIONAL BUSINESS
CHUNG YUAN CHRISTIAN UNIVERSITY
TAIWAN

WEN-CHUAN FU
RESEARCH SCHOLAR (PH. D.)
COLLEGE OF BUSINESS
CHUNG YUAN CHRISTIAN UNIVERSITY
TAIWAN

ABSTRACT
We adopt panel co-integration, VECM, and causality test to test if all variables involve co-integration in the long term and the short term under the dynamic framework. By using data from the WDI database and referring to the classification of International Monetary Fund of different economic characters, we categorize the countries into two groups, namely, advanced countries and emerging countries. Empirical results show that variables among different countries are co-integrated, which implies that all variables will be adjusted to equilibrium in the long run. Short-run VECM model was employed to estimate different countries, and the results are different, that is, all variables need to be adjusted upward to equilibrium in advanced countries and downward in emerging countries. Different variable sets involve partly consistent results. However, the groups of inbound numbers to revenues, trade to revenues, and GDP to trade group have different effects. In addition, the GDP variable would not affect tourism revenue and tourism revenue variable would not affect trade, which shows that the causality relations are consistent. Our research on different regimes and effects under countries and variables can provide ideas that may help in adjusting tourism travel goals and the direction of economic development.

KEYWORDS
Economic Growth, Tourism Arrivals, Tourism Receipts, Panel Data.

1. INTRODUCTION
The tourism industry creates high production value and is a focus for some countries. Many studies have been conducted on tourism and economic growth, but their conclusions about the relations between tourism development and economic growth greatly vary. For example, some studies have found these two regimes to have significant effects while some have not (Tugcu, 2014). Most researchers have argued that tourism can promote exchange revenues and increase tourism development for the host country. Despite the unpredictable volatility of global tourism industries, the number of tourists continues to rise, and economic growth in most countries remains strong. According to the 2014 UN World Tourism Organization (UNWTO) Statistics, the popular tourist areas from January to August 2014 were the United States, the Asia-Pacific area, and Europe, the corresponding growth rates of which were 8%, 5%, and 4% respectively. The UNWTO also predicted that the number of tourists traveling to emerging economic areas will overtake the number of tourists visiting economically advanced countries. We can thus infer that tourism promotes economic growth in emerging countries.

Tourism industries play an important role in global economic growth trends. In addition to their direct contribution to economic growth, tourism industries promote the development of international trade (Chakrabarti, 2014; Harini and Indira, 2014; Lee et al., 2015). Hence, tourism is vital to economic growth, and governments should draft and implement policies that would promote and support tourism development.

Globalization in enterprises also promotes economic growth for the host country. Business contacts can promote tourism. Thus, countries positively view tourism because of the economic benefits it brings. In recent years, leisure tourism has been widely employed as an economic index. Globalization increases tourism revenues and promotes the development of tourism sources to increase economic growth. Hence, whether a host country's economic growth would raise tourism cannot be ignored, and the effect of economic growth on tourism development is worth investigating.

Previous literature has suggested that international inbound tourism is correlated with economic growth. Some researchers have adopted a co-integration method and a Granger causal relationship to study the relation between tourism and economic growth; their results suggest that tourism development and economic growth have a two-way causal feedback relationship (Kim et al., 2006; Lee and Chien, 2008; Chen and Chiou, 2009; Amaghionyeodiwe, 2012; Tugcu, 2014; Samimi, 2011; Tang, 2013). By contrast, some studies have found only a one-way causal relation, in which tourism leads to economic growth (Oh, 2005; Po and Huang, 2008; Belloumi, 2010), while others have concluded that no relationship exists between tourism and economic growth (Akinboade and Braimoh, 2010; Arslanturk et al., 2011). Other studies have investigated the relations of tourism to economic variables such as GDP and exchange rate (Lee and Chang, 2008; Tang, 2013; Akinboade and Braimoh, 2010; Belloumi, 2010; Ekanayake et al., 2012).

As indicated in the previous discussion, many factors affect inbound tourism, and the outcomes are mixed. However, the development of international inbound tourism can be explained by many economic variables. For instance, GDP reflects a country's economic condition and tourism infrastructure for promoting international tourism. Increasing trade export also promotes international inbound tourism. Hence, to avoid bias brought by a country's characteristics, we adopt tourism revenues, GDP, international inbound tourism numbers, and trade variables to investigate whether tourism development and economic growth are related under different regimes and countries.

We mainly investigate the issue of international inbound tourism, but our work is limited by finite samples. We adopt time series and cross-sectional panel data samples to estimate co-integration and causality relations. We also attempt to combine the international inbound tourism data of different countries and classify them according to their economic status (i.e., advanced or emerging economies) to investigate whether tourism is related to economic growth and whether the relationship exists in the long-run equilibrium. In addition, we test the causality of inbound tourism revenues with inbound tourism numbers, trade, and GDP variables to ensure whether such causality or lagged relations exist.

