Received 12 May 2022
Revised 30 November 2022
14 May 2023
30 August 2023
15 September 2023
Accepted 16 September 2023

Has the Regional Comprehensive Economic Partnership (RCEP) negotiations impacted on tourism flows of member countries?

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Abstract

Purpose – Using panel data for the Regional Comprehensive Economic Partnership (RCEP) member states, the present study explored the role of RCEP negotiations on tourism development.

Design/methodology/approach – A dynamic econometric model, namely the panel autoregressive dynamic lag model (PARDL) has been used. To test for panel causality, Dumitrescu–Hurlin panel causality tests were used.

Findings – Through the use of a dynamic econometric model, namely the PARDL, the results show that the RCEP negotiations, growth rates, as well as international trade contribute towards tourism development. Furthermore, the Dumitrescu–Hurlin panel causality tests confirm the existence of a bidirectional causal link between tourism development and RCEP negotiations. Finally, a unidirectional causal link is observed between tourism development and international trade.

Originality/value – This existing evidence on the topic seems to be very scant and limited to specific regions and particular regional trade agreements. This paper thus fills an important gap in the literature by advancing evidence about the effects of the RCEP on international tourism flows across member countries.

Keywords Tourism, International trade, Regional trade agreements, RCEP, PARDL, Dumitrescu–Hurlin panel causality tests

Paper type Research paper

1. Introduction

The numerous benefits of economic integration are well known in economic theory (see Greenaway *et al.*, 2010) and have been widely discussed empirically. However, the literature has overwhelmingly focus on assessing the effect of economic integration on international trade (Carre're, 2006; Baier and Bergstrand, 2009; Ekanayake *et al.*, 2010, Gil-Pareja *et al.*, 2014; Yang and Martinez-Zarzoso, 2014; Afesorgbor, 2016 and more recently Akalpler, 2021 among others). Studies on the effects of trade agreements and other economic partnerships on international tourism flows have been quite scant (except Gil-Pareja *et al.*, 2007, Rose, De Vita, 2014; Santana-Gallego *et al.*, 2010a, b, 2015, 2016; Saayman and Cassella, 2016). This is the case despite the fact that the theoretical literature postulates that free trade agreements and other economic partnerships may potentially lead to high levels of tourism flows. This is explained via heightened awareness of the destinations within the regional block, caused by increased media coverage as well as tighter political, business and cultural links, which translate into a more positive perception and image of member countries as potential destinations (Tasci and Gartner, 2007).

Journal of Economic and Administrative Sciences
Vol. 40 No. 1, 2024
pp. 4-22

1026-4116
DOI 10.1108/JEAS-05-2022-0120

More so, participating in regional trade agreements (RTAs) improves the member countries economic integration and involvement in international trade, investment and tourism (Pham *et al.*, 2023). Many RTAs have included measures for specific economic cooperation in the tourism sector. Following the signing such RTAs, international tourists flows have increased among the member states.

In addition, the existing literature on trade agreements and tourism have essentially focussed on the effects of the European Monetary Union on tourism flows. Only recently, studies like Okafor *et al.* (2021) have assessed the effects of RTAs on international tourist flows in sub-Saharan Africa (SSA) and the Middle East and North Africa (MENA). Their results show that RTAs have a significant positive effect on international tourist flows. This has been attributed to policy harmonisation, which have been helpful in boosting regional integration and thereby enabling inter-regional tourism. Khalid *et al.* (2022) investigate the effects of RTAs (in terms of customs unions, common markets and preferential and free trade agreements) on bilateral tourism flows and show that all types of RTAs have a positive and significant effect on bilateral tourism flows. Similarly, Chen *et al.* (2022) show that the Belt and Road Initiative can significantly boost the development of tourist flows across member countries. The Belt and Road Initiative affects positively tourist flows through people-to-people bonds, better connectivity and unhindered trade. However, to the best of our knowledge, there is no empirical evidence on the impact of Regional Comprehensive Economic Partnership (RCEP) Agreement on tourism flows across the member countries. The existing work on the impact of the RCEP agreement has focussed mainly on the trade effects (Zreik, 2022) or has assessed the causal relationship between Foreign Direct Investment (FDI) and growth in the region (Karahan and Çolak, 2022) but none has made an attempt to analyse tourism flows within the region and the impact of the RCEP agreement on the tourism industry.

This paper thus attempts to supplement the relatively dearth literature on the economic integration/regional integration on tourism development by bringing new evidence from the RCEP Agreement. Although the Agreement came into force in January 2022, it is believed that the effects of this potential agreement since the start of its negotiation 2010 [1] on tourism may already be evident. The RCEP Agreement is expected to provide a boost to the trade, business, political and cultural ties among the RCEP member states. This regional agreement includes South East Asian and Pacific nations (ASEAN) countries alongside key trading partners such as Japan, South Korea, China, New Zealand and Australia. The RCEP Agreement is a comprehensive and mutually beneficial economic partnership that builds on existing bilateral agreements between ASEAN and its Free Trade Agreement partners. It involves tariff elimination, additional preferential market access, streamlined rules of origin and others regional provisions which are meant to be beneficial to businesses within the member states. Above all, the agreement is expected to boost intra-RCEP trade in goods and services and enhance ties among the members. The sheer and unprecedented size of such a trade block has a considerable potential. This agreement is probably the largest FTA to date on the globe as it covers nearly 30% of both the world gross domestic product (GDP) and population.

The paper employs a dynamic panel data analysis, namely a panel autoregressive dynamic lag model (PARDL) approach that includes data from fifteen RCEP member countries over the years 1995–2019. The framework accounts for the dynamic nature of tourism modelling (see Fauzel *et al.*, 2017; Seetanah *et al.*, 2019) and provides for interesting insights on short- and long-run possible impacts of the agreement since its negotiation phase till the pre-COVID-19 years. The regression used in the present study incorporates other variables, which affect tourism development in line with the literature.

