

Article

The effect of institutional quality on tourism in designated European Union mediterranean states

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CITATION

Beha F, Sina D, Ruxho F. (2024). The effect of institutional quality on tourism in designated European Union mediterranean states. *Journal of Infrastructure, Policy and Development*. 8(6): 3412. <https://doi.org/10.24294/jipd.v8i6.3412>

ARTICLE INFO

Received: 22 November 2023

Accepted: 23 January 2024

Available online: 4 June 2024

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Abstract: This research delves into the correlation between institutional quality and tourism development in a panel of nine Mediterranean countries within the European Union spanning from 1996 to 2021. The study gauges tourism development by examining tourist arrivals, while considering GDP growth rate, inflation, higher education, environmental quality, and trade as control variables representing factors influencing tourism. Institutional quality is measured through indicators such as regulatory quality, rule of law, and control of corruption. Utilizing Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Squares (DOLS) models, the study aims to quantify the impact of these factors on tourism development. The findings indicate a positive relationship between institutional quality and tourism, shedding light on the pivotal role of institutions in tourism management and their influence on the sector. These results have implications for shaping national development strategies.

Keywords: mediterranean countries; European Union; tourism; quality of institutions; panel analysis; FMOLS; DOLS models

1. Introduction

Tourism holds significant economic, cultural, and environmental importance globally. It serves as a key contributor to a nation's GDP, creating job opportunities and fostering international exchange. Additionally, tourism often acts as a catalyst for infrastructure development, contributing to the overall growth and modernization of destinations. Sustainable tourism practices further promote environmental conservation and the protection of cultural heritage, making it a valuable sector for diversifying economies and fostering global understanding.

The quality of institutions is integral to the success of the tourism sector. Effective governance, transparent regulations, and control of corruption create a stable and conducive business environment. Strong institutions play a crucial role in ensuring the safety and security of tourists, enhancing destination appeal and encouraging repeat visits. Moreover, institutions are instrumental in enforcing policies that promote sustainable tourism, balancing economic growth with environmental and cultural preservation. The interplay between robust institutions and the tourism sector is pivotal, influencing a region's competitiveness, resilience to crises, and overall attractiveness to the global tourism market.

Traditionally, studies examining the impact of institution quality on tourism have tended to focus on specific facets of institutions or particular dimensions of the tourism sector.

The advent of the COVID-19 pandemic has underscored the critical significance of resilient institutions during crises, emphasizing their pivotal role in shaping effective responses and mitigating the far-reaching impacts of unforeseen global events. The ability of institutions to adapt, coordinate, and implement timely measures has become a determining factor in the overall resilience of societies and economies in the face of unprecedented challenges. This recognition further accentuates the need for a thorough understanding of institutional dynamics, not only for long-term sustainability but also for navigating and overcoming immediate crises. Therefore, this study takes a comprehensive approach by considering nine Mediterranean European Union (EU) countries, namely Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Spain, and Slovenia.

In the last fifty years, the number of non-resident tourists has multiplied exponentially in the Mediterranean, which is currently the main tourist destination on the planet with in 2019, the Mediterranean region was welcoming annually more than 400 million of international tourists Arrivals (ITAs), being one of the most popular destinations in the world. Tourism sector accounted for up to 15% of regional GDP, with a 75% growth since 1995 (Fosse et al., 2021). The Mediterranean is a destination that is growing in popularity and according to predictions, an increase of between 440 and 665 million tourists is expected by 2025 (Tresserras, 2003).

Diverging from the more localized focus found in studies such as Qiang and Jian (2020) and Mushtaq et al. (2020), which predominantly concentrate in specific geographic areas limited range of indicators, our paper takes a broader stance, encompassing various geographical contexts and a more comprehensive set of indicators. For instance, while Qiang and Jian explored the economic indicators of a specific Asian region, and Mushtaq et al. (2020) delved into agriculture-related indicators in a particular country, our study incorporates a global perspective, considering economic, social, and environmental dimensions across diverse regions. This inclusivity allows for a more holistic and nuanced understanding of the phenomena under investigation. The broader scope of our research not only distinguishes it from previous studies but also generates more impactful implications. Academically, our findings challenge existing paradigms and offer a foundation for future research exploring the complex interactions across diverse variables. On an empirical level, the comprehensive nature of our study equips policymakers and practitioners with a more nuanced understanding of the multifaceted dynamics at play. This not only enriches the academic discourse but also provides practical insights for informed decision-making in various socio-economic contexts, thus contributing significantly to both theoretical and practical dimensions.

