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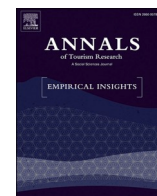
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Good governance and the us tourism demand

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ABSTRACT

Our research empirically examines the impact of good governance on the US tourism demand over the period 1999–2020. We use a data set of 13 different tourism markets to avoid any aggregation bias while controlling for economic and political factors. Our empirical results show that two dimensions of governance, i) the political stability and absence of violence/terrorism and ii) government effectiveness, exert a statistically significant positive impact on the US tourism demand. We also find that the party in control of the White House has a statistically significant influence on tourism demand. These empirical findings have several implications for accurate demand forecasting as well as developing sustainable tourism policies.

1. Introduction

This research focuses on the effects of good governance on tourism demand. Although a myriad of studies has examined these effects, the literature highlighting the importance of aggregation bias in demand estimation has been limited. Only of few studies addressed the significance of the bias using aggregate data in demand estimation (see, for example: Smith & Campbell, 1978; Tenn, 2006; Wang, Yang, Yuan, & Zhang, 2021; among others). At the same time, the research on economics of tourism also lacks sufficient literature acknowledging the importance of aggregation bias in tourism demand estimations induced by the heterogeneous nature of international tourism markets (Tang, 2011; Tang & Tan, 2013; among others). A recent critique of the empirical studies on economics of tourism by Song and Wu (2021) specifically argues that the lack of a comprehensive modeling framework probably leads to an estimation bias. In particular, the empirical studies using aggregated variables such as the total number of tourist arrivals, total tourism expenditure or total tourism revenue for modeling tourism demand may suffer from this bias (Jackman, 2012; Solarin, 2018; among others). As previous literature on the impact of governance quality has ignored the importance of disaggregated data in measuring tourism demand, we raise the question of the role of aggregation bias in analyzing the impact of governance quality on tourism demand. Therefore, the goal of this paper is to investigate the impact of good governance on tourism demand in the US over the period 1999–2020,

using the data set of 13 disaggregated tourism markets.

Our research contributes to the existing literature in two distinct ways. First, estimating the impact of a country's governance on the tourist arrivals from various markets requires an exclusive estimation technique in which unit-variant variables can be incorporated into the panel data framework. In addition, the assumption that the impact of governance quality on tourism demand is homogeneous across each tourism market is very unlikely to hold. Therefore, we use a panel time-series estimator with allowance for heterogeneous slope coefficients as well as unobserved correlation across different tourism markets.

Second, this study incorporates a new political proxy and examines a time period during a recent global crisis to better understand changes in the US tourism demand. Public policy studies frequently analyze party control of the White House as a key political variable (LaPlant et al., 2021). The party, Democratic or Republican, that controls the presidency can influence a plethora of public policy outcomes. Studies have frequently examined how party control of the White House can influence tax and spending policies as well as the economies of neighboring countries (Faricy, 2016; Martin, 2012). Given the fact that the US president has a major impact on how the rest of the world sees the United States, we wish to investigate whether the party in control of the White House could be a covariate in explaining tourist inflows to the US (Pew Research Center, 2017). This study is also one of the first in the governance-tourism literature to include the time period when COVID-19 began, an era of uncertainties when international tourism was

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suspended.

The structure of this research is as described. The next section highlights the US travel position over the years. The literature review is presented in Section 3. The methodology and data are described in Section 4. Section 5 tabulates estimations results. Section 6 provides robustness checks. Section 7 contains the discussion of policy implications. The final section gives concluding remarks.

2. Tourism overview in the US

The US, our host country for this research, is the largest travel and tourism economy in the world (World Travel & Tourism Council, 2021). According to the data released by the US International Trade Administration, total international arrivals to the US increased by roughly 88% between 1999 and 2019. The US has maintained its place in the world's top five tourism destinations over several decades, accounting for roughly 5.4% of worldwide tourism arrivals in 2019. International tourism is a major export category of international trade in services and, as such, has been a significant factor in the trade balance. In 2019, the US had the world's largest travel surplus out of any country worldwide (World Tourism Organization, 2020). Even though the COVID-19 pandemic caused a big disruption globally and turned the international tourism market upside down, the tourism industry in the US still contributed the largest amount to its GDP out of all countries worldwide in 2020 (World Travel & Tourism Council, 2021).