2. LITERATURE REVIEW
Kim et al. (2006) conducted a co-integration and causality test to investigate the inbound tourism and GDP of Taiwan in 1956–2002 and found that the two variables shared a two-way relationship. Lee and Chang (2008) adopted panel co-integration and causality to investigate the inbound tourism revenues, inbound tourism numbers, exchange rates, and GDP relations of non-OECD and OECD member countries; the authors found one-way and two-way relationships between the tourism and economic growth of OECD and non-OECD member countries, respectively. Lee and Chien (2008) performed an EGARCH and causality test on the variables of GDP, exchange rates, inbound tourism revenues, CPI, and inbound tourism numbers and found one-way and two-way relationships between the

tourism development and economic growth of Korea and Taiwan, respectively. Samimi (2011) also argued that in 20 developing countries, the relations of the inbound tourism number with GDP reflect the two-way relationship between tourism and economic growth. Amaghionyeodiwe (2012) applied a causality test to investigate the relationship between the GDP and inbound tourism revenue of Jamaica and identified a two-way relationship between tourism and GDP. Tang (2013) also applied the causality and co-integration method to study the relationships among Malaysia's inbound tourism, GDP, and exchange rate; the empirical result suggested long-term two-way relationships among the variables. Tugcu (2014) adopted panel data and found two-way relationships between the tourism and economic growth of 12 European countries; the study also determined that tourism leads economic growth in 4 Asian countries and that no relationship exists between the two variables in Africa.

Oh (2005) adopted a co-integration and causality test for Korea and found that economic growth leads to an increase in tourism. Po and Huang (2008) used the threshold regression model to test tourism and found that tourism leads economic growth in Regimes 1 and 3 and that the relationship in Regime 2 is not significant. Akinboade and Braimoh (2010) argued that no two-way relationship exists between the tourism and economic growth of South Africa. Arslanturk et al. (2011) contended that the relations between the GDP and tourism revenues of Turkey from 1963–2006 reject the causality test.

Belloumi (2010) conducted a co-integration and causality test and found that only a one-way relationship exists between the tourism development and economic growth of Tunisia. Ekanayake et al. (2012) adopted the panel co-integration method and suggested that 50 major countries promoting tourist visits to America have long-run equilibrium relations. Nanthakumar et al. (2013) adopted a structural break and dynamic co-integration method to investigate the relationships among tourism revenues and found structural break effects for Singapore, Indonesia, and Thailand, which promote inbound tourist visits to Malaysia. Said et al. (2013) employed auto-regression model and a causality method and found that in Tanzania, a two-way relationship exists between tourism and inflation, and a one-way relationship exists between exchange rate and tourism. Kılıç and Bayar (2014) suggested that a two-way causality relationship exists between the exchange rate and tourism in Turkey under the GARCH, co-integration, and causality methods.

Lee and Chou (2014) further adopted the gravity model with the dynamic panel data method to investigate tourism. Sequeira and Campos (2005) also adopted the panel data method and found that tourism leads economic growth in tourism specialization countries. Tiwari (2011) adopted the panel fix effect and random effect with the Hausman test and found that tourism revenue highly affects a country's economic growth but excluding the import and export of goods and services. Mushtaq and Zaman (2013) also suggested that positive significant relations exist between tourism revenue and GDP and trade openness.

3. METHODOLOGY AND DATA

3.1 PANEL UNIT ROOT TEST

The panel unit root test method is combined with time series and cross-sectional data to overcome the data shortage issue of the traditional unit root test. In this work, we adopt the non-stationary panel unit root test proposed by Im et al. (2003) and Levin et al. (2002) (i.e., IPS test and LLC test). In the panel unit root test, testing power increases with the increase in cross-sectional data, and the null hypothesis denotes the time series data in the panel unit root. Levin et al. (2002) suggested a panel data-based augmented Dickey–Fuller (ADF) test parameter by maintaining the same cross-sectional regime as that in Eq. (4.1).

$$\Delta y_{i,t} = \alpha_i + \gamma_i y_{i,t-1} + \sum_{j=1}^{k} \alpha_j \Delta y_{i,t-j} + e_{i,t} \qquad (4.1)$$

where t = 1,…, T denotes time and i = 1,…, N denotes the individual country. The test statistic is $t_\gamma = \hat{\gamma} / s.e.(\hat{\gamma})$, which represents the null hypotheses with unit root. However, the null hypothesis and alternative hypothesis are limited by the same cross-sectional regime.

Im et al. (2003) expanded the LLC test for first-difference auto-regressive coefficients to allow the null hypothesis to cross the regime. The null hypothesis in the IPS varies with the unit root. The IPS test involves average group analysis and the use of t_{γ_i} to present the following $\bar{z}$ statistic.

$$\bar{z} = \sqrt{N}(\bar{t} - E(\bar{t})) / \sqrt{Var(\bar{t})} \qquad (4.2)$$

where $\bar{t} = (1/N)\sum_{i=1}^{N} t_{\gamma_i}$ and $E(\bar{t})$ and $Var(\bar{t})$ denote the average and variance statistic by simulation, respectively. $\bar{z}$ converges to a normal distribution. Im et al. (2003) improved this equation with sample characters; the testing power of the improved equation is better and more robust than that of the LLC test.

3.2 PANEL CO-INTEGRATION TEST

We follow the method of Pedroni (2000, 2004) and use the panel co-integration method. The dataset includes time series and cross-sectional datasets. The chosen method has greater testing power than the traditional test. The main mechanism of the method is similar to the analysis proposed by Engle and Granger (1987). However, this methodology requires residual terms from panel data and the use of a non-parametric method for modifications. Hence, in using the methodology to test the different variable relations among the datasets in this study, the null hypothesis is set up to be a non-co-integration relationship.

$$y_{i,t} = \alpha_i + \delta_i z_{i,t-1} + \beta_{1i} x_{1i,t} + \beta_{2i} x_{2i,t} + \dots + \beta_{mi} x_{mi,t} + \ell_{i,t} \qquad (4.3)$$

Where m denotes the regression coefficient. $x_{mi,t}$ $(m = 1, 2, \dots, M)$ is the I(1) integration, and $x_{mi,t} = x_{mi,t-1} + \varepsilon_{mi,t}$. The equation describes a co-integration system and allows heterogeneity among panel datasets. The fixed effect and individual trend are allowed by the differential slope of the coefficient.