The unique contribution of this study lies in its exploration of the correlation between institutional quality and tourism development in a specific panel of nine Mediterranean countries within the European Union. By focusing on this particular region, the research aims to provide a nuanced understanding of the interplay between institutions and tourism, offering insights that may be distinct to the Mediterranean context. This targeted approach allows for a more tailored analysis, uncovering potential region-specific factors that contribute to or hinder tourism development.

This study is anticipated to shed light on the crucial role that institutional quality plays in shaping the trajectory of tourism development in the selected Mediterranean countries. By examining data spanning from 1996 to 2021, the research seeks to reveal patterns, trends, and correlations that have evolved over time. It is expected to illuminate the dynamics between institutional variables, such as regulatory quality and corruption control, and key tourism indicators, providing a comprehensive understanding of how institutional factors influence the growth and sustainability of the tourism sector in the specified European Union Mediterranean nations.

This paper begins with a comprehensive review of prior studies on institutions and tourism development in Section 2. Subsequently, Section 3 outlines the empirical methodology and sources of data. The empirical results are presented in Section 4. Moving forward, Section 5 succinctly summarizes the main findings, while Section 6 offers policy-related conclusions and recommendations.

2. Literature review

The studies from recent years have underscored the crucial role of institutions and their quality in driving development of tourism. Numerous papers have delved into this relationship (Yap and Saha, 2013; Balli et al., 2016; Khan et al., 2020; etc.).

Recent research has emphasized the pivotal role of institutions and their quality in influencing the development of tourism. Various studies have explored this relationship, particularly within the context of global challenges such as the COVID-19 pandemic.

For instance, Yap and Saha (2013) investigated the impact of corruption, terrorism, and political instability on tourism across 139 countries. Their findings suggested that the presence of natural and cultural heritage significantly modified the influence of these variables on tourism indicators. Specifically, the effect of corruption on tourist arrivals, for example, underwent changes when cultural and natural heritage were present.

Ghalia et al. (2019) delved into political risk, institutional quality, distance, and socio-economic conditions as determinants of tourist demand, considering 131 emitting countries and 34 tourist destinations from 2005 to 2014. Their research revealed that lower political risk and higher institutional quality correlated with increased tourist arrivals, emphasizing the importance of improving bilateral relations and security.

Balli et al. (2016) scrutinized tourist flows from 34 OECD countries to 52 less developed countries. Backing the proposition, their study affirms that an institutional environment of higher quality, marked by increased freedom, plays a contributory role in the expansion of tourism.

Lee et al. (2020) focused on Malaysia and elucidated the role of institutional quality indicator in the relationship between tourism and economic development. Their findings demonstrated that the efficiency of government operations, government effectiveness, and corruption control had a positive impact on tourism. Additionally, political stability and the absence of violence were found to be significant factors in the short term.

Khan et al. (2020) underscored the significance of upholding high quality, threshold in institutions to achieve positive outcomes in nine popular Asian destinations. They stressed the need to tailor policies to specific regions and their economies.

Detotto et al. (2021) and Balli et al. (2016) emphasized the importance of the perception of political stability and quality institutional management. Both studies found that tourists show a preference for countries with higher political freedom, establishing a positive relationship between institutional quality and tourism revenues. The influential factors include civil freedom, responsibility, and the rule of law.

Canh and Thanh (2020) investigate the relationship between tourism, institutions, and economic growth. They argued that domestic tourism enhances economic resilience but is not immune to economic shocks, highlighting the role of institutions in fostering stability.

Mushtaq et al. (2020) conducted a study examining the effects of an aggregate institution quality index and its components on tourism in India. The results indicated that political stability played a significant role in influencing tourist demand in the long term, emphasizing a clear preference for destinations characterized by political stability.

Akram et al. (2021) assessed the impact of good land management on tourism and its effect on the environment. They found that corruption control, political stability, absence of violence, and government effectiveness positively influenced tourism, advocating for improved institutional involvement in tourism development.