The following figures depict the international travel data used for this study. Fig. 1 represents international travel to the US by 13 major tourism markets used in this study. Fig. 1 clearly exhibits the overall upward trend in international travel coming into the US from all countries. The years 2018 and 2019 saw the largest numbers of international travel into the US with each of those years above 63,000,000 in total arrivals. Those record highs were immediately met with record lows due to the global COVID-19 pandemic beginning in 2020. This had a drastic impact on international travel as all travel was either greatly

restricted or prohibited. The year 2020 had a total number of arrivals in the US of only 16,122,900, which was a decrease of approximately 75% from the prior year. As detailed in Fig. 1, this drastic decrease in tourism was across the board, impacting all countries in a similar manner.

3. Literature review

Since the introduction of the governance concept, there are numerous studies that have examined the effect of governance on long-term economic growth through the development of institutional structure (see, for example: Acemoglu, Johnson, & Robinson, 2001; Acemoglu, Johnson, & Robinson, 2005a, 2005b; among others). The dynamics of governance ignited a systematic change from a state-sponsored and managed development to more public-private partnerships and cooperation (Goymen, 2000). Detotto and McCannon (2017) reveal that institutional quality helps increase the efficiency of the services provided by governments.

Considering the discussions by Hsu, Inbakaran, and George (2013) on the importance of governance in tourism policy analysis, it can be asserted that the impact of governance on the tourism industry is crucial for two reasons. First, understanding the split between policy design and implementation is of particular importance for the tourism industry where a multi-level and well-established policy framework is ultimately required. Second, a cooperation mechanism among the state, civil society, and interest groups which can be enhanced through governance quality helps increase the benefits from the tourism industry. Furthermore, Ghalia, Fidrmuc, Samargandi, and Sohag (2019) address that governance quality can affect tourism demand through two channels. First, from a demand side perspective, poor governance quality yields an adverse international image of a country, which, in turn, leads to a decrease in the tourism demand. Second, from a supply side perspective, the prevalence of poor governance practices can induce service providers and agents in the industry to suspend and/or postpone their activities, which hinder the tourism capacity of the country.