Pedroni (2000) suggested seven panel co-integration test models. The first model is a non-parametric variance ratio statistic. The second model is a test statistic similar to rho-statistics that shows non-parametric panel data styles. The third model constructs a parameter test such as the ADF test to determine the lagged number on the model. The three models are based on the average analysis. The statistic in the first model is similar to the Phillips–Perron (PP) rho-statistics. The other two are similar to the PP t-statistics and ADF statistics. These different statistics are based on the assumed heterogeneity of the co-integration relations between two individual variables. These statistics are defined as follows:

Within-samples statistic

Panel v-Statistic $$z_v^w = (\sum_{i=1}^{N}\sum_{t=1}^{T} L_{11i}^{-2} \tilde{\ell}_{it-1}^{2})^{-1} \qquad (4.4)$$

Panel rho-Statistic $$z_\rho^w = (\sum_{i=1}^{N}\sum_{t=1}^{T} \tilde{L}_{11i}^{-2} \hat{\ell}_{it-1}^{2})^{-1} \sum_{i=1}^{N}\sum_{t=1}^{T} (\hat{\ell}_{it-1} \Delta \hat{\ell}_{it} - \hat{\lambda}_i) \qquad (4.5)$$

Panel PP-Statistic $$z_t^w = (\tilde{s}_{NT}^{*2} \sum_{i=1}^{N}\sum_{t=1}^{T} L_{11i}^{-2} \tilde{\ell}_{it-1}^{*2})^{-\frac{1}{2}} \sum_{i=1}^{N}\sum_{t=1}^{T} L_{11i}^{-2} (\hat{\ell}_{it-1}^{*} \Delta \hat{\ell}_{it}^{*}) \qquad (4.6)$$

Panel ADF-Statistic $$z_{pp}^w = (\tilde{\sigma}^2 \sum_{i=1}^{N}\sum_{t=1}^{T} \tilde{L}_{11i}^{-2} \tilde{\ell}_{it-1}^{2})^{-\frac{1}{2}} \sum_{i=1}^{N}\sum_{t=1}^{T} \tilde{L}_{11i}^{-2} (\hat{\ell}_{it-1}^{2} \Delta \hat{\ell}_{it} - \hat{\lambda}_i) \qquad (4.7)$$

Between samples statistic

Group rho-Statistic $z_{\rho}^{B} = (\sum_{i=1}^{N}\sum_{t=1}^{T}\hat{L}_{11i}^{-2}\hat{\ell}_{it-1}^{2})^{-1}\sum_{i=1}^{N}\sum_{t=1}^{T}(\hat{\ell}_{it-1}\Delta\hat{\ell}_{it} - \hat{\lambda}_{i})$ (4.8)

Group PP-Statistic $z_{t}^{B} = \sum_{i=1}^{N}(\hat{\sigma}_{i}^{2}\sum_{t=1}^{T}\hat{\ell}_{it-1}^{2})^{-1}\sum_{t=1}^{T}(\hat{\ell}_{it-1}\Delta\hat{\ell}_{it} - \hat{\lambda}_{i})$ (4.9)

Group ADF-Statistic $z_{pp}^{B} = \sum_{i=1}^{N}(\sum_{t=1}^{T}\hat{s}_{1}^{*2}\hat{\ell}_{it-1}^{*2})^{-1}\sum_{t=1}^{T}\hat{\ell}_{it-1}^{*}\Delta\hat{\ell}_{it}^{*})$ (4.10)

3.3 PANEL ERROR CORRECTION MODEL

We follow the work of Koop et al. (2006) in constructing a panel VECM model for testing the existence of causality between variables. Let i denote the individual of the cross-sectional unit $(i = 1, ..., N)$, and let $\chi_{i,t}$ denote the vector of observations. If $\beta_i^{'} X_{i,t-1} = Z_{i,t-1}$, then the panel VECM model can be written as

$$\Delta X_{i,t} = u_i + \alpha_i(\beta_i^{'} X_{i,t-1}) + \sum_{h=1}^{K}\gamma_{i,h}\Delta X_{i,t-h} + \varepsilon_{i,t} \quad (4.11)$$

Where α_i and $\beta_i^{'}$ are the matrixes with full ranks. The model allows co-integration relations across countries; hence, we can expand the aforementioned mark. For instance, the co-integration space is $p_i = sp(\beta_i)$, and $\beta_i^{'} X_{i,t-1}$ presents the mentioned error correction item $Z_{i,t-1}$. The co-variance matrix $\varepsilon_{i,t}$ is as follows:

$$E(\varepsilon_{i,t}\varepsilon_{j,s}^{'}) = \Sigma_{ij} \quad \text{for } t = s \quad (4.12)$$

If the error correction term has no relations with the sample period but is related to the cross section of the individual, then model elasticity exists in the rank assumption. Hence, we construct a panel VECM model with panel vector correction terms and investigate the adjustment process for tourism and economic growth. The panel VECM model is constructed as follows.

