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THE NEXUS BETWEEN TOURISM SECTOR PERFORMANCE AND INSTITUTIONAL QUALITY: EVIDENCE FROM TEN MOST-VISITED DEVELOPING COUNTRIES

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ABSTRACT

The nexus between tourism sector performance and the quality of institution have been widely studied by several researchers. However, based on the knowledge of the authors of this study, no research has investigated the impact of institutional quality and trade openness as an economic institution on tourism development for most-visited developing countries. In this context, the target of this study was to empirically examine the link between the quality of the institutional structure and tourism sector development for 10 developing countries for the period 2001 to 2018. To achieve this objective, the panel data approach was preferred and adopted as it provides the advantage of including more observations. The results obtained indicate that an increment of 1% in trade volume and institutional quality increased tourism arrivals by 1.29% and 0.38%, respectively.

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INTRODUCTION

Tourism is not only an activity where people learn about new cultures (Atsız et al., 2022a), establish friendships and gain experiences (Atsız et al., 2022b) but also an industry with economic contributions. With its 10.3% contribution to World's GDP and its power to provide 330 million jobs in 2019, the tourism industry is the world's third-largest export industry which has direct and indirect substantial impacts on countries' economic

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development (WTTC, 2019). It is accepted as an influential way to reach high rates of growth and development due to its functions such as providing employment, contributing to the gross domestic product, attracting foreign exchange, and encouraging entrepreneurial activities, particularly in developing countries whose industrial infrastructure is not as advanced as developed countries (Telfer & Sharpley, 2008). The development of the tourism industry has become an imperative duty to accomplish for policymakers who target macroeconomic improvement. The impacts of tourism on macroeconomic variables have been analyzed several times and various studies have provided empirical evidence indicating the positive causality of the tourism sector to economic growth (Arslanturk et al., 2011; Cannonier & Burke, 2019; Stauvermann et al., 2018).

The substantiality of the tourism industry for overall economic prosperity has been demonstrated once again during the COVID-19 outbreak which has caused a 56% decline in tourist arrivals globally in the first month and a 98% decline in the fifth month. The total loss in exports from these arrivals has been almost $320 billion which is three times higher than the total loss of the 2009 Global Financial Crisis (UN, 2020). Despite its devastating economic results, the pandemic has supplied an opportunity to reconsider the vital role of the tourism sector. The ongoing case typifies an adverse scenario; however, this could have also been a favorable circumstance that would cause an explosion in the tourism sector. In this regard, it can be said that a positive or negative shock that impresses the tourism sector directly or indirectly may cause huge outcomes in the overall economic conditions.

The prominent role of tourism for domestic and global economic welfare steers scholars and politicians to inquire about ways to enhance tourism activities and increase tourism revenues long since. The institutional quality which has started to catch scholars' attention as a determinant of tourism activity for a couple of decades, is a variable that shows the quality of a country's institutions. Institutions could be considered as the rules of the game for society. Initially introduced by Institutional School, whose main assertion is that "institutions matter", defined institutions as the humanly fabricated restraints that shape human interactions (North, 1990, p. 3). Schmoller (1900) who studied institutions as a determinant of economic and political processes years before North, has defined them as the arrangements related to a certain point of the life of society, oriented towards certain targets, having a distinctive emergence and progress, and serving as a framework for the movements of generations that have come on after another for hundred years (Chavance, 2009). Even

though the definition of the term has gained diversity with the evaluation of different institutional schools, in a general manner, they can be described as the collection of interrelated rules and customs that identify proper actions in terms of relations between circumstances and statuses (March & Olsen, 2006). In this context, property, serfdom, markets, democracy, law, trade, money, and industry are all examples of institutions that are the collection of rules, customs, and regulations having a common center or targets and establishing a system together (Chavance, 2009). The quality of this collection of rules and regulations that determine the environment in which economic activity is held has a prominent role in the establishment of organizations, entrepreneurship, and other economic agents. As stated by North (1994), if the institutional structure rewards the pirate activities, pirate organizations will raise, on the other hand, if the productive actions are rewarded, productive organizations will be born.

There are political, economic, social, and legal institutions that are all interrelated and have an effect on each other. Political institutions are stated to have the power to generate economic institutions which are the determinants of resource distribution and growth rate of the economies in the New Institutionalist literature (Acemoğlu et al., 2006). New Institutionalism tends to accept some New Classical assumptions such as automatic equilibrium in markets and determinative role of individual choices (Rutherford, 1994; Klein, 1998). From this point of view, it can be concluded that the distribution of political power, the structure of governing mechanism, democracy, the efficiency of administrations, and all kinds of political institutions are influential in the formation and improvement of economic institutions shaping economic outcomes such as trade, property, consumption, taxes, entrepreneurship, and all sectors like finance, tourism, and manufacturing. The political, economic, and other institutions will also have a determinative role in the activities, developments, and performance in the tourism sector.