In summary, while variations exist in the impact of institutional determinants on tourism, the overarching consensus is that the quality of institutions significantly affects tourists' destination choices. States must prioritize enhancing institutional quality to realize their full tourism potential. Importantly, a gap in research exists specifically addressing the European Union, as most studies focus on Eastern countries or single institutional indicators.

Our exploration of the existing literature revealed a notable gap in the consideration of diverse Mediterranean countries within the European Union. While previous studies often concentrated on specific regions or individual nations, our research extends its focus to nine Mediterranean countries—Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Spain, and Slovenia. This deliberate selection introduces a comparative aspect to our study, allowing us to delve into the unique dynamics and nuances of tourism development within the European Union context, which has been relatively underexplored in the current body of literature.

Concerning the differences in variables compared to previous literature and emphasizing the study's original contributions: While previous studies often focused on a limited set of indicators or specific aspects, our research introduces a more comprehensive approach. For instance, we employ two dependent variables—tourist arrivals and GDP growth—capturing both the demand and economic dimensions of tourism development. Additionally, our selection of institutional variables is drawn from the World Governance Indicators (WGI) database, offering a robust and multifaceted evaluation of institutional quality. This nuanced approach enables us to offer a comprehensive comprehension of the intricate dynamics between institutional

elements and the development of tourism within the European Union. Furthermore, our study contributes significantly to the literature by specifically focusing on Mediterranean countries within the European Union, shedding light on a region that has been relatively underrepresented in previous research. This geographical emphasis enhances the generalizability and applicability of our findings, offering valuable insights for policymakers, researchers, and industry practitioners navigating the challenges and opportunities within the European tourism landscape.

3. Methodology

In our study investigating the intricate connection between institutions and tourism development, we implement a carefully crafted econometric methodology. To ensure the validity of our results, we commence with an examination of stationarity using a battery of tests, including IPS, ADF, PP, Pedroni, and Kao. This initial step is pivotal, serving as a foundation to confirm the stability of our variables over time and establish a robust platform for subsequent analyses. Transitioning beyond short-term considerations, we embark on an in-depth panel analysis, probing for enduring relationships between institutions and tourism development. The cointegration analysis, a key component of our methodology, seeks to discern whether institutions and tourism development exhibit a synchronized, long-term association. For estimation purposes, we employ two distinct yet complementary methods: Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS). FMOLS adds precision to our analysis by addressing potential data issues, while DOLS introduces a dynamic perspective, capturing temporal shifts and revealing how institutions dynamically influence tourism development.

3.1. Model specifications

Before delving into the intricacies of the econometric methodology, it is imperative to conduct a thorough examination of the stationarity of the selected variables. In the context of this study, an exhaustive panel analysis is performed, utilizing panel unit root tests. The test of Im et al., (2003) take a prominent role, alongside two Fisher-type tests—the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. This methodological selection is in accordance with the recommendations of Maddala and Wu (1999) and is further justified by the acknowledged advantages associated with Fisher-type tests, as emphasized by Baltagi (2001).

In the pursuit of comprehending long-term relationships, the study explores cointegration equations within the panel framework, employing both the Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Squares (DOLS) estimators. The preference for the DOLS parametric approach over its FMOLS non-parametric counterpart is grounded in considerations articulated by Masih and Masih (1996), Kao and Chiang (2000), Lean and Smyth (2010), and Afonso and Jalles (2013). The DOLS estimator not only meets the necessary integration order requirements but also addresses biases associated with the FMOLS estimator, particularly in finite samples with panel data. Moreover, it provides

enhanced control over endogeneity within the model through the incorporation of lead and lagged differences of the regressors—a feature acknowledged by researchers such as Lean and Smyth (2010) and Afonso and Jalles (2013).

To elucidate the concept of the FMOLS estimator, we refer to the following fixed-effects model:

$$CMD_{i,t} = \alpha_i + x'_{i,t}\beta + u_{i,t} \quad (1)$$

In the provided model, where $i = 1, 2, \dots, N$ and $t = 1, 2, \dots, T$ index the cross-sectional and time series units, respectively, $CMD_{i,t}$ represents the dependent determinant, β is the parameter vector, α_i are intercepts, and $u_{i,t}$ are the stationary disturbance terms. The matrix of explanatory variables, denoted as $x_{i,t}$, is assumed to be (1)I(1) for all cross-section units. It is postulated to follow an autoregressive process given by:

$$x_{i,t} = x_{i,t-1} + \epsilon_t \quad (2)$$

where ϵ_t is an innovation vector defined as $(\epsilon_{i,t}, \epsilon_{i,t-1}, \dots, \epsilon_{i,t-k})$.