$$TR_{i,t} = u_{4i} + \alpha_{4i}Z_{i,t-1} + \sum_{h=1}^{k}\alpha_{1i,h}TR_{i,t-h} + \sum_{h=1}^{k}a_{2i,h}GDP_{i,t-h} + \sum_{h=1}^{k}a_{3i,h}TA_{i,t-h} + \sum_{h=1}^{k}a_{4i,h}T_{i,t-h} + \varepsilon_{TR,it} \quad (4.13)$$

$$GDP_{i,t} = u_{3i} + \alpha_{3i}Z_{i,t-1} + \sum_{h=1}^{k}b_{1i,h}GDP_{i,t-h} + \sum_{h=1}^{k}b_{2i,h}TR_{i,t-h} + \sum_{h=1}^{k}b_{3i,h}TA_{i,t-h} + \sum_{h=1}^{k}b_{4i,h}T_{i,t-h} + \varepsilon_{GDP,it} \quad (4.14)$$

$$TA_{i,t} = u_{2i} + \alpha_{2i}Z_{i,t-1} + \sum_{h=1}^{k}c_{1i,h}TA_{i,t-h} + \sum_{h=1}^{k}c_{2i,h}TR_{i,t-h} + \sum_{h=1}^{k}c_{3i,h}GDP_{i,t-h} + \sum_{h=1}^{k}c_{4i,h}T_{i,t-h} + \varepsilon_{TA,it} \quad (4.15)$$

$$T_{i,t} = u_{1i} + \alpha_{1i}Z_{i,t-1} + \sum_{h=1}^{k}d_{1i,h}T_{i,t-h} + \sum_{h=1}^{k}d_{2i,h}TR_{i,t-h} + \sum_{h=1}^{k}d_{3i,h}GDP_{i,t-h} + \sum_{h=1}^{k}d_{4i,h}TA_{i,t-h} + \varepsilon_{T,it} \quad (4.16)$$

Where i denotes country and u denotes the intercept. $z_{i,t-1}$ denotes the error correction terms, and k denotes the lagged period. ε denotes the residual terms, TR denotes the inbound tourism revenues in time t, GDP denotes the gross domestic product, TA denotes the inbound tourism number in time t, and T denotes the trade volume in time t.

3.4 Panel Causality Test

We adopt the panel data unit root test and panel causality in this study with consideration of the vital role of causality among variables. For analysis, previous studies assume that causality is independently and identically distributed among variables. However, many disturbances exist among variables, and maintaining the individual characteristics of the variables is difficult in practice. An understanding of the causality effect will thus help predict the behavior of variables. Granger (1969) suggested that causality could be used to identify whether a model can decrease prediction errors. We consider the linear model as

$$\Delta Y_{i,t} = \mu_i + \sum_{l=1}^{L}\phi_i^{(l)}\Delta Y_{i,t-1} + \sum_{l=1}^{L}k_i^{(l)}\Delta X_{i,t-l} + \tau_{i,t} \quad (4.17)$$

Where $\tau_{i,t}$ is typically iid and $\tau_i = (\tau_{i,l}, ..., \tau_{i,T})'$ is a dependent cross group, the dependence of which is a normal variable with distribution. According to the null hypothesis, Xi cannot predict Yi. Such hypothesis is a homogeneous non-causality assumption.

3.5 Data and Variable Selection

Data obtained from the World Development Indicators database are used to screen 67 countries whose inbound tourists reached one million in 2013. According to the classification by the IMF, we separate the data into two groups comprising 25 advanced countries and 42 emerging countries according to the annual data from 1995 to 2013. The variable measurements used are international inbound tourism revenues (TR), gross domestic production (GDP), trade (T), and international inbound tourism number (TA). Relevant information is listed in Tables 1 and 2.

TABLE 1: SAMPLE COUNTRIES

Advanced Economies (25)			
Australia	France	Korea	Spain
Austria	Germany	Malta	Sweden
Belgium	Greece	Netherlands	Switzerland
Canada	Ireland	Norway	United Kingdom
Cyprus	Israel	Portugal	
Denmark	Italy	Singapore	
Estonia	Japan	Slovenia	
Emerging and Developing Economies (42)			
Algeria	Dominican	Malaysia	South Africa
Argentina	Egypt	Maldives	Sri Lanka
Armenia	El Salvador	Mexico	Tanzania
Brazil	India	Morocco	Thailand
Bulgaria	Indonesia	Namibia	Tunisia
Cambodia	Jamaica	Nicaragua	Turkey
Chile	Kyrgyz	Peru	Uganda
China	Lao PDR	Philippines	Ukraine
Colombia	Latvia	Poland	Uruguay
Costa Rica	Lebanon	Romania	
Croatia	Lithuania	Russian	

Data source: World Development Indicators database.

TABLE 2: VARIABLES MEASUREMENT

Variable	Description	Measurement	Data source
TR	Inbound tourism revenues	USD	WDI
GDP	Gross domestic product	USD	WDI
TA	Inbound tourism number	People	WDI
T	Trade volume	Exports of goods and services (USD)	WDI

Data source: World Development Indicators database.

4. EMPIRICAL RESULT

4.1 PANEL UNIT ROOT TEST RESULTS

We adopt the LLC, IPS, and ADF unit root tests with the international inbound tourism revenues, GDP, inbound tourism number, and trade variables of different countries to identify whether a unit root exists within the time series. The null hypothesis states that if not statistically significant, the time series with a unit root is non-stationary. When a variable is affected by the differences involved in the rejection of the null hypothesis, the series is deemed to be stationary (i.e., I(d) integration). Generally, the economic data set is stationary with I(1).

Table 3 shows that the advanced countries cannot pass the null hypothesis. Under certain differences, all the unit root statistics are significant; the rejection of the null hypothesis implies I(1) integration.