The main independent variable is the RCEP negotiations. A dummy variable is used and it takes a value of 1 as from 2012 whereby the negotiations started and 0 otherwise. Among the

independent variables, GDP per capita (GDPPC) of the destination countries is included in line with existing tourism demand studies. Furthermore, trade openness, which is the ratio of the exports plus imports to GDP, is incorporated. It is claimed that international trade boosts business travel and contributes to greater interactions and networking at the individual, business and national levels. Moreover, demand for overseas travel in a particular destination is expected to be negatively related to relative prices as relatively higher cost of living will make most tourists less enthusiastic about a destination. To take into account this crucial aspect, the Consumer Price Index of the destination country adjusted by the $ exchange rate is used as a proxy for relative tourism prices (see Eilat and Einav, 2004; Naudé and Saayman, 2005; Seetanah *et al.*, 2015). Demography is also likely to exert an important influence on tourism development; hence, population size of the host country is included in the regression model (Saayman *et al.*, 2016).

The paper is organised as follows: section 2 dwells in reviewing the related literature, while section 3 discusses the methodology. Section 4 analyses the findings, while section 5 concludes and proposes policy options.

2. Literature review

International trade is governed by a complex system of international organisations, agreements and policies that have important effects on trade, investment and tourism flows. While most of the literature on the effects of RTAs has concentrated mainly on trade flows, terms of trade and tariffs (Freund and Ornelas, 2010), the effects of trade agreements on regional and international tourism flows are important from different theoretical perspectives. International trade theories in particular represent an important theoretical foundation in explaining tourism flows (Socher, 1986; Vellas *et al.*, 1995). As countries engage more in international trade whether through regionalism or multilateralism, they are likely to experience increased tourism flows. This can be due to various factors, including increased economic activity, greater cultural exchange and improved transport infrastructure. This is termed as the opportunity or the Marco Polo hypothesis (Kulendran and Wilson, 2000). As income and wealth levels increase, people's preferences shift towards leisure and recreational activities, such as tourism. This means that as countries become more economically developed, there is an increased interest in other countries and their cultures. This increased interest termed as the interest hypothesis (Wang and Godbey, 1994) has been used to explain the linkage between international trade and tourism as trade has a network effect that decreases transaction, which leads to growth in international travel (Turner and Witt, 2001).

A conducive environment to trade contributes to increased tourist flows and regional agreements that encourage trade across a group of countries help in fostering tourism. The rapid rise in regionalism has indeed led to improved intra-regional trade, investment and tourism. Regionalism has encouraged people to travel more to their neighbouring countries and boost tourist flows across many members of RTAs. It is argued that an increase in awareness of destinations caused by greater political links, extensive business connections as well as increased media coverage may induce tourism flows to a destination within the region (Tasni and Gartner, 2007). Cultural, historical and geographical proximity can also reduce transaction costs and promote tourism (Leitao, 2010). RTAs can influence tourism flows for different reasons. The main ones being that RTAs bring with them a preference for home-country products within the region and in addition reduce transaction costs between home and the host country.

Trade theory postulates that trade agreements have a positive impact on tourism by reducing trade barriers like tariffs and quotas and thus promote free flow of goods and services. In essence, trade in tourism-related goods and services between countries may

increase. Low trade barriers will also lead to increased investment in the tourism industry as businesses are more likely to invest in tourism-related infrastructure and services. As per Helpman and Krugman (1987) work on increasing returns, imperfect competition and the international economy, trade agreements can impact international tourism flows across countries with similar trade patterns.

However, the impact differs across regions and sectors with tourism flows benefiting mostly countries with greater political and economic ties with China. The economic geography theories therefore suggest that trade agreements and economic partnerships affect the spatial distribution of tourism flows (Martin, 1999). The theory argues that trade agreements can lead to a concentration of tourism flows between countries with stronger economies, leaving small countries at a disadvantage. This results from the fact that trade agreements lead to a more efficient allocation of resources and production, hence causing a concentration of economic activities in certain regions. Larger or more developed economies have a comparative advantage in the tourism industry relative to smaller and developing countries and hence attract more tourists. For instance, Martin (1999) examines the impact of the EU's Single Market programme on the spatial distribution of tourism flows and observes that a rise in economic activity resulting from the Single Market programme causes an increase in intra-regional tourism flows, particularly within the core regions of the EU. This has been explained by the fact that these regions are in a better position to attract higher levels of investment in the tourism industry, which leads to better tourist infrastructure, higher quality services and greater marketing efforts. In contrast, small regions and peripheral areas are at a disadvantage as they are unable to compete with the core regions and fail to attract the same level of investment and develop their tourism sectors. Trade agreements can thus lead to a clustering of economic activity in specific regions hence influencing the spatial distribution of tourism flows (Ma *et al.*, 2018). The net impact of trade agreements on tourism flows depends on the regions whereby those with higher levels of economic development tend to benefit more from trade agreements. The effects of trade agreements on tourism flows further depend on the type of agreement. In addition, political economy theories suggest that power relations between countries influence the effects of trade agreements on international tourism flows. The theory suggests that powerful countries may use trade agreements to promote their own interests, leading to economic inequality and uneven tourism flows between countries (Laird and Venables, 2001).

Overall, the theoretical literature suggests that the impact of trade agreements and economic partnerships on international tourism flows is complex and multifaceted. While trade agreements can create opportunities for increased tourism flows and economic growth and represent one of the most effective tools in achieving sustainability in tourism (Timothy and Teye, 2004), they can also pose challenges related to economic inequality, cultural diversity and local identity in the tourism industry. Further, the impact of trade agreements on tourism flows varies depending on the type of agreement in place (Saayman *et al.*, 2016). Free trade agreements tend to have a stronger positive impact on tourism flows relative to other types of agreements like RTAs and bilateral investment treaties since free trade agreements cover a higher degree of investment and trade liberalisation leading to increase economic activity and greater opportunities for tourism.