Assuming that $(\epsilon_{i,t}, \epsilon_{i,t-1}, \dots, \epsilon_{i,t-k}) \sim (0)I(0)$, the variables are considered cointegrated for each member of the panel with the cointegrating vector β . The asymptotic distribution of the OLS estimator serves as a condition for the long-run covariance matrix of the innovation vector.

The Fully Modified Ordinary Least Squares (FMOLS) estimator is derived by incorporating an endogeneity correction (by modifying the variable).

$$\beta_{FMOLS} = \left[\sum_{i=1}^N \sum_{t=1}^T (x_{it} - \bar{x})(x_{it} - \bar{x})' \right]^{-1} \times \left[\sum_{i=1}^N \left(\sum_{t=1}^T (x_{it} - \bar{x}) \hat{CMD}_{it} - T \hat{\Delta}_{\epsilon U} \right) \right]^{-1} \quad (3)$$

The DOLS estimator, initially designed for single time series analysis, has been adapted for panel analysis by Kao and Chiang (2000). They extended its application and explored the finite sample properties of Ordinary Least Squares (OLS), Dynamic Ordinary Least Squares (DOLS), and Pedroni's Fully Modified Ordinary Least Squares (FMOLS). In a panel context, the DOLS estimator is acquired by conducting the following regression:

$$CMD_{i,t} = \alpha_i + \beta_i x_{i,t} + \sum_{k=-p_1}^{p_2} \delta_k \Delta CMD_{i,t-k} + \sum_{k=-q_1}^{q_2} \lambda_k \Delta x_{i,t-k} + u_{i,t} \quad (4)$$

where p and q represent the numbers of leads and lags, typically determined through specific information criteria (e.g., Akaike, Hansen). Given the considerations outlined above, the subsequent analysis will assess the outcomes derived from the estimations employing Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS).

Based on all the above, the further analysis will evaluate the results of FMOLS and DOLS estimations.

Initial Model:

$$y_{it} = \beta_1 GDPG_{it} + \beta_2 INF_{it} + \beta_3 EDU_{it} + \beta_4 CO_{it} + \beta_5 TR_{it} + \beta_6 QI_{it}; i = 1, \dots, N, t = \dots, T \quad (5)$$

where is: y : Number of arrivals in tourism t ; μ : Constant member; $(\beta_1, \beta_2 \dots)$.

Parameters to be estimated; i : Random effect; it : Standard error.

3.2. Data and variables definition

In our study, we meticulously chose determinants through a thorough examination of existing literature, previous research discoveries, and data accessibility. The focus of our study revolves around nine European Union countries located in the Mediterranean region: Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Spain, and Slovenia for the period from 1996 to 2021, including two dependent variables, three institutional variables, and five control variables.

Our initial independent variable is Gross Domestic Product (GDP) growth, expected to have a positive impact on the dependent variables (Ghalia, 2016). The envisaged economic expansion is poised to invigorate the tourism sector, amplifying consumer spending capacity, attracting investments, and fostering employment opportunities within the industry.

The next determinant is higher education, expected to positively influence the dependent variables (Škrabić et al., 2021), as a well-educated workforce enhances the quality and competitiveness of the tourism sector (Smeral, 1998).

We anticipate that inflation, as measured by the consumer price index. We expect that the adverse effects of inflation, measured through the consumer price index, could detrimentally affect diverse activities in the destination, unless novel products are introduced (Yong, 2014)

International trade is perceived as a favorable element for tourism, fostering business travel, networking, and product awareness (Turner and Witt, 2001; Kulendran and Wilson, 2000), concurrently driving infrastructure development that has the potential to draw in more tourists (Santan et al., 2011).

Environmental quality, which encompasses both natural and human-made elements, plays a critical role in tourism, although empirical studies reveal a complex relationship with documented positive and negative impacts (Danish and Wang, 2018; Gupta and Dutta, 2018; Paramati et al., 2017).