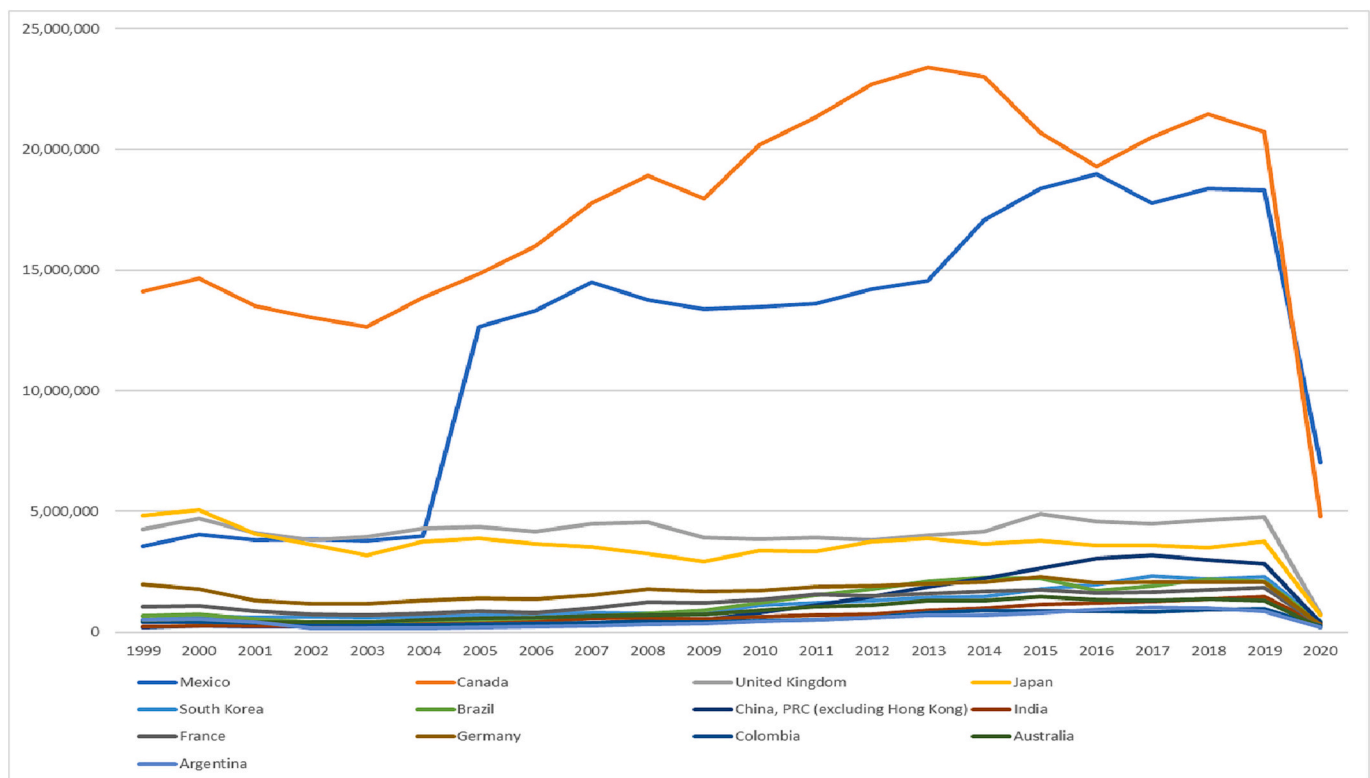


Fig. 1. International travel to the United States.

Source: International Trade Administration (U.S. Department of Commerce).

Apart from the theoretical point of view, there are some empirical links that seem straightforward on the certain quality of governance and tourism. For instance, the presence of corruption tarnishes the image or destination brand of the host country and weakens the economic and business environments which are required for promising tourism development. Therefore, a reduction in corruption leads to an increase in tourism competitiveness, and, as a result, tourism demand (Das & Dirienzo, 2010; Demir & Gozgor, 2017; Lau & Hazari, 2011).

UNCTAD (2013) reports that adverse events such as natural disasters, epidemics, political unrest, and terrorism can affect tourism demand. Tourists are sensitive to the political and/or economic image of the host country (Bentum-Ennin, 2020; Detotto, Giannoni, & Goavec, 2021; Ridderstaat, Oduber, Croes, Nijkamp, & Martens, 2014). Any development resulting from an increase in governance quality can potentially affect the tourism sector as well. The role of political stability and public policies is of particular interest in the tourism economics literature to address the phenomenon of decreasing tourism demand associated with an unstable industry trend (see, for example: Ioannides & Apostolopoulos, 1999; Issa & Altinay, 2006; Causevic & Lynch, 2013; among others). The existing literature on the terrorism-tourism nexus is also in broad consensus on the detrimental role of terrorist attacks on tourism-related activity (see, for example: Faulkner, 2001; Israeli & Reichel, 2003; Mansfeld & Pizam, 2006; among others). Specifically, Arana and Leon (2008) conclude that the effects of terrorist attacks lead to a differentiation in the profile of destinations and tourists' preferences.

Civil liberties political freedom, economic freedom, and press freedom are also found to be significant determinants in choosing the destination country (Balli, Balli, & Louis, 2016; Demir & Gozgor, 2019; Saha, Su, & Campbell, 2017). Rashid, Samah, and Amlus (2020) find that tourism demand rises with increases in government effectiveness.