Despite the fact that the theoretical perspective on regional cooperation is extensive, the conceptual framework modelling the impact of regional integration on the tourism industry is very scant. The literature on the impact of RTAs on tourist flows remains rather limited in quantity and depth (Chen *et al.*, 2022) and is mainly empirical in nature where the impacts of different kinds of regional trading agreements are studied across various regions. There is thus an imbalance between the application of theoretical and

empirical approaches in explaining the linkage between RTAs and tourist flows (Calero and Turner, 2020). Further, though there is a myriad of empirical studies attempting to measure the effects of regional cooperation on tourism, most analyses have not been guided by a formal theoretical framework (Calero and Turner, 2020). Hence, most models and analyses fail to provide any causal relationship between regional agreements and tourist flows. This gap in the theoretical literature arises mainly to the special nature of the tourism product where visitors travel from one country or region to another to consume non-traded goods and services and converting these into tradable goods and services (Hazari and Sgro, 2004). An additional limitation to the existing literature on regional integration and tourist flows is that most empirical studies focus essentially on developed countries (Saymaan *et al.*, 2016) with only a few recent ones on developing and emerging countries.

Most empirical studies draw the same common conclusion that regional agreements promote the development of tourist flows across countries. For instance, Viljoen *et al.* (2019) investigate into whether trade theory can explain intra-African tourism using a panel of 25 African countries over a 10-year period. Their findings indicate that cultural and geographic proximity and the development level of the destination country tend to promote intra-African tourism. In addition, those African countries, which are already important tourist destinations, benefit more from intra-African tourism.

The recent empirical work from Khalid *et al.* (2022) underscores the importance of strong economic integration in promoting international trade flows. Their study investigates the effects of RTAs on bilateral tourism flows across a group of 163 destination countries and 171 source nations from 1995 to 2015. There is evidence that all forms of regional trading agreements namely custom unions, common markets and the preferential and free trade agreements have positive and significant effects on tourism flows across countries. Their results suggest that strong economic integration among countries help in fostering tourism. In essence, appropriate policies need to be implemented to promote economic integration to facilitate greater tourism flows. Likewise, Okafor *et al.* (2021) assess the effects of RTAs on international tourist flows in the MENA and the SSA regions. Their findings based on 171 source countries and 55 destinations from 1995 to 2015 reveal that RTAs have significant positive impacts on international trade flows. Members of the RTAs benefit from greater tourist flows relative to non-members in both SSA and MENA regions. Their findings underscore the role of policy harmonisation in promoting inter-regional tourism. In effect, regional trading agreements tend to strengthen policy harmonisation among member states hence promoting regional integration, which thereby enable higher inter-regional tourism. Integrating tourism development into RTAs can amplify their positive effect on tourist flows, such as through harmonising tourism-related policies, which in turn, will create positive spill-overs across tourist destinations in regional trading groups. Chen *et al.* (2022) build on the previous studies by quantifying the impact of regional cooperation agreements on tourism via five different channels namely policy coordination, connectivity facilities, unimpeded trade, financial integration and people to people bonds. Adopting different proxies, they use the Belt and Road Initiative as a quasi-natural experiment and construct the propensity score matching and difference in difference regression approach to assess the impact of regional cooperation agreements on international tourism. Their results show that the Belt and Road Initiative significantly promotes the development of international tourism in member countries, with important economic and geographical heterogeneity. The effect on inbound tourism operates mainly through connectivity facilities, unimpeded trade and people-to-people bonds.

Focussing on the RCEP, Zreik (2022) assesses the consequences of the agreement on member countries. There is evidence that the agreement will be a significant driver of regional trade despite the relatively restricted scope of tariff benefits and rules of origin. Enterprises are more likely to source products and services from RCEP members and as such replace some competing commodities and exports from the United States. For commodities inside the RCEP area, for instance from China, the RCEP is expected to reduce tax and trade facilitation costs, which will further enhance trade. This evidence focusses mainly on the trade aspect and does not link the agreement to tourism flows.

Pham *et al.* (2023) investigate the impact of RTAs on international tourism demand in Vietnam through the use of a gravity model with data from 29 main source countries from 2007 to 2019. They note that free trade agreement enhances the international tourism demand in Vietnam.

The empirical studies are so far also very scant and limited to specific regions and RTAs. This paper thus fills an important gap in the literature by advancing evidence about the effects of the RCEP on international tourism flows across member countries.

3. Methodology

3.1 Model specification

The study aims at investigating the relationship between RCEP negotiations and tourism development for the fifteen member states [2] over the period 1995 to 2019. The following model is grounded from an international demand for tourism framework (see Seetanah, 2019; Fauzel and Seetanah, 2023) and from past related empirical literature (see Saayman *et al.*, 2016; Santana-Gallego *et al.*, 2010a, b, 2016; Gil-Pareja *et al.*, 2007):

$$\mathbf{TOU} = \mathbf{f}(\mathbf{RCEP}, \mathbf{GDPPC}, \mathbf{TR}, \mathbf{PR}, \mathbf{POP}) \quad (1)$$

where TOU represents the dependent variable, tourism development. In this study, tourist arrivals (Wang and Godbey, 1994; Kim *et al.*, 2006; Seetanah, 2011; Biagi *et al.*, 2016; Fauzel *et al.*, 2021; Fauzel, 2021) is used as a proxy for tourism development. The study focusses on this particular proxy of tourism development as it enables quantifying the impact of RCEP negotiations on tourist arrivals in the host countries.