TABLE 3: PANEL UNIT ROOT TESTS (ADVANCED ECONOMIES)

	LLC		IPS		ADF	
Individual effects	Level	First difference	Level	First difference	Level	First difference
TR	1.5537	−11.9412***	5.7363	−9.5565***	8.6726	182.876***
GDP	2.0585	−10.0979***	5.9698	−7.4382***	12.1088	144.258***
TA	1.7389	−8.2958***	4.6512	−7.9646***	26.8043	156.736***
T	1.5333	−15.0375***	6.7812	−12.271***	5.5399	233.218***

Note:
1. Estimation results adopt regression with intercept model.
2. *, **, and *** denote significance at 10%, 5%, and 1% levels, respectively.

Table 4 shows the test results from emerging countries. The null hypothesis of the unit root cannot be significantly rejected. Next, we arrange the variables with first differential and find that all statistics are significant. Hence, all the series are stationary by first differential. The variable series is I(1) integrated.

TABLE 4: PANEL UNIT ROOT TESTS (EMERGING AND DEVELOPING ECONOMIES)

	LLC		IPS		ADF	
	Level	First difference	Level	First difference	Level	First difference
TR	5.7828	−8.5839***	10.1984	−7.8685***	13.8181	219.953***
GDP	9.3425	−8.2153***	13.5916	−6.0149***	5.9017	178.840***
TA	6.5924	−7.3105***	10.1520	−7.4817***	25.6176	209.810***
T	7.1774	−13.4362***	12.2650	−2.1176***	5.3771	308.800***

Note:
1. Estimation results according to the regression with an intercept model.
2. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

4.2 PANEL CO-INTEGRATION RESULTS

This study adopts the panel co-integration method proposed by Pedroni (2004) and finds co-integration relations among international tourism revenues, GDP, inbound tourism number, and trade. Mehrara et al. (2014), Liu (2013), and Sriboonchitta (2010) also followed Pedroni (2004) and found that panel rho-Statistic and group rho-Statistic do not yield significant results but that the other five test statistics have results that are significant enough to reject the null hypothesis; they concluded that the series is co-integrated in the long-run. In the present work, we follow relevant research studies to identify which variables have relationships and are co-integrated in the long term such that the series adjusts to equilibrium. (Table 5)

TABLE 5: PANEL CO-INTEGRATION RESULTS

	Advanced Economies	Emerging and Developing Economies
Panel v-Statistic	2.3110**	1.37852*
Panel rho-Statistic	−0.1302	0.2505
Panel PP-Statistic	−2.5018***	−3.0726***
Panel ADF-Statistic	−4.1413***	−2.0578**
Group rho-Statistic	1.6453	1.8475
Group PP-Statistic	−2.5363***	−4.0475***
Group ADF-Statistic	−2.8032***	−3.4938***

Note: *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

4.3 PANEL VECM MODEL TEST RESULT

Engle and Granger (1987) suggested that variables with co-integration relationships can be adjusted to equilibrium but would diverge in the short run. Hence, we must analyze their short-term dynamics using the VECM model. When we are certain that variables are co-integrated among individual economies, we proceed to use a panel VECM model to analyze their dynamic adjustments in the short run. The optimal model criteria for screening to screen optimal lagged periods are AIC and BIC. The results are as follows.

Table 6 shows the VECM model test results for the advanced countries. First, the VECM model obtains positive error correction terms ($z_{i,t-1}$), which indicate that when inbound tourism revenues diverge from the long-term equilibrium, such revenues would increase to adjust to the equilibrium in the long run. In this case, the inbound tourism numbers in previous periods is significant to inbound tourism revenue. Second, the VECM model estimation for GDP achieves positive error correction terms, which indicate that if GDP increases, the imbalance would adjust to reach equilibrium. In this case, the GDP and the inbound tourism number in previous periods significantly affect the current GDP. Third, the VECM model of the inbound tourism number yields positive results and shows smooth recovery speed. This result indicates that an increased inbound tourism number smoothly returns to equilibrium, in which case the effects of previous tourism revenues, inbound tourism numbers, and trade volumes become apparent. Fourth, the VECM model for trade yields positive error correction terms, which indicate that previous data on the inbound tourism number and trade volume would significantly affect the current trade volume. Furthermore, trade growth would be affected by the lagged period, and previous inbound tourism numbers would affect export and import status. Hence, our work can offer adequate inbound tourism data that tourism industries can use as reference in offering suitable services.

For the advanced countries, the variables of the current period are affected by the high GDP, and their growth rate is slower than that in previous periods. Hence, the variables must be adjusted upward to reach long-term equilibrium. The trade and GDP variables adjust quickly, possibly because of the stable economic growth, in which case enterprises transform their production for emerging markets to achieve economic growth while reducing trade volume. In addition, tourism revenues adjust more smooth specialized in inbound numbers adjust speed present very slow.