Tourism is a social phenomenon that includes people traveling and remaining in a location that is different from their usual environment for a specific period of time (UNWTO, 2008); it is fragile to the changes occurring in the politics and economics of countries. The transportation opportunities, safety, crime, marketing campaigns, the international image, and the overall development of the country are conservatively accepted as linked with the performance of the tourism sector (Roxas & Chadee, 2013). Besides, the political conditions such as terrorism or the possibility of a coup, the circumstance of human rights have the potential to directly affect the decision to visit a country since they are strongly related to the safety and

peace of the society. For instance, adverse and hazardous conditions in a country's political and legal spheres can result in an actional boycott of or renouncement of erstwhile popular destinations (Lea, 1988). On the other hand, the economic institutions determined by political and legal institutions are influential on the tourism sector's performance through the policies that may stimulate or discourage the activities of the sector. From the perspective of new institutionalism, the openness in trade, protection of property rights, or absence of corruption all might have impact on the activities that can invigorate the arrivals by affecting the investments in tourism. Accordingly, Acemoglu and Robinson (2013) stated that well established institutional structure will encourage the economic agents to be more innovative and to invest more, and proved that property rights have a massive impact on long-term economic development (Acemoglu & Johnson, 2005). We might expect more investment and innovation to be made in the tourism sector like other industries in an environment where the rights of investors are guaranteed and the restrictions on their activities are reduced. The more investment in tourism activities, the more travelers will be interested in the country.

With the purpose of testing the relationship among tourism development, liberalization, and institutional quality in the 10 most-visited developing countries (China, Mexico, Croatia, Turkey, Malaysia, Russian Federation, Thailand, Vietnam, India, and Indonesia) between the years 2001 and 2018, this paper first makes a related literature review. After the examination of counterpart studies, the data is then presented in a framework that the institutional quality is tackled bidimensionally as political-legal institutions and economic institutions. The political and legal institutions that determine the legal structure in which all kinds of social, economic, and political behaviors are realized, are currently measured with the Global Governance Indicators that have been indexed by World Bank. On the other hand, as we have stated above, these political-legal institutions are the determinants of economic institutions such as liberalization of markets, property rights, restrictions on trade, etc. In this context, this study tackled liberalization or openness to trade as a kind of economic institution which is specified under the legal and political institutions and determines a country's trade volume, global integration level, mobilization of labor, or the extent of trade barriers. Before concluding, the methodological process and model to be applied will be explained step by step and the results will be interpreted respectively.

LITERATURE REVIEW

The statement that tourism sector performance is crucial for economic growth and development, has been empirically proved by diverse studies in the literature (Bassil et al., 2015; Habibi & Ahmadzadeh, 2015; Smeral, 2015; Cannonier & Burke, 2019). Similarly, a good deal of studies has provided evidence that confirmed the determinative role of institutional quality and liberalization on economic and financial performance (Acemoglu & Johnson, 2005; Butkiewicz & Yanikkaya, 2006; Haggard et al., 2008; Law & Azman-Saini, 2012; Marcelin & Mathur, 2015; Slesman et al., 2015). The literature on empirical investigations of the relationship between institutional quality and tourism sector performance is also extending gradually.

Several current researches have examined the relationship between diverse institutional quality variables and tourism development indicators. Some of these studies have analyzed the relationship by employing the institutional determinants separately. For instance, Eilat and Einav (2004) investigated the determinants of international tourism for all countries between the years 1985 and 1998 by employing a discrete choice estimation methodology and stated that political risk is very prominent for tourism development. Another study that analyzed the link between corruption and tourism in 199 countries was carried out by Das and Dirienzo in 2010 and showed evidence that corruption has a deteriorating impact on tourism competitiveness. On the other hand, Yap and Saha (2013), using the fixed effect panel data approach for 139 countries between the years 1999 and 2009, studied the effect of political instability, terrorism, and corruption on tourism development for UNESCO-listed heritage destinations. As a result of the analysis, they concluded that political instability impairs tourism revenue and arrivals while corruption has no effect on them. Besides, Poprawe (2015) demonstrated that a one percent decrease in the corruption index leads to a decline by two to seven percent in tourism revenue in her study that employed panel data analysis for 100 countries between the years 1995 and 2010. Tang (2018) investigated the link between institutional quality and inbound tourism in Malaysia by employing a dynamic panel GMM methodology. He declared that political stableness, corruption, government effectiveness, and the rule of law are all significantly effective on tourism revenues while voice and accountability are not. As a relatively current example, using the dynamic panel data analysis for 100 countries between the years 2002 and 2012, Detotto et al. (2021) proved that Worldwide Governance Indicators (WGI) have a positive impact on countries' tourism performances.