3.2 Data description

The main independent variable is the RCEP negotiations. A dummy variable is used taking a value of 1 as from 2012 with the start of the negotiations and 0 otherwise. Among the other independent variables is GDPPC of the destination countries, widely included in tourism demand studies (see Naudé and Saayman, 2005; Seetanah and Sannassee, 2015 among others). It reflects the level of development of the host country. Cohen (1984) posits that tourists prefer to maintain essentially the same comforts and standards as at home while travelling as they are used to modern infrastructure high-quality services including transport, communication and tourism infrastructure. Further, TR measures trade openness, which is the ratio of the exports plus imports to GDP (Bhat *et al.*, 2023). It is claimed that international trade boosts business travel and contributes to greater interactions and networking at the individual, business and national levels. More so, international trade stimulates a network effect, which reduces international transaction costs and also promotes travel and exchanges among countries (White, 2007; Turner and Witt, 2001). Kulendran and Wilson (2000) further argue that international trade encourages the marketing of products, which in turn attracts consumers' attention and creates awareness of the product and the country of origin. Thus, it stimulates the desire to travel to that particular country.

Moreover, demand for overseas travel in a particular destination is expected to be negatively related to relative tourism prices as relatively higher cost of living (measured as PR) will make most tourists less enthusiastic about a destination. To take into account this crucial aspect, the Consumer Price Index of a destination country adjusted by the $ exchange rate is used as a proxy for relative tourism prices (see Eilat and Einav, 2004; Naudé and Saayman, 2005; Seetanah *et al.*, 2015). The inverse of it shows how many baskets of goods a tourist has to give up in his home country in order to buy a basket of goods in the destination country (Eilat and Einav, 2004). Further, demography is argued to exert an important influence on tourism development. It can affect the types of journeys undertaken by tourists, their countries of origin, their destinations and the types of accommodation chosen (Bak and Szczecinska, 2020). Hence, to investigate the link between demography and tourism development, population size of the host country is included in the regression model (Saayman *et al.*, 2016).

The panel data (multidimensional data of observations that is measured repeatedly over time) was gathered from the World Bank (2021) for the fifteen countries involved in the RECEP over the period 1995 to 2019.

3.3 Econometric procedure

The natural logarithm of the variables has been used (apart from the dummy variable) in order to reduce the problem of heteroscedasticity. This technique also makes interpretation of the results easier and more meaningful. This results in the following equation:

$$lnTOUit = \beta 0 + \beta 1RCEPit + \beta 2lnGDPPCit + \beta 3\,lnTRit + \beta 4\,lnPRit + \beta 5\,lnPOPit + \varepsilon it \tag{2}$$

where i represent country, t represents time; ε is the random error term. The parameter estimates are $\beta_1 \ldots \beta_5$ and the random disturbance term is ε_{it}.

3.4 Rationale for PARDL

For estimation purposes, the PARDL approach to cointegration is applied. The estimation is based on three alternate estimators mainly the mean group estimator (MG), pooled mean group (PMG) and dynamic fixed effects (DFE). There are several benefits of the PARDL framework. For instance, both the long-run and short-run results are obtained simultaneously and this approach is used in the case of mixed order of integration. However, the variables must not be integrated of order two and above (Shin *et al.*, 2014).

Pesaran *et al.* (2001), postulate that the PARDL can be written by using ARDL (p,q) approach. The lags of the dependent variables are represented by p, while q represents the lags of the independent variable. Equation (1) is re-written as follows:

$$TOUit = \mu_i + \sum_{j=1}^{p} \beta_0 TOU_{i,t-j} + \sum_{j=0}^{q} \beta_1 RCEP_{i,t-j} + \sum_{j=0}^{q} \beta_2 X_{i,t-j} + \varepsilon_{it} \tag{3}$$

By reparametrising eq. (3) becomes:

$$\Delta TOUit = \mu_i + \varnothing_i \left(TOU_{i,t-j} - \theta_1 RCEP_{i,t-j} - \theta_2 X_{i,t-j}\right) + \sum_{j=1}^{p-1} \lambda_{ij} \Delta TOU_{i,t-j} + \sum_{j=0}^{q-1} \lambda'_{ij} \Delta RCEP_{i,t-j} + \sum_{j=0}^{q-1} \lambda''_{ij} \Delta X_{i,t-j} + \varepsilon_{it} \tag{4}$$

where i and t represent country and time respectively, TOU denotes tourism development, RCEP is the RCEP negotiation variable, X is a set of control variables: GDPPC, TR, PR, POP. Notation λ, λ′, λ″ are the short-run coefficients of the lagged dependent variable, RCEP and other control variables respectively. The long-run coefficients are θ1 and θ2 for RCEP and other control variables. Lastly, Φi shows the speed of adjustment.

It should be noted that the PARDL is a dynamic econometric estimation technique which allows for estimation in both the short run and long run. Static models such as the fixed and random effect estimation are not used as the independent variables have more of a lagged (dynamic) effect on the dependent variables instead of a contemporaneous (static) effect.

There are several advantages of using PARDL. It allows for the possibility of estimating different variables with different order of stationarity as observed in the present study. Moreover, this technique estimates both short-run and long-run relationships along with the error correction coefficients.

4. Analysis and discussion

Several diagnostic tests were done in the form of Breusch–Pagan–Godfrey heteroskedasticity test, Jarque–Bera normality test and the Ramsey reset test. The findings are displayed in Table 1. Moreover Appendix 2 shows other diagnosis tests such as the actual-fitted residual graphs and the criteria graphs.

The autoregressive conditional hetoroscedasticity (ARCH) test for testing heteroscedasticity in the error process in the model has an *F*-statistic of 2.08, which is statistically insignificant. This shows that there is the absence of heteroscedasticity in the model. Furthermore, the Jarque–Bera normality test on the residuals also shows that the error process is normally distributed. Finally, the Ramsey reset test shows the regression is well specified.