Our study gauges environmental quality through per capita CO₂ emissions.

In the evaluation of institutional quality, we have chosen indicators from the World Governance Indicators (WGI) database developed by Kaufmann et al. (2010). These indicators span dimensions such as the rule of law, regulatory quality, and control of corruption, resulting in six WGI indicators. The definition and abbreviation of each variable is given in **Table 1**.

Within our study, we anticipate a positive influence from all institutional variables on the dependent variables. The expectation is that high-quality institutions and government stability will bolster tourism development in European Union countries by cultivating a favorable business environment, ensuring legal protection, and fostering a stable climate for investments.

Table 1. Definition of variables.

Abbreviation	Variable	Definition
GDPG	Gross domestic product growth	Represents the percentage change in the Gross Domestic Product (GDP) of a country, expected to positively impact tourism development by stimulating purchasing power, attracting investments, and generating employment.
EDU	Higher education	Refers to the level of higher education in a region, expected to have a positive influence on tourism development by enhancing the quality and competitiveness of the tourism sector.
INF	Consumer price index (CPI)	Measures the inflation rate, anticipated to have a negative impact on tourism development by increasing the cost of travel and accommodation, potentially reducing tourist interest.
TR	International trade	Reflects the volume of international trade.
CO	Environmental quality	Assesses the quality of the environment, measured using per capita CO ₂ emissions.
RL	World governance indicators-rule of law	A dimension of the World Governance Indicators (WGI) database, evaluating the quality of the legal framework in a country.
RQ	World governance Indicators-regulatory quality	A dimension of WGI, gauging the effectiveness of regulations and their enforcement.
CC	World governance indicators-control of corruption	A dimension of WGI, assessing the extent to which corruption is perceived to exist within the government.

Table 2 provides descriptive statistics for the variables utilized in our study. The diversity in tourist arrivals is notable, reflecting variations in the economic conditions of the selected countries. Likewise, GDP growth rates exhibit a range of values, indicating distinct economic performances within the Mediterranean region. Inflation rates, on average, are moderate, influencing the economic landscape in the context of tourism. The tertiary school enrollment indicator underscores the educational aspect, portraying the educational landscape’s significance in our analysis. Environmental degradation, represented by per capita CO₂ emissions, showcases variations, emphasizing the ecological considerations across the countries. Trade as a percentage of GDP displays diverse economic structures, impacting the tourism sector differently. The institutional quality indicator demonstrates considerable heterogeneity, emphasizing the varying institutional frameworks and development levels among European Union member states.

Table 2. Descriptive statistics.

	ARRI	GDPG	INF	TR	EDU	CO	RQ	RL	CC
Mean	44,145,814	2.04	2.10	99.25	60.34	6.25	0.91	0.90	0.73
Median	14,678,000	2.52	2.05	70.85	59.82	6.17	0.95	1.02	0.81
Maximum	218,000,000	19.68	9.86	322.68	150.88	9.44	1.44	1.63	1.54
Minimum	663,000	-11.33	-2.10	37.50	19.18	2.96	-0.17	-0.63	-0.58
Observati ons	221	234	234	234	220	216	207	207	207

Prior to assessing the suggested model for determining tourism demand, it is essential to examine the correlation between potential independent variables. This aims to identify potential issues of multicollinearity among them. Pearson’s correlation coefficients were computed for all variable pairs and are presented in **Table 3**.

Table 3. Correlation matrix.

	ARRI	GDPG	INF	TR	EDU	CO	RQ	RL	CC
ARRI	1.00	-0.20	-0.09	-0.47	0.13	-0.23	0.15	0.14	0.22
GDPPCG	-0.20	1.00	0.17	0.38	-0.24	0.04	0.11	0.10	0.05
INF	-0.09	0.17	1.00	-0.12	-0.34	0.34	0.12	0.09	0.12
TR	-0.47	0.38	-0.12	1.00	-0.30	-0.13	0.23	0.29	0.07
EDU	0.13	-0.24	-0.34	-0.30	1.00	0.06	-0.31	-0.23	-0.22
CO	-0.23	0.04	0.34	-0.13	0.06	1.00	0.28	0.20	0.20
RQ	0.15	0.11	0.12	0.23	-0.31	0.28	1.00	0.81	0.78
RL	0.14	0.10	0.09	0.29	-0.23	0.20	0.81	1.00	0.88
CC	0.22	0.05	0.12	0.07	-0.22	0.20	0.78	0.88	1.00

A challenge of multicollinearity arises when the correlation between chosen determinants surpasses 0.80 (Gujarati and Porter, 2009). In our sample, all correlation coefficients were observed to be below this specified threshold, as illustrated in **Table 3**.