Another methodology that has been used to analyze the relationship between the quality of the institutional structure and tourism sector performance is constructing an index variable of different institutional quality indicators. In this context, Lee (2015) constructed the quality of governance variable by averaging corruption, law and order, and bureaucracy quality and scaling them between 0 and 1. Lee (2015) provided evidence that government quality is positively linked with tourism competitiveness based on the OLS estimation for 117 countries. As a contemporary example, Mushtaq et al. (2020) analyzed whether institutional quality affects tourism development in India from 1995 to 2016. They showed that trade openness and institutional quality (PCA of WGIs) have a stimulating effect on the tourism development in India. Ming and Liu (2021) showed that political uncertainty has an adverse impact on tourism revenues by taking the anti-corruption campaign in China as a research setting. Khan et al. (2021) supplied evidence that institutional quality has a promotive impact on tourism development by analyzing the relationship between governance and tourism development for a panel of 65 during the years between 2000 and 2015. Finally, by examining the data of tourism-dependent economies for the period 2002-2017, Adedoyin et al. (2021) suggested that weak institutions have a deteriorating impact on the tourism-growth nexus.

The second independent variable in this study is trade openness. It is employed as an economic institution that indicates the extent to which an economy is integrated with the rest of the world. Even though most of the research in the literature assert that trade liberalization has positive causality on economic well-being, it is also believed to have a negative effect in the case of very low institutional development (Stensnes, 2006). In this context, this study employed liberalization as an economic institution that can positively affect tourism development in an environment where other legal, political, social, and economic institutions are developed enough. From this point of view, the literature investigating the relationship between tourism sector performance and trade openness was reviewed. For example, Leitão (2010) employed static and dynamic panel demand models and provided evidence that trade volume is a significant positive determinant of tourism demand in Portugal between the years 1995 and 2006. On the other hand, Wong and Tang (2010), employing Toda and Yamamoto causality test, indicated that trade liberalization with Singapore's major trading partners may not result in higher amounts of tourist arrivals from these countries. However, they observed that it is an important determinant of the growth and development of the tourism

sector. Habibi and Ahmadzadeh (2015) certified a bidirectional relationship between total trade volume and tourism development by employing the ARDL cointegration methodology for quarterly data covering the years 1980-2013 in Malaysia. Chaisumpunsakul and Pholphirulb (2018) demonstrated that there is a positive link between trade openness and international tourism demand for Thailand. They concluded that when the trade share to GDP increased by 1%, long-term foreign tourism demand rose by 0.8% in Thailand. In another study, Puah et al. (2018) analyzed the determinants of tourism demand for Malaysia for the years between 2000-2015 using the ARDL cointegration test. They showed that as the level of trade liberalization between China and Malaysia rises, the amount of Chinese tourists visiting Malaysia gets higher. Similarly, Khan et al. (2021) indicated that as the trade openness enhanced, tourism development increased in 65 developing countries from the period 2000-2015. Finally, Nyasha and Odhiambo (2021) proved the positive impact of trade openness on tourism development in their study that examined the determinants of tourism development for South Africa, Brazil, and Vietnam for the years 1995-2018.

As shown by the literature review, the nexus between institutional quality and tourism sector performance is accepted and has been proven by several studies in the literature. Besides, the openness to trade or liberalization is empirically shown to have a favorable impact on tourism development. In this framework, the current study tests these relationships for the 10 most-visited developing countries between the years 2002 and 2018. The consistency of the results with the literature is also investigated.

DATA AND ECONOMETRIC METHODOLOGY

The study employed a panel ARDL model for 10 developing countries between the period 2002-2018 to analyze the relationship between institutional quality and tourism sector performance. The most visited developing countries have been selected considering the significant role of tourism sector revenues in their economic developments. These countries are respectively China, Mexico, Croatia, Turkey, Malaysia, Russian Federation, Thailand, Vietnam, India, and Indonesia according to the statistics of the World Bank in 2019. The panel data approach was preferred since it provides the advantage of including more observations, especially in the cases where the data are restricted like governance indicators.

In the literature, tourism sector development is mainly represented by two indicators: international tourism receipts (Ekanayake & Long, 2012;

Chaudhry et al., 2021) and international tourism arrivals (Deng and Hu, 2019; Eleftheriou & Sambracos, 2019; Ghalia et al., 2019; Seetanah, 2019; Ahmad & Ma, 2021). Following the latter, this study used international tourism arrivals which were obtained from the world development indicators database to measure tourism sector performance. On the other hand, using the principal component analysis, an index variable was created to measure institutional quality. The PCA representing institutional quality consisted of government effectiveness, the rule of law, the control of corruption, regulatory quality, and voice and accountability. Political stability was not included since it is an important and widely studied determinant of tourism development individually.

Finally, the data belonging to total trade volume representing trade openness was obtained from the World Development Indicators database in a form of a percentage of GDP.