From the series of diagnostic tests presented in Table 2, this study concludes that the model is well estimated and that the observed data fits the model specification adequately; thus, the residuals are expected to be distributed as white noise and the coefficient valid for policy discussions.

Table A1 shows the descriptive statistics (Appendix 1). The results of the correlation matrix (Bhatt *et al.*, 2023) are presented in Table 2, and it shows that there are no correlation issues with the data.

Breusch-Pagan-Godfrey heteroskedasticity test	*F*-statistics = 2.08	Prob *F*-stats = 0.1495
Jarque–Bera normality test	0.657515	Probability = 0.781818
Ramsey reset test	F(3,203) = 15.63	Prob > F = 0.000

Table 1. Diagnostic tests

	LTOU	RCEP	LGDPPC	LTR	LPR	LPOP
LTOU	1	0.34	−0.00	0.29	−0.22	0.64
RCEP	0.34	1	0.00	0.11	−0.24	0.11
LGDPPC	−0.00	0.00	1	0.25	−0.34	−0.40
LTR	0.29	0.11	0.25	1	−0.33	−0.19
LPR	−0.22	−0.25	−0.34	−0.33	1	0.20
LPOP	0.64	0.11	−0.40	−0.19	0.20	1

Source(s): Authors' compilation

Table 2. Results of correlation matrix

Table 3 presents the results of Levin, Lin and Chu (LLC), Im, Pesaran and Shin (IPS) and Fisher-ADF panel unit root tests. It is observed that there is a mixed level of integration among the series. We thus apply the PARDL approach rather than panel cointegration test (Asteriou and Monastiriotis, 2004).

To measure the most efficient and consistent estimator among the PMG and MG, the Hausman test has been applied. The results (presented in Table 5) shows that the PMG estimator should be adopted.

Table 5 shows the long-run results, while Table 4 reports the short-run effects (SR) and the speed of adjustment (ECT). By disaggregating the results in terms of short run and long run, we are able to see hidden trends and this enable the identification of vulnerable variables in terms of time.

	Level			First difference			Decision
Coefficients	Im, pesaran and shin	ADF	PP-Fisher	Im, pesaran and shin	ADF	PP-Fisher	rule
LTOU	0.635	0.9999	0.896	0.000	0.000	0.000	I(1)
LGDPPC	0.261	0.995	0.863	0.000	0.000	0.000	I(1)
LTR	0.007	0.033	0.034				I(0)
LPR	0.000	0.000	0.000				I(0)
LPOP	0.991	0.9999	0.942	0.000	0.000	0.000	I(1)

Source(s): Authors' compilation

Table 3. Unit root tests

Variable	Coefficient	Standard error	t-value
RCEP	0.444***	0.083	5.345
LGDPPC	1.308***	0.183	7.156
LTR	0.324***	0.057	5.701
LPR	0.002	0.003	0.594
LPOP	0.155	0.567	0.272

Source(s): Authors' compilation

Table 4. PMG long-run estimates from PARDL model

Variable	Coefficient	Standard error	t-value
ECT	−0.214**	0.087	−2.458
D(RCEP)	−0.002	0.049	−0.047
D(LGDPPC)	2.454***	0.773	3.177
D(LTR)	0.584	0.190	1.495
D(LPR)	0.003	0.003	0.995
D(LPOP)	8.068	10.441	0.773
Constant	−1.582	0.661	−2.395
Hausman Test			
$\chi^2 = 0.59$			
Prob> $\chi^2 = 0.9886$			

Note(s): D is first difference operator; PMG means pooled mean group; ECT is error correction term. Dependent variable: Tourist Arrivals (LTOU), ** and *** shows significance at 5 and 1% respectively

Source(s): Authors' compilation

Table 5. PMG short-run estimates

The results of the Hausman test (see Table 5) indicate that the PMG has consistent and efficient estimations compared to MG. Hence, analysing the results on RCEP negotiations and tourism development, it is observed that the coefficient is positive and significant. It implies that RCEP negotiations have resulted in an increase in tourist arrivals for the countries under study. In fact, these negotiations have broadened and deepened ASEAN's engagement with Australia, China, Japan, Korea and New Zealand. Together, these RCEP participating countries account for about 30% of the global GDP and 30% of the world population (Flach *et al.*, 2021). The positive and significant result obtained can be explained by the existing trade agreements like the ASEAN and the RCEP negotiations, which aim at establishing a modern, comprehensive, high-quality, and mutually beneficial economic partnership. Moreover, trade between the RCEP countries has already increased sharply since 1990. There are already strong linkages within the entire RCEP area and the tariffs and non-tariff barriers between most RCEP countries have at present been largely eliminated (Flach *et al.*, 2021). Hence, the high trade levels between these countries and the elimination of tariffs have contributed towards an increase in tourist arrivals. As deliberated by Santana-Gallego *et al.* (2011), countries with high trade intensities are more open to the global market, and this facilitates the channel for travel and tourism.

Moreover, the results support the hypothesis whereby trade openness has contributed to an increase in tourist arrivals. Similar results were obtained by Khan *et al.* (2005) and Kulendran and Wilson (2000) whereby trade boosts tourism through existing trade relationships, which stimulate business trips to destination countries. In addition, there is a rise in tourism when similar goods and services consumed by tourists are available in the host country. In addition, owing to increase in regional integration between the ASEAN+3 countries, international trade has increased.