TABLE 6: PANEL VECM MODEL TEST RESULTS

	Advanced Economies			
	D (TR)	D (GDP)	D (TA)	D (T)
CointEq1	0.002300	0.115728	2.39E-06	0.148305
	(0.00150)	(0.08752)	(6.9E-07)	(0.03233)
	[1.52884]	[1.32238]	[3.44927]	[4.58665]
D(TR(-1))	−0.045318	−5.133208	−7.81E-05	−1.120572
	(0.07122)	(4.14360)	(3.3E-05)	(1.53093)
	[−0.63627]	[−1.23883]	[−2.38147]	[−0.73195]
D(GDP(-1))	0.001903	0.335035	3.62E-07	0.034629
	(0.00122)	(0.07102)	(5.6E-07)	(0.02624)
	[1.55859]	[4.71724]	[0.64321]	[1.31966]
D(TA(-1))	451.1040	11055.52	0.346231	7620.946
	(114.867)	(6682.66)	(0.05290)	(2469.04)
	[3.92718]	[1.65436]	[6.54522]	[3.08661]
D(T(-1))	−0.002347	−0.218425	−3.43E-06	−0.169977
	(0.00339)	(0.19749)	(1.6E-06)	(0.07297)
	[−0.69152]	[−1.10600]	[−2.19262]	[−2.32950]

Note: D ( ) denotes first differential, parentheses ( ) denote standard deviation, square brackets denote t statistic, and CointEq1 denotes error correction term.

Table 7 presents the VECM model test results for the emerging countries. First, in the VECM estimation of international tourism, the error correction term is negative. If imbalance emerges, the inbound tourism revenue would adjust downward to reach equilibrium. Previous inbound tourism revenue, inbound tourism number, and trade significantly affect current tourism revenues. Second, in the VECM model for GDP, the error correction term is negative and adjusts downward to reach equilibrium. The GDP base is small in emerging countries, and the GDP variable is affected by previous data on inbound tourism revenue and inbound tourism number. Third, the VECM model estimation for the inbound tourism number yields negative results that adjust downward to reach equilibrium smoothly. Previous data on GDP and inbound tourism number will significantly affect the current data on the inbound tourism number. Fourth, in the VECM model for trade, the coefficient is negative, which implies that with long-term adjustment, trade will adjust downward and return to equilibrium. Previous data on GDP, inbound tourism number, and trade would significantly affect current trade variables. The trade variable will be affected by its lagged period, previous GDP, and previous inbound growth rate.

In summary, an emerging country's GDP and trade grow quickly over the long-run equilibrium. A possible reason is globalization, which motivates emerging countries to attract foreign investment, promote economic growth, and increase trade export and import. Hence, the economic boom can lead to tourism development. According to the empirical results on different economic groups, advanced countries should adjust their variables upward to reach equilibrium in the short run. On the contrary, emerging countries should adjust their important factors upward to reach equilibrium. A possible explanation is that in advanced countries, economic growth has reached a certain level in which the GDP is high enough to cause imbalance. However, in emerging countries, all factors show imbalance over equilibrium in the short run. Foreign investment and low consumption might attract tourism industries and lead to high economic growth rate that could push the adjustment downward in the short run.

TABLE 7: PANEL VECM MODEL TEST RESULTS

	Emerging and Developing Economies			
	D (TR)	D (GDP)	D (TA)	D (T)
CointEq1	−0.010723	−2.034943	−8.85E-06	−0.663450
	(0.00196)	(0.11533)	(1.8E-06)	(0.04905)
	[−5.47715]	[−17.6442]	[−4.92922]	[−13.5267]
D(TR(-1))	0.184450	−6.598949	3.21E-06	−0.973796
	(0.05604)	(3.30154)	(5.1E-05)	(1.40405)
	[3.29126]	[−1.99875]	[0.06241]	[−0.69356]
D(GDP(-1))	−0.000501	0.154503	−2.67E-06	−0.041106
	(0.00093)	(0.05483)	(8.5E-07)	(0.02332)
	[−0.53850]	[2.81761]	[−3.13323]	[−1.76270]
D(TA(-1))	108.8848	5708.173	0.156024	5457.451
	(54.3824)	(3203.75)	(0.04985)	(1362.46)
	[2.00220]	[1.78171]	[3.13002]	[4.00557]
D(T(-1))	−0.005843	−0.179150	−4.55E-07	−0.166012
	(0.00223)	(0.13121)	(2.0E-06)	(0.05580)
	[−2.62340]	[−1.36535]	[−0.22296]	[−2.97511]

Note: D ( ) denotes first differential, parentheses ( ) denote standard deviation, square brackets denote t statistic, and CointEq1 denotes error correction term.

4.4 CAUSALITY TEST

Table 8 shows the causality test for advanced countries. Only the variable sets for inbound tourism revenue and GDP and trade and GDP have significant one-way relationships; that is, inbound tourism revenue and trade would affect GDP. The results indicate that promotion for tourism industries and terms of trade would increase economic growth. Inbound tourism numbers have feedback causality relations with GDP, inbound tourism revenues, and trade. Controlling the change in inbound tourism numbers could affect GDP, inbound tourism revenues, and trade growth. However, in two-way relationships, inbound tourism revenue is not significant in trade; tourism revenues and trade would be affected by each other.

TABLE 8: CAUSALITY TEST IN ADVANCED ECONOMIES

	Advanced Economies	
Null Hypothesis:	F-Statistic	Prob.
GDP does not Granger cause TR	0.1469	0.8634
TR does not Granger cause GDP	3.4275	0.0334
TA does not Granger cause TR	6.8318	0.0012
TR does not Granger cause TA	10.8399	3.E-05
T does not Granger cause TR	0.1114	0.8945
TR does not Granger cause T	0.1439	0.8660
TA does not Granger cause GDP	2.5518	0.0791
GDP does not Granger cause TA	5.2497	0.0056
T does not Granger cause GDP	2.63576	0.0728
GDP does not Granger cause T	0.62655	0.5349
T does not Granger cause TA	8.42437	0.0003
TA does not Granger cause T	3.72219	0.0250

Table 9 shows the causality relation results for emerging countries. For emerging economies, we separate the variables into three groups, namely, inbound tourism revenue with GDP, inbound tourism revenue with trade, and inbound tourism revenue with inbound tourism numbers. Only a one-way relationship exists between inbound tourism revenue affecting GDP and inbound tourism numbers and trade affecting inbound tourism revenues. The results from inbound tourism revenue tests benefit inbound tourism numbers and GDP, and trade leads to inbound tourism revenue growth. The one-way relationship among the three groups indicates that emerging countries must continue to develop tourism industries if such industries can meet tourism requirements to provide capital investment and promote economic development.