Table 1. *List of variables*

Abbreviation	Variable	Indicator	Source
LTD	Tourism Development	International Tourism Receipts	WDI
LTR	Liberalization	Total Trade (% of GDP)	WDI
INS	Institutional Quality	Rule of law	WGI
		Regulatory Quality	WGI
		Government Effectiveness	WGI
		Control of Corruption	WGI
		Voice and Accountability	WGI

Table 2. *Descriptives*

Variable	Obs	Mean	Std. Dev.	Min	Max
Tourism Arrivals	170	38.900.000	39.200.000	2.384.000	159.000.000
Trade Volume(% of GDP)	170	84.309	47.319	29.509	210.374
Control of Corruption	170	-0.358	0.371	-1.144	0.411
Government Efficiency	170	0.161	0.416	-0.500	1.267
Regulatory Quality	170	-0.001	0.412	-0.596	0.838
Rule of Law	170	-0.215	0.408	-0.970	0.623
Voice and Accountability	170	-0.398	0.717	-1.749	0.658
Institutional Quality	170	0.000	1.000	-1.850	2.055

Table 2 presents the descriptive statistics and indicates the ten most visited developing countries received 38.900.000 international tourists annually over the years 2002-2018. The minimum and the maximum numbers of tourist arrivals in 2018 belong to Vietnam and China. On the other hand, the mean of trade volume (the proportion of the sum of imports and exports with respect to GDP) is 84% while its standard deviation is 47%. Finally, the averages of governance variables that take values between -2.5 and 2.5, are below zero except for government efficiency. The institutional

quality variable which was created by the PCA of governance indicators has almost zero mean and one standard deviation. The highest and lowest numbers of institutional quality in 2018 pertained to Malaysia and Russian Federation. The empirical specification that will be used for this study is given as follows:

$$\mathrm{TD_{it}} = (\mathrm{TR}_{it}, INS_{it})$$

where i and t indicate country and year respectively, TD refers to the international tourism arrivals, TR indicates the trade volume, and INS is the institutional quality index. The log-linear form of the above equation can be specified as:

$$\mathrm{LTD_{it}} = \beta_0 + \beta_1 \mathrm{LTR}_{it} + \beta_2 INS_{it} + \varepsilon_t$$

where ε_t is the error term and β_1 and β_2 are the coefficients that show the marginal responses of tourism arrivals to changes in trade openness and institutional quality seriatim. In the light of the theoretical framework and the existing literature, both of the coefficients are expected to be positive.

The empirical estimation of the above model specified in the second equation was realized through the ARDL model which is a model that allows the researchers to analyze the cointegration among the variables that are integrated into different orders except two (Pesaran & Smith, 1995). On the other hand, it is a better methodology for the small sample data and it automatically tackles the endogeneity between the variables (Mushtaq et al., 2020). To be able to apply the procedure, first we should be sure that the independent variable is integrated into order 1 and any of the variables are not integrated into order 2. In this context, the integration level of each variable is first determined by the unit root test. Following the stationarity tests, the cointegrating relation among the variables is detected to be able to continue with Panel ARDL to estimate the long-run coefficients of the variables. Because of the reasons that will be explained below, the study employed the Westerlund Cointegration test to determine cointegration among the variables. The determination of the long-run relationship is followed by the ARDL model which estimates the long-run coefficients of the institutional quality variables. The model whose optimal lags have been determined with respect to Bayesian Schwarts Information Criteria (SIC) ARDL(1,1,1) is specified as follows:

$$LTD_{i,t} = \beta_{1,i} + \sum_{j=1}^{p=1} \beta_{2i} LTD_{i,t-j} + \sum_{j=1}^{q=1} \beta_{3i}\, LTR_{i,t-j} + \sum_{j=1}^{q=1} \beta_{4i}\, INS_{i,t-j} + \varepsilon_{i,t}$$

where β_3 and β_3 indicate the long-run coefficients of the trade openness and institutional quality respectively. After the estimation of the long-run

model, the error correction model -short-run model- which is shown below is then estimated as well:

$$\Delta LTD_{i,t} = \delta_{1,i} + \sum_{j=1}^{p=1} \delta_{2i} \Delta LTD_{i,t-j} + \sum_{j=1}^{q=1} \delta_{3i} \Delta LTR_{i,t-j} + \sum_{j=1}^{q=1} \delta_{4i} \Delta INS_{i,t-j} + \lambda_i ECT_{i,t} \varepsilon_{i,t}$$

where δ_{3i} and δ_{4i} represent short-run coefficients of the independent variables, ECT indicates error correction term, and λ_i implies the speed of adjustment that the model diverges from the shocks that occur in the short-term to equilibrium in the long run. In the estimation of the dynamic panel, the study employed PMG (Pooled Mean Group) estimator constraining the long-term coefficients to be identical and allowing short-term coefficients and error variances to vary across the panels in return for the MG (Mean Group) estimator which assumes that all long-run and short-run coefficients can differ across the panels (Pesaran et al., 1999), and the consistency and the efficiency of the PMG estimator is affirmed by the Hausman Test.