Alongside individual aspects of governance quality, a limited number of studies have focused on multiple dimensions in measuring governance quality. Lee (2015) uses the average of the three indicators (corruption, law and order, and bureaucracy quality) reported in the International Country Risk Guide (ICRG) to measure their impact on international tourism competitiveness in a global panel. Empirical results indicate that governance quality affects tourism competitiveness positively. Ghalia et al. (2019) use the ICRG country risk composite score to estimate the effect of both institutional quality and political risk on tourism demand using a rich data set comprised of 134 origins and 31 popular destination countries. Their estimation results show that institutional quality and political stability are the key factors influencing tourist arrivals for both origin and destination countries. Khan et al. (2020) also investigate the effect of institutional quality on the demand for tourism inflow in selected Asian countries. Their empirical findings indicate that higher (lower) institutional quality asymmetrically promotes (hinders) the tourism demand in the long-run. According to the study, if the institutional quality drops below an estimated threshold point, it produces a negative impact on tourism demand. However, the positive effect of institutional quality on tourism demand is maintained above this threshold point.

The most recent studies, however, used a broader definition, called the Worldwide Governance Indicators, in measuring the quality of governance. The Worldwide Governance Indicators (WGI) consist of six dimensions of governance quality: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (World Bank). For the purposes of our study, governance is not referring to corporate governance. Adedoyin, Erum, & Bekun (2021) use a simple average of six governance indicators to examine whether aggregate governance moderates the impact of tourism on economic growth in 18 tourism-dependent and 33 high-earning countries. Estimation results show that the moderating role of governance reverses the impact of tourism on economic growth from positive to negative in both tourism-dependent and high-earning countries. Based on a data set of 100

countries for the period between 2002 and 2012, Detotto et al. (2021) also use a simple average of the six governance indicators listed above to find that the aggregate governance index positively affects the tourism industry. Moreover, the study examines the impact of each sub-component of the governance indicators and concludes that government effectiveness and regulatory quality have a significant effect on the tourism industry. Finally, Hor (2021) employs the Principal Component Analysis to obtain an aggregate governance index. The estimation results show that all governance indicators as well as the aggregate index have a significant positive impact on tourism demand in a panel group of 10 ASEAN member countries for the period between 2007 and 2017.

Furthermore, tourism economics literature provides a certain number of studies on the importance of aggregation bias. For instance, Tang (2011) investigates the validity of the tourism-led growth hypothesis for Malaysia based on the data set of 12 different tourism markets. In a follow-up study on Malaysia, Tang and Tan (2013) revise the empirical procedure to examine the stability of the tourism-led growth hypothesis in Malaysia with respect to 12 different tourism markets using a causality approach. Jackman (2012) investigates the validity of the tourism-led growth hypothesis in Barbados using disaggregated data for four tourism markets. Solarin (2018) uses the data on Mauritius' major 10 tourism markets to test the validity of the tourism-led growth hypothesis for Mauritius. Notice that all of these studies use disaggregated markets to test the validity of the tourism-led growth hypothesis.

To summarize, previous studies examining the impact that governance quality has on tourism demand have used either the total number of arrivals or total tourism expenditures/revenues to measure tourism demand and none of them have used disaggregated data in measuring tourism demand to the best of our knowledge. From this point, we raise the question of the role of aggregation bias in analyzing the impact of governance quality on tourism demand in the U.S. over the period 1999–2020 using the data set of 13 disaggregated tourism markets. Due to the multi-dimensional nature, we expect that some dimensions of governance quality may lead to a significant effect on tourism demand. Given this expectation, our hypothesis is that at least one dimension of governance quality affects tourism demand positively.