The aforementioned findings are similar, except for inbound tourism numbers to tourism revenues, trade to tourism revenues, and GDP to trade. These three groups have different effects. The inbound tourism numbers of emerging countries would affect tourism revenue and could serve as basis of consumption price. Advanced countries show insignificant relations between trade and revenue and between GDP and trade. A possible explanation is that advanced countries have reached a certain level of economic growth and that competition among emerging countries leads to insignificant results among variables.

TABLE 9: CAUSALITY TEST IN EMERGING AND DEVELOPING ECONOMIES

	Emerging and Developing Economies	
Null Hypothesis:	F-Statistic	Prob.
GDP does not Granger cause TR	1.9366	0.1450
TR does not Granger cause GDP	3.6605	0.0262
TA does not Granger cause TR	1.3414	0.2621
TR does not Granger cause TA	5.6045	0.0038
T does not Granger cause TR	3.0136	0.0497
TR does not Granger cause T	0.8422	0.4312
TA does not Granger cause GDP	3.9820	0.0191
GDP does not Granger cause TA	9.1882	0.0001
T does not Granger cause GDP	31.3467	9.E-14
GDP does not Granger cause T	3.2022	0.0413
T does not Granger cause TA	6.6901	0.0013
TA does not Granger cause T	10.1424	5.E-05

5. CONCLUSION

This study adopts panel co-integration, VECM, and causality model to investigate long-term equilibrium among the variables of inbound tourism revenue, GDP, inbound tourism numbers, and trade in different economies.

This work offers three contributions. First, the co-integration test reports the existence of a long-term equilibrium relation in different economies. Second, the VECM model for different countries in the short run presents different outcomes for advanced countries and emerging countries. For example, all variables for advanced countries should be adjusted upward to reach equilibrium in the short run; however, the same could not be said for emerging countries. A possible explanation is that advanced countries have reached a high level of economic growth, whereas emerging countries experience slow economic growth, which could be influenced by high prices. However, emerging countries quickly develop their tourism industries and economies because of the low cost of materials and labor. In this case, foreign capital flows into emerging countries (for instance, China and Indonesia), causes economic growth, and consequently increases tourism growth rate. Third, this study finds significant differences between advanced and emerging countries, particularly in terms of the three groups identified, namely, inbound tourism numbers and revenue, trade and revenue, and GDP and trade. Emerging countries tend be affected by revenue related to price levels, whereas advanced countries do not maintain significant relationships between trade and revenue and between GDP and trade. A possible explanation is that advanced countries have reached a certain growth level and are affected by globalization such that foreign capital flows into emerging countries. In addition, GDP and tourism revenues do not exhibit causality.