In the context of the mentioned methodology, firstly, the multicollinearity between the variables and cross-section dependency among the panels is tested. According to the presence of the cross-section dependency, the tests used to determine the stationarity of variables are determined. The integration levels of the variables were investigated through the selected unit root test and it was shown that any of the variables were not integrated into order 2. Concerning the outcomes of the cross-section dependency test, the cointegration method was chosen and implemented. Finally, following the specification of the entity of cointegration among the variables, the Panel ARDL and ECM models were applied to estimate long-run coefficients of the institutional quality that referred to political and legal institutions and the trade openness that indicated an economic institution.

EMPIRICAL RESULTS

Multicollinearity is a problem that indicates the perfect linear relationship between explanatory variables of a regression model, and in the case of the existence of perfect or less than perfect multicollinearity between the variables, the standard errors of the coefficients become indeterminate and their standard errors larger and even infinite which makes the coefficients unreliable and inaccurate (Gujarati & Porter, 2009, p. 344). Thus, the model should be free of this problem to be able to estimate confidential

coefficients. To measure whether there is such a problem, the study used Variance Inflation Factor (VIF) values that are computed by R^2 values of each variable (Thompson et al., 2017).

Table 3. *Variance inflation factor results.*

Variable	VIF	1/VIF
INS	1.19	0.837529
LTR	1.19	0.837529
Mean VIF	1.19	

The VIF values for each variable are shown in Table 3, and it is seen that all values are below ten which implies that independent variables do not have multicollinearity problems. Second, the study checks if there is a dependency between the panels (countries) that is a common issue in panel data analysis. Traditional panel unit root and cointegration tests are proceeded assuming that the panels are independent of each other which is a restrictive assumption and it can produce misleading results. There are second-generation tests that have been developed to look for unit root and cointegration in the case that there is cross-sectional dependency among the panels. Thus, the determination of the cross-section dependency is crucial to deciding which generations test to use. The results of the cross-section independence test are shown in Table 4.

Table 4. *Cross-Section Independence test results*

Test	Statistics	Probabilities
LM	74.79***	0.0035
LM adj	5.598 ***	0.0000
LM CD	3.025***	0.0025

As can be seen in the Table 4, the null hypothesis of no cross-section dependency is rejected by all test statistics whose probabilities are below 0.05. Accordingly, the panels are dependent and the traditional unit root tests are not appropriate to determine stationarity levels and to continue with second generation panel unit root tests is required.

The study employs the Paseran Panel Unit Root test which increases the standard DF (or ADF) regressions with the cross-section means of lagged levels and first-differences of the singular series, instead of basing on deviations from the predicted factors (Pesaran, 2007).

The results of the Panel Unit Root Test demonstrate that all of the variables except for INS are integrated into order 1 at constant and constant and trend are demonstrated in Table 5. INS is integrated into order zero at

a 10% significance level when the model does not include a trend. Thus, it is clear that any of the variables is not integrated into order 2 and the dependent variable is integrated into order 1, which indicates that there is no obstacle to running the Panel ARDL model.

Table 5. *Pesaran panel unit-root test results*

Variable	Level		1ST Difference	
	Constant	Constant and Trend	Constant	Constant and Trend
LTD	-1.462	-1.588	-3.132***	-3.364***
LTR	-0.579	-1.690	-3.038 ***	-3.385***
INS	-2.233*	-2.468	-3.797***	-3.926***

*, ** and *** indicates 10%, 5% and 1% significance levels respectively.

Before the determination of cointegration between the variables, the optimal lags of the error correction model have been determined by using Schwartz Information Criteria (SIC). The value of SIC indicates that the optimal lag which provides the best estimation results for each variable is 1. The cointegration among the variables has been measured by the Westerlund Cointegration test which models the cross-section dependence by using the limited number of common denominators and assumes that cross-sectional panels are independent depending on these dominators (Westerlund, 2008).

Table 6. *Westerlund Cointegration test results*

Test	Test Statistic	Probability
Westerlund	2.4748	0.0067

The cointegration test results are demonstrated in Table 6. The test statistics are significant at a 1% level which enables us to reject the null hypothesis of no cointegration. Hence, it can be concluded that cointegration exists among the tourism sector performance, institutional quality, and trade openness and the long-run coefficients can be estimated.

To estimate the long-run coefficients, the study uses PMG and MG estimators and compares their efficiency and consistency with the help of the Hausman Test. The difference between the MG and PMG estimators is that the MG estimator assumes that short-run and long-run coefficients can change over panels while the PMG constraints that long-run coefficients are identical for each panel. The long-run coefficients and error correction term, having been estimated through MG and PMG estimators, are reported in Table 7. According to the MG estimation results, it is seen that the error correction term is negative and statistically significant at the 1% level. The

sign of the ECM is substantial since in the case that it is not negative, the shocks occurring in the short-run do not converge to the equilibrium, in the long run, instead, it would mean that there is an explosion from the equilibrium. Here, it is clear that the shocks converge to the equilibrium by 0.23 speed of adjustment. However, the long-run coefficients are not statistically significant even at the 10% level which prevents us to interpret them.