4. Methodology and data

4.1. Methodology

The U.S. tourism demand (*TOUR*) is estimated using a static panel data model. The following equation postulates a linear relation between the variables:

$$\ln(TOUR)_{it} = \beta_0 + \beta_1 \ln(Income)_{it} + \beta_2 \ln(Exchange\ Rate)_{it} + \beta_3 \ln(GG)_{it} + \beta_4 d_{crises_t} + \beta_5 d_{gov_t} + \nu_i + \varepsilon_{it} \quad (1)$$

where $\ln$ represents natural logarithm; i represents the country of origin ($i = 1, \dots, 13$); t represents the year ($t = 1999, \dots, 2020$), and the country-specific effects and the error term are expressed by ν_i and ε_{it} , respectively. *TOUR*, the dependent variable for this analysis, is defined as the number of international arrivals into the United States. *Income* and *Exchange Rate* are the real GDP per capita of the country of origin and real effective exchange rate index, respectively. *GG* variable represents each of the governance indicators of the US, namely voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law and control of corruption. For the crises dummy, d_{crises} we assign a value of 1 for the years 2001, 2002, 2008, 2009, and 2020 (when the crises are expected to affect the tourism industry) and 0 otherwise. For the government dummy (party in control of the White House), d_{gov} we assign a value of 1 for the years when a Democrat is in the office of President and 0 otherwise.

Our research utilizes the Augmented Mean Group (AMG) estimator

Table 1
Descriptive statistics of international arrivals by top 13 countries.

Variable	Obs	Mean	Min	Max
Canada	22	17,521,233.45	4,808,888	23,406,993
Mexico	22	11,929,378.00	3,574,186	18,990,585
United Kingdom	22	4,113,175.55	730,032	4,915,379
Japan	22	3,578,788.68	696,727	5,061,377
The Republic of Korea	22	1,136,341.77	439,286	2,334,839
Brazil	22	1,176,396.68	348,945	2,274,305
China, PRC*	22	1,172,409.41	157,326	3,173,915
India	22	676,878.82	228,072	1,473,517
France	22	1,226,135.05	297,785	1,843,782
Germany	22	1,682,162.32	293,967	2,284,912
Colombia	22	545,520.68	270,110	944,013
Australia	22	853,265.32	208,707	1,453,103
Argentina	22	502,319.36	150,719	1,018,177

Obs: Observation; Min: Minimum; Max: Maximum; * excluding Hong Kong.

developed by Eberhardt and Bond (2009), Eberhardt and Teal (2010), and Bond and Eberhardt (2013). One of the advantages of this procedure is the applicability regardless of whether the variables are cointegrated or not, as well as allowing for a combination of panel data and unit-invariant variables.¹

4.2. Data

The dependent variable, tourism demand (*TOUR*), is defined as international travel to the United States and is measured by the number of arrivals into the United States by various countries of origin. The data for the dependent variable is obtained from the International Trade Administration's (U.S. Department of Commerce) website. The dataset contains I-94 data. The National Travel and Tourism Office along with the Department of Homeland Security/U.S. Customs and Border Protection oversee the I-94 visitor arrivals program. I-94 data includes the number of visitors into the United States by country of origin. The term visitor is defined by the United Nations World Tourism Organization as "any traveler taking a trip to a main destination outside their residence, for at least one night - but less than one year, and for any main purpose (business, pleasure, or other personal purposes) other than to be employed in the country or place visited" (International Trade Administration, 2021).

The dataset contains international travel data from Mexico, Canada, and the top 50 ranked other countries involved in overseas travel to the United States. We investigate a sub-set of this data to include all countries that individually account for a minimum of 1% of the total international travel to the United States in the most current year. Therefore, our sample includes the top 13 countries which make up 83% of the cumulative market share of international arrivals to the US.² The countries used in this study are Argentina, Australia, Brazil, Canada, China, Colombia, France, Germany, India, Japan, the Republic of Korea, Mexico, and the United Kingdom. The years covered in our study are 1999 through 2020.