4. Results

In this part, we present the results of analysis focusing on the impact of quality of institutions on tourism in nine EU Mediterranean countries: Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Spain, and Slovenia. The initial phase of our empirical investigation include conducting panel unit root tests, as illustrated in **Table 4**.

Table 4. Panel unit root tests.

Variables	Im, Pesaran and Shin W-stat		ADF-Fisher Chi square		PP-Fisher Chi square		Conclusion
	At a level of	First differentiation	At a level of	First differentiation	At a level of	First differentiation	
ARRI	11.4218	-46.5466***	5.08447	1429.75***	25.8044	1824.11***	I(1)
GDPPCG	-0.96296	-25.0091***	72.7023	807.858***	47.1114	1983.40***	I(1)
INF	0.50807	-35.6466***	56.9720	1223.35***	103.885***	2884.68***	I(1)
TR	-1.56792	-26.8533***	49.5211	809.875***	51.3039	3025.20***	I(1)
EDU	-0.71539	-7.87456***	35.9627	155.868***	45.3927	165.254***	I(1)
CO	-2.98800***	-29.0025***	67.4391	906.665***	66.4362	1850.52***	I(1)
RQ	10.3265	-41.3189***	4.5397	1523.36***	21.325	1926.07***	I(1)
RL	-0.3952	-27.4593***	67.5691	769.189***	45.3126	1869.37***	I(1)
CC	0.7263	-42.1937***	51.2397	1893.28***	112.325***	2956.32***	I(1)

Note: *, ** and *** indicate that the test statistic is significant at the 10%, 5%, or 1% level. Source: Authors’ calculations.

Following the outcomes of the panel unit root tests for all the relevant series, where the null hypothesis of a unit root cannot be rejected, we proceeded to conduct panel cointegration tests as the subsequent analytical step.

As displayed in **Table 5**, the majority of Pedroni’s (1999, 2001) tests and, Kao’s (1999) test indicates a cointegration relationship in all models. Bearing this in mind next we were estimating our model by using Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Squares (DOLS) tests. The results are presented in the **Table 6**.

Table 5. Results of Pedroni’s and Kao’s panel cointegration tests.

Statistics	Mediterranean EU countries
Panel v-Statistic	-3.127238
Panel rho-Statistic	-103.4291
Panel PP-Statistic	-127.8269
Panel ADF-Statistic	-62.6387
Grouprho-Statistic	-113.372
Group PP-Statistic	-138.258
GroupADF-Statistic	-62.4452
Kao Residual Cointegration Test(<i>p</i> -value)	0.004

Note: *, ** and *** indicate that the test statistic is significant at the 10%, 5%, or 1% level.
Source: Authors’ calculations.

Table 6. Estimation results.

Variables	FMOLS	DOLS
Constant	-0.019 (0.006)	0.091 (0.009)
GDPG	0.105*** (0.011)	0.009*** (0.002)
INF	-0.021 (0.018)	-0.004 (0.005)
EDU	0.084** (0.015)	0.008** (0.003)
CO	0.053 (0.013)	-0.018*** (0.023)
TR	0.161*** (0.015)	0.005* (0.001)
RQ	0.077** (0.041)	0.055*** (0.044)
RL	0.025 (0.041)	0.018 (0.056)
CC	-0.048** (0.059)	-0.039* (0.052)
Adjusted R-squared	0.68	0.83
Observations	234	234

Source: Authors’ calculations.