Table 7. *Panel ARDL results: long-run coefficients and error correction term*

	PMG Estimator		**MG Estimator**	
Variable	Coefficient	Probability	Coefficient	Probability
LTR	1.295469	0.008	0.4543029	0.693
INS	0.3765479	0.001	0.2232477	0.377
ECT	-0.0858852	0.004	-0.2308206	0.000
Hausman Test Results (MG/PMG)				
Chi² Test Statistic	Probability	Null Hypothesis		
1.90	0.3863	The difference in coefficients is not systematic		

PMG estimations results, on the other hand, ensure statistically significant long-term coefficients besides the negative and statistically significant error correction term. According to the ECM results of the PMG estimator, the shocks from the equilibrium do converge to it by 0.08 speed of adjustment. When it comes to the coefficients of the variables, the long-run coefficient of trade openness is seen to be positively related to international tourism arrivals. 1% increase in total trade volume results in tourism arrivals by 1.29% in the long run which indicates that as the level of liberalization in the trade rises, tourism sector development is enhanced. Since trade has been employed as an economic institution, the liberalization of this economic institution has a prompting impact on tourism activities.

The coefficient of the INS variable (the PCA of governance indicators) was observed to be positive and statistically significant at a 1% level. It was observed that as the institutional quality enhances by 1%, the tourism arrivals increased by 0.38% which provides additional evidence to the related literature having claimed the positive relationship between institutional quality and tourism development. Even though the percentage seems small, when the amount of tourism arrivals is considered, institutional quality clearly has a huge impact on tourism arrivals. For example, if the number of arrivals is 1 million, a 1% increase in institutional quality results in 3.800 more arrivals to the country. Therefore, the model proves that tourists consider the quality of the institutional structure of a country when they decide to visit there and they prefer to visit countries with higher institutional quality.

To determine which results are more efficient and consistent, the Hausman Test has been applied between the MG and PMG estimators and the result of the test is shown in Table 7. According to the Hausman test, the null hypothesis of the difference in coefficients is not systematic and could not be rejected which indicates that the PMG estimator is more efficient and consistent. In conclusion, the model with PMG estimator provides the reliable and interpretable results which proves the positive efficacy of institutional quality and trade openness to tourism sector performance.

CONCLUSION

Although prior works have examined the relationship between diverse institutional quality variables and tourism sector performance, to the best of the authors' knowledge, no study has explored tourism sector performance, trade openness, and institutional quality for most visited developing countries. Thus, the current gap motivated the authors to focus on this topic. In this context, this paper has tried to empirically investigate the relationship between the institutional structure and tourism sector development specific to developing countries in which the tourism sector is a substantial income source. In the light of the theoretical framework and related literature, the study employed panel data covering the 10 most-visited developing countries for the period 2002-2018. The time period could not be enhanced far due to the restricted data belonging to institutional variables. A PCA was constructed as an index variable of diverse institutional quality variables and trade openness was employed as an economic institution to show the liberalization in the economy and trade. The contributions of this study to literature are two-fold. First, the results disclosed that institutional quality has a significant positive effect on the tourism industry's performance. Second, it has been detected that trade openness has a stronger positive effect on the tourism sector's performance. The short-run relationship was not investigated since the institutions are variable in the long run and are path-dependent structures. As a result, the study has provided evidence that the quality of a country's institutions is highly effective on the number of tourism arrivals. It has been empirically proved that the improvement of the tourism sector and the number of visitors can be prompted by a well-structured institutional composition in which property rights are protected, corruption is eliminated, bureaucracy is run efficiently, and trade is liberalized.

Implications

This study also has significant managerial implications. First, in this study, some factors that affected the performance of the tourism sector have been determined. As reported in the study, institutional quality has a significant positive effect on the performance of the tourism sector. These results can be taken into account by policymakers who want to develop tourism in developing countries. In case of increasing institutional quality, the tourism sector of developing countries will be positively affected. Second, this study revealed that trade openness has a positive effect on the tourism sector's performance. Thus, if policymakers in developing countries attach importance to trade openness, the tourism sector in that country will be positively affected. They can prioritize trade openness in their trade policies for the tourism sector's development.

Limitations and future research directions

As with all academic research, the current study has some limitations. First, this study examined the 10 most visited developing countries. Therefore, forthcoming researchers can include many more developing countries in their studies and they can compare their findings with this study. Second, for this paper, the panel data approach was adopted for the period 2002-2018. 2019 and 2020 were not included in this study since COVID-19 has an impact on trade and tourism. Thus, future studies may research for a longer period.

REFERENCES

Acemoglu, D., & Johnson, S. (2005). Unbundling institutions. *Journal of Political Economy, 113*(5), 949-995.