Table 1 displays the descriptive statistics of international travel to the United States by the top 13 countries. The country with the largest average number of arrivals to the United States as well as the largest one-time annual arrivals to the United States is Canada with approximately 17.5 million and 23.4 million respectively. Mexico is the second highest for both categories with amounts of approximately 11.9 million and 18.9 million respectively.

Following the tourism literature, there are several explanatory variables used to account for the economic and political environment. The

¹ See, Chudik, Pesaran, and Tosetti (2011), Kapetanios, Pesaran, and Yamagata (2011), Pesaran and Tosetti (2011), Sadorsky (2014), for further information.

² See, Appendix A for the cumulative shares of these markets.

variables *Income* and *Exchange Rate* are used to account for the economic factors. The variable *Income* is represented by the real GDP per capita of the country of origin and measured in constant 2010 U.S. dollars. The variable *Exchange Rate* is expressed by the real effective exchange rate index (2010 = 100). Data on real GDP per capita and real effective exchange rate are obtained from the World Bank (2021a).

Worldwide governance indicators constructed by Kaufmann, Kraay, and Mastruzzi (2010) are used to account for the political environment of the destination country (the US), which measures governance quality. Each of the governance indicators reflects the perceptions of various constituents on the quality of governance. According to the World Bank, good governance creates an environment in which a) governments are selected, monitored, and replaced as well as effectively design and implement policies; and b) it has the respect of citizens and the state for the institutions that govern economic and social interactions among them (World Bank, 2021b). Therefore, we identify and utilize a total of six measures of governance indices. The definitions of each are displayed below and are taken from the World Bank (2021b) Database.

1. *Voice and accountability (GG_VOICE)* - captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media
2. *Political stability and absence of violence/terrorism (GG_POLI)* - measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism
3. *Government effectiveness (GG_GOVEFF)* - captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies
4. *Regulatory quality (GG_QUALITY)* - captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development
5. *Rule of law (GG_LAW)* - captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence
6. *Control of corruption (GG_CORRUP)* - captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests

All good governance dimensions³ are measured in terms of percentile ranking from 0 to 100. The higher the score a country has, the better the assessment it has received. Alongside these six dimensions, we also incorporate an aggregate index, i.e., the good governance index (*GGI*), calculated as the average⁴ of each of the percentile rankings following the majority of the studies. Data on these six measures of governance indices are obtained from the WGI website. In addition, two dummy variables are included in the estimation: d_{crises} and d_{gov} which represent domestic and global crises and the party control of the White House, respectively.

³ Due to lack of good governance data for the year 1999 and 2001, we use the average of a year before and a year after for each of these periods following Kraipornsak (2020).

⁴ Following Hor (2021), we also calculate a composite good governance index using the Principal Component Analysis (PCA) to see the aggregate impact on tourism demand and obtain similar results. The *GGI* variable has been constructed using the weights of each dimension and constructed a new composite variable through weighted averaging. Since PCA and average method provide identical results, we only report the results based on the average calculations. The estimations based on PCA are available in Appendix C.

Table 2 illustrates the descriptive statistics of all variables used for the estimation. The variable *TOUR* is scaled by population of the country of origin to avoid population-size effects (Detotto et al., 2021). All variables except dummy variables are in the natural logarithm to interpret the coefficient in terms of elasticities. According to Table 2, the tourism demand variable (*TOUR*) has the highest standard deviation due to a significant gap between Canada and Mexico' arrivals to the United States and the next set of countries over the study period. Each of the governance dimensions (*GG_VOICE*, *GG_POLI*, *GG_GOVEFF*, *GG_QUALITY*, *GG_LAW*, *GG_CORRUP*) measures the US governance quality. The highest standard deviation among good governance indicators of the US is political stability (*GG_POLI*), which is fairly high compared to other good governance indicators. Notice also that the mean value for *GG_POLI* variable is the lowest at around 4.1 whereas the mean for other dimensions is around 4.5. The correlation matrix between the variables used in the empirical estimation is presented in Appendix B. The correlations between some of the GG indicators are above 0.7, which also validates the choice of modeling each of these variables individually (See Table 5, Model 2–8). Apart from the GG indicators, there is no indication of multicollinearity among the variables under investigation.