Probing further into the results relating to the link between tourism development and economic growth, it is observed that the coefficient is positive and highly significant. A 1% increase in GDP per capita has led to 1.03% increase in tourism development. This result supports the fact that tourists are sensitive to the development level of a country, and this is in line with the work of Seetanah *et al.* (2019), Seetanah *et al.* (2015) and Naudee and Saayman (2005). It also supports the economic-driven tourism growth hypothesis (Fauzel *et al.*, 2021; Gounder, 2022; Seetanah *et al.*, 2019). Applying this finding to the ASEAN+3 member countries, it is observed that these countries mainly the ASEAN ones have important tourism potential and are rich of cultural heritage and natural environment (Indriani, 2022). Tourism development in these countries has had important direct and indirect multiplier effects (Mazumder *et al.*, 2013). The ASEAN-Japan 2018 report highlights the important contribution of tourism in the economy whereby a comprehensive linkage has been developed with many other industries. It is documented that international visitor arrivals in ASEAN countries reached 143.5 million in 2019. The tourism sector has important linkages with other sectors and contributes towards increasing employment, investment and economic growth in the ASEAN member countries (Indriani, 2022). Hence, tourism development has greatly contributed to the economic growth of ASEAN nations, and this is in line with the current findings.

Further analysis of the results shows that relative prices have not influenced tourism development for the sample of countries considered in this study. This result contrasts with Içöz (1991), who argues that high inflation is an important variable, which affects tourism demand and the tourism sector in developing countries. Tourism development is highly affected by changes in prices. Our result can be explained by the fact that relative prices were not very high in the sample of countries considered, and tourists attractions in the ASEAN+3 member countries have greater weight in attracting tourists compared to local prevailing prices. Moreover, the results show that population size do not influence tourism development. This result is in contrast to Saayman *et al.* (2016). In fact, population size is used to measure

the size of the country and previous studies demonstrated that the larger the economies, the stronger the international tourism flows. However, the population variable is positive but is not statistically significant thus showing that demography is not always a significant factor influencing tourism flows in the host countries under study.

Additionally, the PARDL is transformed into an error correction model to measure the short run dynamics. It depicts how fast the variables adjust towards long-run equilibrium and the negative sign shows convergence in the short-run. The results of the short-run dynamics are presented in the above table. The error correction term is negative and statistically significant. This depicts the presence of a long-run relationship among the variables. The only significant result for the short-run is related to the economic growth variable. The results of the short-run dynamics for the other variables are statistically insignificant. It can be concluded that these variables have an impact on economic tourism development mostly in the long run.

4.1 Panel granger causality test

To investigate the direction of causality, the Dumitrescu and Hurlin test (Dumitrescu and Hurlin, 2012) is used. Instead of pooled causality, the Dumitrescu and Hurlin causality proposed a causality based on the individual Wald statistic of Granger non-causality averaged across the cross-section units. It asserts that the traditional test allows for homogeneous analysis across all panel sets, thus neglecting the specific causality across different units. This approach allows heterogeneity in coefficients across cross-section panels. The two statistics Wbar-statistics and Zbar-statistics provide standardised versions of the statistics. Wbar-statistic takes an average of the test statistics, while the Zbar-statistic shows a standard (asymptotic) normal distribution. This pool causality test proposed an average Wald statistic that tests the null hypothesis of no causality in a panel subgroup against an alternative hypothesis of causality in at least one panel (Rasool *et al.*, 2021).

The findings presented in Table 6 show bidirectional causal relationship between tourism development and RCEP negotiations. Hence, while the RCEP negotiations have led to an increase in tourist arrivals, the reverse also holds true. It should be noted that the ASEAN countries mainly have large international tourism sectors. ASEAN's rich culture is reflected in its wealth of ancient temples and churches, colonial houses and heritage sites, colourful festivals and world-famous cuisines, which fascinate regional and international tourists [3]. Forming part of a regional bloc increases regional tourist flows and these types of tourist flows contribute to development, preserve the environment and respect cultures [4].

Analysing the causal link between trade openness and tourism development, a unidirectional causality is obtained. The results show that international trade contributes towards tourism development. Kadir *et al.* (2010), obtained similar results. For instance, Santana-Gallego *et al.* (2016) argue that an environment conducive to trade boosts tourism development in terms of better transport infrastructure. The ASEAN+3 countries have experienced important development over time in terms of transport, port, information and communication technology as well as soft infrastructures (Brooks, 2008).

Table 6.
Dumitrescu–Hurlin panel causality tests—the graphical representation of the results is presented in appendix 3

Null hypothesis	*W*-stat	Z-bar	*p*-value
RCEP does not homogeneously cause LTOU	4.09	2.28	0.02
LTOU does not homogeneously cause RCEP	4.53	2.82	0.00
LTR does not homogeneously cause LTOU	13.28	4.22	0.00
LTOU does not homogeneously cause LTR	8.23	1.11	0.27
LGDPPC does not homogeneously cause LTR	4.24	2.97	0.00
LTR does not homogeneously cause LGDPPC	4.13	2.81	0.00

Relating to the causal link between economic growth and trade openness, the findings demonstrate the presence of bi-directional causality between the two constructs. This link has been widely researched and scholars like Romer (1993), Grossman and Helpman (1991) and Barro and Sala-i-Martin (1995) among others, elaborated on the trade-led growth hypothesis whereby countries which are more open are able to better adopt technologies which contribute to higher growth. Other researchers like Bahmani-Oskooee *et al.* (1991), Bhagwati (1988), Helpman and Krugman (1987) and Kónya (2006) find a bidirectional causal link between trade and growth whereby higher economic growth also stimulates international trade mainly through increased specialisation, scale economies, cost reduction, technical progress and comparative advantage. For instance, the ASEAN +3 countries have been registering economic growth which is supported by resilient domestic demand and export growth, with stable inflation. Notably, growth in China and Japan, which are the region's two largest economies, is robust. In terms of international trade, the ASEAN+3 countries have growing regional trade integration and trade interconnectedness. In fact, trade links among these countries have become stronger and increasingly close over the years. Importantly, trade in the region turned asymmetric and highly regionalised (Vidya *et al.*, 2021).