REFERENCES

1. Akinboade, O. A. and Braimoh, L. A., 2010, International tourismand economic development in South Africa: a Granger causality test, International Journal of Tourism Research, 12(2), pp.149-163.
2. Amaghionyeodiwe, L. A., 2012, Research note: A causality analysis of tourism as a long-run economic growth factor in Jamaica, Tourism Economics, 18 (5), pp.1125-1133.
3. Arslanturk, Y., Balcilar, M. and Ozdemir, Z. A., 2011, Time-varying linkages between tourism receipts and economic growth in a small open economy, Economic Modelling, 28, pp.664-671.
4. Belloumi, M., 2010, The relationship between tourism receipts, real effective exchange rate and economic growth in Tunisia, International Journal of Tourism Research. 12(5), pp.550-560.
5. Chakrabarti, A. (2014), Economic development and tourism in Sikkim: A critical review, International Journal of Research in Commerce, Economics and Management, 4(3), pp.16-21.
6. Chen, C. F., and Chiou-Wei, S. Z., 2009, Tourism expansion, tourism uncertainty and economic growth: new evidence from Taiwan and Korea, Tourism Management, 30(6), pp.812-818.
7. Engle, R. F. and Granger, C. W. J., 1987, Co-integration and Error Correction: Representation, Estimation, and Testing, Econometrica, 55, pp.251-276.
8. Ekanayake, E. M. Halkides, M. and Ledgerwood, J. R., 2012, Inbound international tourism to the United States: A panel data analysis, International Journal of Management and Marketing Research, 5(3), pp.15-27.
9. Granger, C. W. J., 1969, Investigating causal relations by econometric models and cross-spectral methods, Econometrica, 37(3), pp.424-438.
10. Harini, K.V. & Indira, M. (2014), Trends in economic contribution of tourism industry to Indian economy, International Journal of Research in Commerce, Economics and Management, 4(7), pp.21-24.
11. Im, K. S., Pesaran, M. H. and Shin, Y., 2003, Testing for unit roots in heterogeneous panels, Jounal of Econometrics, 115, pp.53-74.
12. Kılıç, C. and Bayar, Y., 2014, Effects of real exchange rate volatility on tourism receipts and expenditures in Turkey, Advances in Management and Applied Economics, 4(1), pp.89-101.
13. Kim, H. J., Chen, M. H. and Jang, S.C.S., 2006, Tourism expansion and economic development: The case of Taiwan, Tourism Management, 27(5), pp.925-933.
14. Koop G., Gonzalez, R. L. and Strachan, R., 2006, Bayesian inference in a cointegrating panel data model, Working Paper, Department of Economics, Leicester University.
15. Lee, C. C. and Chang C. P., 2008, Tourism development and economic growth: a closer look at panels, Tourism Management, 29, pp.180-192.
16. Lee, C. W., Fu, W. C., Hsieh, K. S. and Lee, Y. C., 2015, Investigating the impact of economic variables on international tourist arrivals, International Journal of Research in Commerce, Economics and Management, 5(2), pp.14-19.
17. Lee, C. C., and Chien, M. S., 2008, Structural breaks, tourism development and economic growth: evidence from Taiwan, Mathematics and Computation in Simulation, 77, pp.358-368.
18. Lee, C. W. and Chou, C. M., 2014, The impacts of native culture on tourism in Taiwan: a dynamic panel data analyses, African Journal of Social Sciences, 4(2) pp.87-98.
19. Levin, A., Lin, C. F. and Chu, C. S. J., 2002, Unit root tests in panel data: asymptotic and finite-sample properties, Journal of Econometrics, 108, pp.1-24.
20. Liu, Y., 2013, Economic growth drag in the Central China: evidence from a panel analysis, Applied Economics, 45, pp.2163-2174.
21. Mehrara, M. Karsalari, A. R. and Musai, M., 2014, The causality between quality environment, income and openness in oil exporting countries: panel cointegration and causality, International Journal of Academic Research in Business and Social Sciences, 4(11), pp.355-364.
22. Mushtaq, A. and Zaman, K., 2013, Impact of macroeconomic factors on tourism receipts: evidence from SAARC region, European Economics Letters, 2(2), pp.38-43.
23. Nanthakumar, L., Han, A. S. and Kogid, M., 2013, Demand for Indonesia, Singapore and Thailand tourist to Malaysia: Seasonal unit root and multivariate analysis, International Journal of Economics and Empirical Research, 1(2), pp.15-23.
24. Oh, C. O., 2005, The contribution of tourism development to economic growth in the Korean economy, Tourism Management, 26, pp.39-44.
25. Pedroni, P., 2000, Fully Modified OLS for Heterogeneous Co-integrated Panels, Non-stationary Panels, Panel Co-integration and Dynamic Panels, 15, pp. 93-130.
26. Pedroni, P., 2004, Panel co-integration: asymptotic and finite sample properties of pooled time series tests with an application to the PPP HYP, Econometric Theory, 20, pp.597-625.
27. Po, W. C. and Huang, B. N., 2008, Tourism development and economic growth – a nonlinear approach, Physica A, 387, pp.5535-5542.
28. Said, K. K., Luvanda, E. and Massawe E. S., 2013, Mathematical analysis of the impact of real exchange rate on output growth and inflation: the case of Tanzania Zanaibar, International Journal of Mathematical Research, 2(4), pp.23-36.
29. Samimi, A. J., Sadeghi, S. and Sadeghi, S., 2011, Tourism and economic growth in developing countries: P-VAR approach, Middle-East Journal of Scientific Research , 10(1), pp.28-32.
30. Sequeira, T.N. and Campos, C., 2005, International tourism and economic growth: a panel data approach, Fondazione Eni Enrico Mattei Nota di Lavoro, No.141.
31. Sriboonchitta, S., 2010, A panel cointegration analysis: An application to international tourism demand of Thailand, annals of the university of petroşani, Economics, 10(3), pp.69-86.
32. Tang, C. F., 2013, Temporal granger causality and the dynamics relationship between real tourism receipts, real income and real exchange rates in Malaysia, International Journal of Tourism Research, 15, pp.272-284.
33. Tiwari, A. K., 2011, Tourism, exports and FDI as a means of growth: Evidence from four Asian countries, The Romanian Economic Journal, 40, pp.131-151.
34. Tugcu, C. T., 2014, Tourism and economic growth nexus revisited: A panel causality analysis for the case of the Mediterranean Region, Tourism Management, 42, pp.207-212.

REQUEST FOR FEEDBACK

Dear Readers

At the very outset, International Journal of Research in Commerce, Economics & Management (IJRCM) acknowledges & appreciates your efforts in showing interest in our present issue under your kind perusal.

I would like to request you tosupply your critical comments and suggestions about the material published in this issue as well as on the journal as a whole, on our E-mail**infoijrcm@gmail.com** for further improvements in the interest of research.

If youhave any queries please feel free to contact us on our E-mail **infoijrcm@gmail.com**.

I am sure that your feedback and deliberations would make future issues better – a result of our joint effort.

Looking forward an appropriate consideration.

With sincere regards

Thanking you profoundly

Academically yours

Sd/-
Co-ordinator

DISCLAIMER

ABOUT THE JOURNAL

In this age of Commerce, Economics, Computer, I.T. & Management and cut throat competition, a group of intellectuals felt the need to have some platform, where young and budding managers and academicians could express their views and discuss the problems among their peers. This journal was conceived with this noble intention in view. This journal has been introduced to give an opportunity for expressing refined and innovative ideas in this field. It is our humble endeavour to provide a springboard to the upcoming specialists and give a chance to know about the latest in the sphere of research and knowledge. We have taken a small step and we hope that with the active co-operation of like-minded scholars, we shall be able to serve the society with our humble efforts.

Our Other Journals