Acemoglu, D., & Robinson, J. A. (2013). *Why nations fail: the origins of power, prosperity, and poverty.* New York: Crown.

Acemoğlu, D., Johnson, S., & Robinson, J. A. (2006). Institutions as a Fundamental Cause of long-run growth. In P. A. (eds), *Handbook of Economic Growth* (pp. 386-472). North Holland.

Adedoyin, F. F., Erum, N. & Bekun, F. V. (2021). How does institutional quality moderates the impact of tourism on economic growth? Startling evidence from high earners and tourism-dependent economies. *Tourism Economics, 28*(5), 1311-1332.

Ahmad, N., & Ma, X. (2021). How does tourism development affect environmental pollution?. *Tourism Economics*, 1-27. https://doi.org/10.1177/13548166211000480

Atsız, O., Öğretmenoğlu, M. & Akova, O. (2022a). Understanding online heritage destination image through user-generated content. In D. Gursoy & R. P. Singh Kaurav (Eds.), *Handbook on Tourism and Social Media* (pp. 52-67). Chelmsford: Edward Elgar.

Atsız, O., Ramkissoon, H., & Öğretmenoğlu, M. (2022b). Yoga travellers' experiences in guided tours: a multiple case study approach. *Current Issues in Tourism*, 1-7. https://doi.org/10.1080/13683500.2022.2032616

Arslanturk, Y., Balcilar, M., & Ozdemir, Z. A. (2011). Time-varying linkages between tourism receipts and economic growth in a smallopen economy. *Economic Modelling*, 664-671

Bassil, C., Hamadeh, M., & Samara, N. (2015). The tourism led growth hypothesis: The Lebanese case. *Tourism Review, 70*(1), 43-55.

Butkiewicz, J. L., & Yanikkaya, H. (2006). Institutional quality and economic growth: Maintenance of the rule of law or democratic institutions, or both? *Economic Modelling 23*(4), 648-661.

Cannonier, C., & Burke, M. G. (2019). The economic growth impact of tourism in small island developing states—evidence from the Caribbean. *Tourism Economics,25*(1), 85–108.

Chaisumpunsakul, W., & Pholphirulb, P. (2018). Does international trade promote international tourism demand? Evidence from Thailand's trading partners. *Kasetsart Journal of Social Sciences, 39*(3), 393-400.

Chaudhry, I. S., Nazar, R., Ali, S., Meo, M. S., & Faheem, M. (2021). Impact of environmental quality, real exchange rate and institutional performance on tourism receipts in East-Asia and Pacific region. *Current Issues in Tourism, 25*(4), 611-631. DOI: 10.1080/13683500.2021.1894101.

Chavance, B. (2009). *Institutional Economics.* Oxon: Routledge.

Das, J., & Dirienzo, C. (2010). Tourism competitiveness and corruption: a cross-country analysis. *Tourism Economics, 6*(3), 477–492.

Deng, T., & Hu, Y. (2019). Modelling China's outbound tourist flow to the 'Silk Road': A spatial econometric approach. *Tourism Economics,25*(8), 1167–1181.

Detotto, C., Giannoni, S., & Goavec, C. (2021). Does good governance attract tourists? *Tourism Management, 82,* 104155.

Ekanayake, E. M., & Long, A. E. (2012). Tourism development and economic growth in developing countries. *The International Journal of Business and Finance Research, 6*(1), 61-63.

Eleftheriou, K., & Sambracos, E. (2019). Tourism–growth nexus and spatial spillovers: Evidence from Greece. *Tourism Economics, 25*(2), 297–302.

Eilat, Y., & Einav, L. (2004). Determinants of international tourism: a three-dimensional panel data analysis. *Applied Economics, 36*, 1315–1327.

Ghalia, T., Fidrmuc, J., Samargandi, N., & Sohag, K. (2019). Institutional quality, political risk and tourism. *Tourism Management Perspectives, 32,* 100576.

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th ed.). New York: McGraw-Hill.

Habibi, F., & Ahmadzadeh, K. (2015). Tourism development, trade openness and economic growth: the case of Malaysia. *European Journal of Economics, Finance and Administrative Sciences,78*, 129-139.

Haggard, S., MacIntyre, A., & Tiede, L. (2008). The rule of law and economic development. *Annual Review of Political Science, 11,* 205-234.

Khan, R.E.A., Ahmad, T.I., & Haleem, J. (2021). The governance and tourism: A case of developing countries. *Asian Journal of Economic Modelling, 9*(3), 199-213.

Klein, P. G. (1998, July). *New Institutional Economics*. Available at SSRN: https://ssrn.com/abstract=115811 or http://dx.doi.org/10.2139/ssrn.115811

Law, S., & Azman-Saini, W. (2012). Institutional quality, governance, and financial development. *Economics of Governance*, 217-236.

Lea, J. (1988). *Tourism and Development in the Third World.* New York: Routledge.