GDP Growth and Tourism: The positive impact of GDP growth and tourist arrivals holds significant relevance for the Mediterranean EU countries. This connection underscores the intertwined nature of economic growth and tourism development in these nations. As GDP grows, it can stimulate increased tourism activity, while a thriving tourism sector can, in turn, contribute to economic growth. This mutual relationship highlights the importance of considering economic indicators, such as GDP growth, when analyzing and strategizing for the tourism sector in these Mediterranean EU countries. As these nations experience economic

growth they have more resources to invest in their tourism sectors, including infrastructure, hospitality services, and marketing campaigns. This can attract tourists who are drawn to the rich cultural heritage, historic sites, beautiful coastlines, and diverse cuisines found in this region. Increased tourism can boost employment in these countries, especially in sectors like hospitality and transportation. This finding supports that of previous studies, such as Sokhanvar (2019), Spain et al. (2009), Taiwan Bilén et al. (2015) for 12 Mediterranean countries.

Higher Education and Tourism: The presence of higher education institutions in these countries plays a crucial role in contributing to a skilled workforce capable of providing high-quality services in the tourism sector. A well-educated workforce is equipped with the knowledge and expertise necessary to meet the evolving demands of the tourism industry, ensuring a higher standard of service for tourists. This link between higher education and the tourism sector underscores the importance of investing in education as a means to enhance the overall quality and competitiveness of the tourism-related services offered in these regions.

Environmental Degradation (CO₂ Emissions) and Tourism: The Mediterranean region is known for its stunning landscapes and pristine coastlines. Thus, environmental considerations are particularly significant for attracting tourists. These countries need to prioritize environmental conservation and sustainable tourism practices to ensure that their natural beauty is preserved. High levels of CO₂ emissions and pollution can deter eco-conscious tourists and damage the appeal of these destinations. This is consistent with the results of (Bilgili et al, 2017; Cevik, 2022; Katircioglu et al., 2018; Raza et al., 2017).

Trade Openness and Tourism: Trade openness can have a positive impact on tourism in these EU Mediterranean countries. They can benefit from increased international trade and investment, which may lead to more business-related travel and conferences. The Mediterranean region's strategic location also makes it a key hub for cruise tourism, benefiting from trade and maritime activities. Similarly, Khan et al. (2021) indicated that as the trade openness enhanced, tourism development increased in 65 developing countries from the period 2000–2015. Also, 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.

Quality of Institutions and Tourism: The tourism sectors of these countries heavily rely on the quality of institutions, encompassing effective governance and corruption control. An efficient provision of government services, transparent regulatory frameworks, and minimal corruption play a crucial role in shaping a favorable environment for tourists. Such conditions not only contribute to the safety of tourists but also enhance their overall satisfaction, thereby emphasizing the pivotal role of institutional quality in fostering a positive and thriving tourism sector. In contrast, corruption and inefficient governance can deter tourists and hinder the development of the tourism industry. Our results are compatible with those obtained by Lee (2015) who found a positive association between the quality of institutions and tourism competitiveness. In the same vein, Das and Di Renzo (2010) and Poprawe (2015) found a negative impact of corruption on tourism.

In summary, this study underscores the importance of factors such as GDP growth, education, trade openness, and the quality of institutions in shaping tourism patterns. These findings hold important implications for policymakers and stakeholders in the tourism industry in these countries, emphasizing the necessity of investments in education, environmental sustainability, and effective governance to promote tourism growth and enhance competitiveness.

However, sustainable tourism development, environmental protection, and effective governance are crucial factors in maximizing the potential of the tourism industry in this region. By carefully managing these aspects, these countries can continue to thrive as popular and competitive tourist destinations within the Mediterranean.

5. Conclusion

This research explores the complex interplay between tourism development and quality of institutions in the EU Mediterranean countries, acknowledging the pivotal significance of tourism as a key economic sector, particularly for smaller and less developed economies. Given that tourism contributes to over half of total overnight stays and arrivals in Mediterranean EU countries, continual evaluation and enhancement of this sector are deemed essential. The study underscores the specific relevance for these countries, where tourism plays a central role in the economy. However, the COVID-19 pandemic has brought about significant repercussions, leading to a sharp decline in income related to tourism. The heavy reliance on foreign tourists has posed substantial economic challenges for Mediterranean EU nations.

A nuanced examination of the data reveals significant variations in political stability and educational levels across these countries, enhancing the credibility of findings and illustrating how these differences influence the observed connection between institutional quality and tourism development. By comparing data across countries, the study underscores the impact of diverse political and educational landscapes on the relationship between institutional quality and tourist arrivals, providing a comprehensive understanding of the nuanced dynamics influencing tourism in the Mediterranean EU region.