5. Conclusion and policy recommendations

5.1 Contributions of the study

Most studies on RTAs have focussed on the trade and investment effects, while there is very scant evidence on the impact on tourism development. The existing work on the linkage between RTAs and tourism flows concentrate more on developed countries. This paper therefore fills an important gap in the literature by advancing new evidence on the effects of the RCEP on international tourism flows across 15 member countries. Using annual panel data from 1995 to 2019 in a panel ARDL framework, the results confirm that tourism development has been influenced by the negotiations. The results further support a positive and significant link between tourism development and international trade. The study confirms the tourism creation hypothesis of the trading bloc, whereby the creation of the economic partnership in this case RCEP has led to a rise in tourism activity within the member countries. Moreover, the Dumitrescu–Hurlin panel causality tests confirmed bidirectional causality between the RCEP negotiations and tourism and also international trade and economic growth. Finally, a unidirectional causal link is noted between tourism development and international trade.

The findings further reveal that tourism can be used as a catalyst to promote growth and improve economic performance of member states. Tourism may help in supporting the socio-economic well-being and in improving the standards of living within communities in member states. The RCEP has huge potential despite the fact that the gains from trade may not be distributed equally across member states, some will be benefitting more compared to others, which is common across regional trading blocs. With 90% of the tariffs on imports being eliminated between the member states in the next 20 years (UNCTAD, 2021), this will allow for greater trade, investment and tourism flows that are likely to boost economic growth within the region.

5.2 Policy implications

5.2.1 Theoretical implication. The implications of the paper are particularly important. The paper has strong theoretical implications as it adds to the theory on the determinants of tourism demand. The existing theoretical literature tends to focus mainly on the economic determinants of tourism demand. These include tourists' income, GDP and relative prices among others. The present study shows that another determinant of tourism demand is RTAs. For instance, there is evidence of a bidirectional causality between tourism development and RCEP negotiations.

5.2.2 Economic and practical implications. There are however still improvements to be made in areas of non-tariff measures and behind the border measures. Regional cooperation is in fact a long-term process and the full impact of the negotiations and provisions on tourism will take time to materialise. Even in the long run it may be difficult to identify a clear relationship between the RCEP and the extent of the impact on tourism as in many instances economic cooperation may have an initial large impact which fades overtime, hence the need for appropriate policies and actions to maintain the permanent positive effects on international and regional tourism.

In addition, owing to differences in national policies and cultural backgrounds of countries, the effects of regional cooperation may differ. Hence, appropriate policy harmonisation will be effective in boosting regional integration and thereby enabling inter-regional tourism. Further, it is also important to ensure that smaller and more economically vulnerable countries within the RCEP bloc do not lag behind and can reap the benefits of trade and investment in the region.

With the COVID-19 pandemic, the tourism industry across all countries has been negatively impacted. There is thus a need for greater regional policies and strategies to deal with the socioeconomic effects of the pandemic and its health containment measures. The RCEP is a good avenue for combined commitment from different governments to come up with regional policies to support existing sectors across the different waves of the pandemic and find solutions to expand new sectors of economic activity. Regional cooperation needs to be further promoted in different areas like e-commerce and good governance among others to foster trade as well as investment.

5.2.3 Directions of future research. The RCEP was signed in November 2020 and is very recent. Since the RCEP represents the world's largest free trade agreement and is expected to have a significant impact on international trade, investment and tourism in the Asia–Pacific region. Future work can measure the long-term effects of the RCEP on different macroeconomic variables namely growth, trade, investment and tourist flows. In addition, research can concentrate on the economic and social impacts of the RCEP across member countries. The impact may differ across countries where the agreement may benefit mainly stronger economies, leaving small countries at a disadvantage. Hence, the differential country effects of the RCEP beg for further analysis.

Notes

1. Already in 1990, the idea of a trade agreement between the ASEAN members, China, Japan and South Korea, i.e. an ASEAN +3 agreement
2. Australia, Brunei, Cambodia, China, Indonesia, Japan, South Korea, Laos, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam
3. https://investasean.asean.org/tourism
4. https://www.ipemed.coop/en/our-projects-r16/tourism-c143/tourism-and-regional-integration-sc240/

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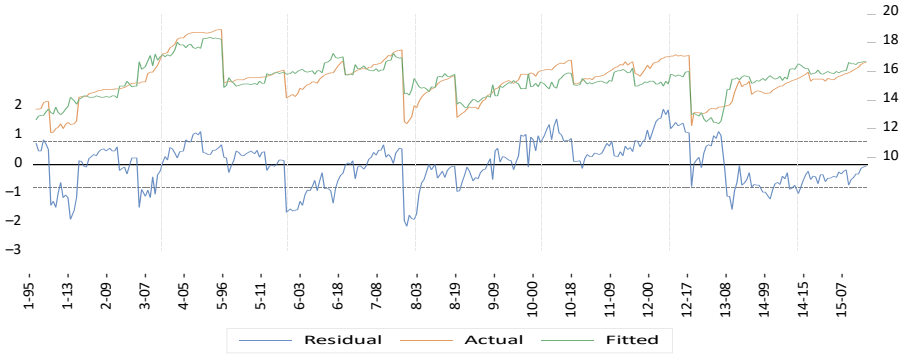
Appendix 1

	TOU	RCEP	GDPPC	TR	PR	POP
Mean	13,975,788	0.3199	19,290	98.74290	4.9961	139,401,110
Median	5,050,000	0	4,628	73.87452	2.7227	47,225,119
Maximum	162,538,000	1	98,411	437.3267	125.272	1,407,745,000
Minimum	119,000	0	−14.350	0.01	−2.3149	297,112
Std. dev.	28,559,879	0.4670	25,053	83.8366	10.4043	320,734,840
Skewness	3.5765	0.7717	1.1838	2.03344	6.9115	3.2897
Kurtosis	15.3489	1.5955	3.2802	7.2457	65.845	12.3026