Lee, S. (2015). Research note: Quality of government and tourism destination competitiveness. *Tourism Economics, 21*(4), 881–888.

Leitão, N. C. (2010). Does trade help to explain tourism demand? The case of Portugal. *Theoretical and Applied Economics, 17*(3), 63-74.

Marcelin, I., & Mathur, I. (2015). Privatization, financial development, property rights and growth. *Journal of Banking & Finance, 50,* 528-546.

March, J., & Olsen, J. (2006). Elaborating the ''New Institutionalism''. In R. Goodin (Ed.), *The Oxford Handbook of Political Institutions* (pp. 3-23). New York: Oxford University Press.

Ming, Y., & Liu, N. (2021). Political uncertainty in the tourism industry: evidence from China's anti-corruption campaign. *Current Issues in Tourism, 24*(18), 2573-2587. *DOI: 10.1080/13683500.2020.1852195*.

Mushtaq, R., Thoker, A. A., & Bhat, A. A. (2020). Does institutional quality affect tourism demand? Evidence from India. *Journal of Hospitality and Tourism Insights, 4*(5), 622-638.

North, D. C. (1994). Economic Performance through Time. *American Economic Review, 84*(3), 359–95.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance.* Cambridge: Cambridge University Press.

Nyasha, S. & Odhiambo, N. M. (2021). Determinants of tourism development: Empirical evidence from three developing countries. *Economia Internazionale / International Economics, 74*(3), 335-368.

Pesaran, M. H. (2007). A simple panel unit root test in the presence of coss-section dependence. *Journal of Applied Econometrics, 22*, 265–312.

Pesaran, M. H., & Smith, R. (1995). Estimating long-run relationship from dynamic heterogeneous panels. *Journal of Econometrics, 68*(1), 79–113.

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of the American Statistical Association, 94*, 621–34.

Poprawe, M. (2015). A panel data analysis of the effect of corruption on tourism. *Applied Economics, 47*(23), 2399-2412.

Puah, C.-H., Huan, S.-H., & Thien, F.-T. (2018). Determinants of Chinese demand for tourism in Malaysia. *Business and Economic Horizons, 14(3),* 501-512.

Roxas, B., & Chadee, D. (2013). Effects of formal institutions on the performance of the tourism sector in the Philippines: The mediating role of entrepreneurial orientation. *Tourism Management, 37*, 1-12.

Rutherford, M. (1994). *Institutions in Economics: The old and the new institutionalism.* Cambridge: Cambridge University Press.

Schmoller, G. (1900). *Principes d'économie politique, vol. 1 (Grundriss der allgemeinen Volkswirtschaftlehre, vol. 1).* Paris: Giard et Brière.

Seetanah, B. (2019). Telecommunication and tourism development: an island perspective. *Tourism Review, 74*(4), 815-829.

Slesman, L., Baharumshah, A. Z., & Ra'ees, W. (2015). Institutional infrastructure and economic growth in member countries of the Organization of Islamic Cooperation. *Economic Modelling, 51*, 214-226.

Smeral, E. (2015). Measuring the economic impact of tourism: the case of Lower and Upper Austria. *Tourism Review, 70*(4),289-297.

Stauvermann, P. J., Kumar, R. R., Shahzad, S. J., & Kumar, N. N. (2018). Effect of tourism on economic growth of Sri Lanka: accounting for capital per worker, exchange rate and structural breaks. *Economic Change and Restructuring,*49-68.

Stensnes, K. (2006). *Trade Openness and Economic Growth: Do Institutions Matter?* Oslo: Norwegian Institute for International Affairs (NUPI).

Tang, C. F. (2018). The impacts of governance and institutions on inbound tourism demand: evidence from a dynamic panel data study. *Asia Pacific Journal of Tourism Research,* 1000-1007.

Telfer, D. J., & Sharpley, R. (2008). *Tourism and Development in the Developing World*. Oxon: Routledge.

Thompson, C. G., Rae, S. K., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. *Basic and Applied Social Psychology, 39*(2), 81-90.

UN. (2020, August). Policy Brief: COVID-19 and Transforming Tourism. UN.

UNWTO. (2008). *International Recommendations for Tourism Statistics.* New York: United Nations.

Westerlund, J. (2008). Panel Cointegration Tests of the Fisher Effect. *Journal of Applied Econometrics, 23*, 193-233.

Wong, T. & Tang, T.C. (2010). Tourism and openness to trade in Singapore: evidence using aggregate and country-level data. *Tourism Economics*, *16*(4), 965-980.

WTTC. (2019). *The Importance of Travel & Tourism in 2019.* World Travel & Tourism Council.

Yap, G., & Saha, S. (2013). Do political instability, terrorism, and corruption have deterring effects on tourism development even in the presence of UNESCO heritage? A cross- country panel estimate. *Tourism Analysis, 18*, 587-599.