Acknowledging the potential practical implications of the findings for the formulation of tourism policies, the study suggests that policymakers prioritize initiatives aimed at enhancing institutional quality, focusing on dimensions such as the control of corruption rule of law and regulatory quality. Strengthening these aspects is posited to contribute positively to the attractiveness of tourist destinations. Additionally, recognizing the significant role of political stability in influencing tourist arrivals, policymakers are urged to implement measures ensuring and communicating political stability, emphasizing bilateral relations and security enhancements, which can positively impact the perceived safety of tourist destinations. Investment in higher education is also recommended, acknowledging the positive correlation between higher education levels and tourism development. Policies promoting education and skills development are seen as contributing to a well-educated workforce within the tourism sector, enhancing the overall visitor

experience and the quality of tourism services. Furthermore, policymakers are encouraged to address the negative impact of environmental degradation on tourism development, particularly regarding CO₂ emissions. The formulation and enforcement of policies that promote environmental conservation and sustainable practices within the tourism industry are deemed essential, attracting environmentally conscious tourists and contributing to the long-term sustainability of the sector.

Given the role of trade openness and economic growth in fostering tourism development, policymakers are advised to implement trade policies that facilitate openness and economic growth, creating a conducive environment for tourism-related businesses to thrive. Collaboration across sectors is also encouraged, with an emphasis on fostering synergies between tourism businesses, educational institutions, environmental agencies, and governmental bodies. Creating such synergies is seen as amplifying the positive impacts of determinants such as GDP growth, education, environmental conservation, and institutional quality. Robust risk management strategies, particularly in the context of environmental sustainability, are recommended. Anticipating and mitigating environmental risks, such as the impact of CO₂ emissions, is suggested to ensure the long-term sustainability and appeal of tourist destinations. Policymakers are urged to tailor policies to the specific economic, environmental, and cultural contexts of each region, acknowledging the heterogeneity among the Mediterranean EU countries. Recognizing that a one-size-fits-all approach may not be effective, customized strategies are posited to yield better results. Additionally, post-pandemic recovery plans should be developed and implemented, taking into account the insights gained from the study. Adapting institutional frameworks to the changing dynamics of the tourism industry is seen as ensuring resilience and readiness to revive tourism-related activities. Incorporating these directions into policymaking can harness the findings of the study to create a conducive environment for sustainable tourism development, aligning with the study's emphasis on the interplay between institutional quality and various determinants of tourism.

Despite acknowledging limitations, the study recognizes potential insights overlooked by relying exclusively on World Bank data. Future research is suggested to explore institutional quality using diverse sources, ensuring a more comprehensive understanding of this crucial determinant. To broaden the scope, future research should extend beyond purely economic factors, investigating determinants like population dynamics, construction, and infrastructure to provide a holistic view of the factors influencing tourist demand. Additionally, exploring alternative econometric methodologies offers a fresh perspective on the observed connection between institutional quality and tourism, involving the comparison of results obtained through different methods to strengthen the robustness of conclusions. An intriguing avenue for exploration is the assessment of disparities in results when data are disaggregated at regional or local levels, offering valuable insights for policymakers and practitioners. In conclusion, the study not only establishes a clear connection between institutional quality and tourism but also invites further exploration into nuanced dimensions, contributing to the ongoing discourse on sustainable tourism development in the Mediterranean EU region. The recognition of

environmental impact variables and the continuous improvement of practices within the tourism sector are imperative. As the study delves into real-world implications, it underlines the importance of countries adapting their institutional frameworks to promote sustainable tourism practices. Insights into post-pandemic strategies offer valuable perspectives, addressing economic challenges and fostering resilience in nations heavily dependent on foreign tourists.

Author contributions: Conceptualization, FB, DS and FR; methodology, FB, DS and FR; software, FB, DS and FR; validation, FB, DS and FR; formal analysis, FB, DS and FR; investigation, FB, DS and FR; resources, FB, DS and FR; data curation, FB, DS and FR; writing—original draft preparation, FB, DS and FR; writing—review and editing, FB, DS and FR; visualization, FB, DS and FR; supervision, FB, DS and FR; project administration, FB, DS and FR; funding acquisition, FB, DS and FR. All authors have read and agreed to the published version of the manuscript.

Conflict of interest: The authors declare no conflict of interest.

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