Source(s): Authors' compilation

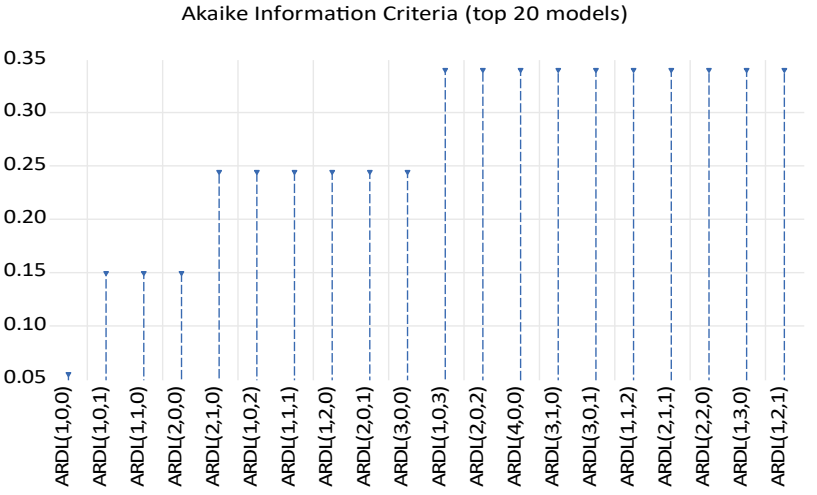
Table A1. Descriptive statistics

Appendix 2



Source(s): Authors' Compilation

Figure A1. Actual-fitted residual graphs



Source(s): Authors' Compilation

Figure A2. Actual-fitted residual graphs, criteria graphs is included in appendix

Appendix 3

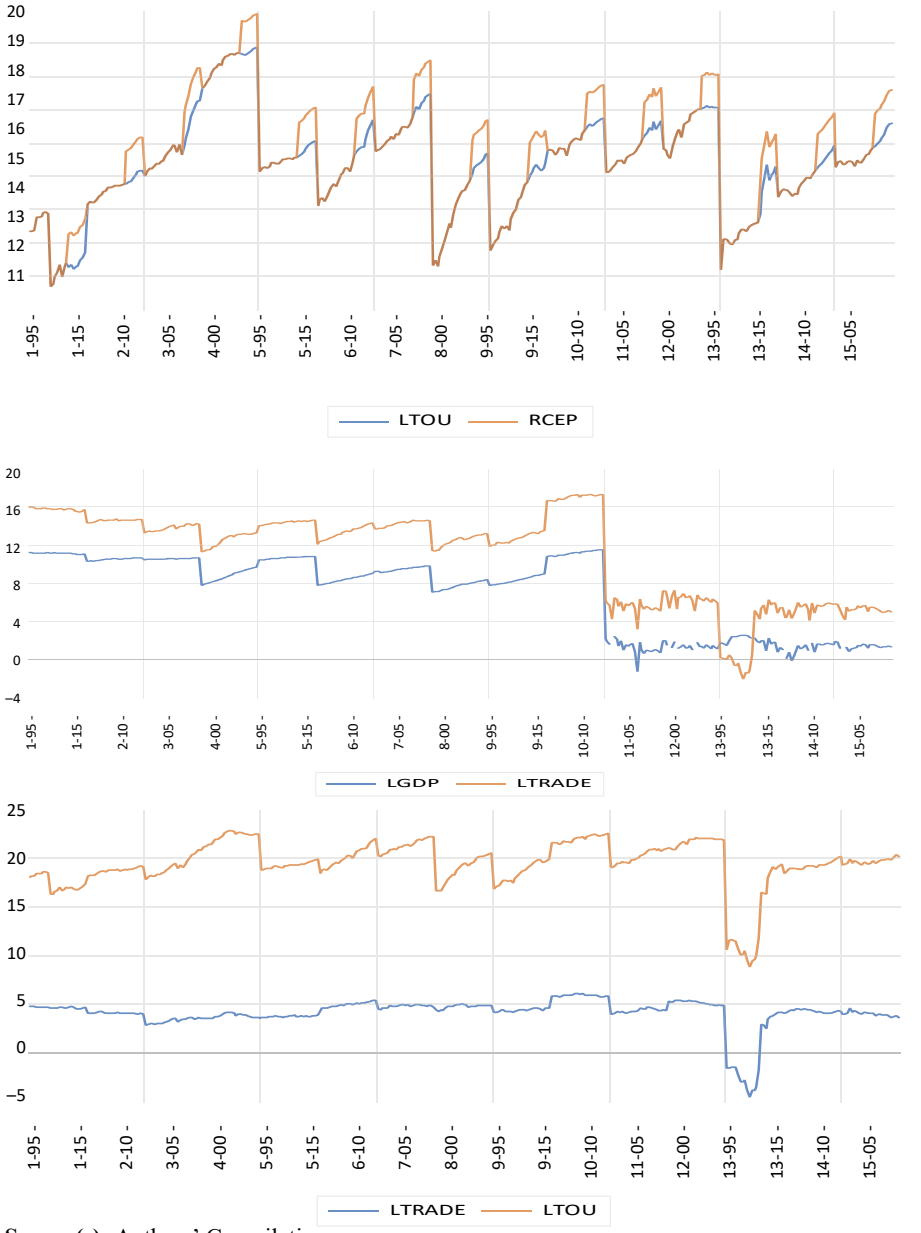


Figure A3. Graphical representation of granger causality test

Source(s): Authors' Compilation