5. Empirical findings

The Augmented Mean Group (AMG) estimator is used to estimate Eq. (1) using panel data. Cross-sectional dependence in the error terms is an important issue in the panel data estimation. The dependency may arise due to common unobserved shocks. Ignoring the assumption of cross-sectional dependence is likely to provide biased and inconsistent results (Sarafidis & Wansbeek, 2012). Therefore, the cross-sectional dependence (CD) test by Pesaran (2004) is used to examine the existence of CD in the variables. The formulation of the CD test can be described as follows:

$$CD = \sqrt{\frac{2T}{N(N-1)}} \left(\sum_{i=1}^{N-1} \sum_{j=i+1}^N \rho_{ij} \right) \quad (2)$$

where T is the time period; N is the number of countries; and ρ_{ij} is the sample estimate of the pair-wise correlation of the residuals. CD test results reported in Table 3 indicate the existence of cross-sectional dependence with the exception of the exchange rate variable.

Another important econometric issue in the panel estimation is to determine if the variables are non-stationary. Granger and Newbold (1974) indicate that estimation results would be biased and lead to spurious regression if nonstationary data are used. Given the common existence of CD, the study utilizes Pesaran (2007) Cross-sectionally Augmented IPS (CIPS) panel unit root test. It is also noted that good governance indicators are unit-invariant. Therefore, the unit root for these variables should be examined through a test following time-series procedure. Therefore, we employ the Dickey Fuller Generalized Least Squares (DF-GLS) test proposed by Elliott, Rothenberg, and Stock

Table 3

Cross-sectional dependence (CD) test.

Variable	CD-test
<i>lnTOUR</i>	28.29***
<i>lnIncome</i>	36.49***
<i>lnExchange Rate</i>	1.14

Significance at the 1% level is denoted by “***”.

(1996). The results of the unit root tests reported in Table 4 show that political stability (*GG_POLI*), government effectiveness (*GG_GOVEFF*), and regularity quality (*GG_QUALITY*) are stationary in level, whereas all other variables are stationary in first difference.

Given the CD test results, the parameters in Eq. (1) must be estimated within a panel framework considering the cross-sectional dependence. Table 5 presents the results of the AMG estimator. Model 1 is the baseline model, which includes the economic determinants of tourism demand as well as economic and political factors. In contrast, Models 2–7 incorporate each of the good governance indicators into the baseline model separately. Model 8 includes the good governance index, which is the aggregation of the World Governance Indicators (see above for the calculation).

The empirical estimation results tabulated in Table 5 suggest several interesting findings. We first note that two indices, *GG_POLI* (Political stability and absence of violence/terrorism) and *GG_GOVEFF* (Government effectiveness) are statistically significant. The point estimates of *GG_POLI* and *GG_GOVEFF* suggest that an increase by one percentage point in *GG_POLI* and *GG_GOVEFF* raise tourism demand by 0.051 and 0.726 percentage points, respectively. One of the potential reasons for the significance of these two dimensions could be related to their perceived importance. Because *GG_POLI* and *GG_GOVEFF* measure politically-motivated violence including terrorism and the quality of public services and civil service, respectively, tourist inflows to the U.S. are likely to consider these dimensions more than the rest. Therefore, our findings confirm the importance of a stable political environment and the role of effective government in enhancing the international arrivals to the USA. Unlike previous literature, however, our results demonstrate the absence of a statistically significant relation between aggregate governance index (*GGI*) and the US tourism demand (*TOUR*).

Table 5 reports that the economic factors of the origin countries are important for the US tourism demand. The coefficients on *Income* and *Exchange Rate* are significant and have the expected signs regardless of the model specifications. For example, based on Model 1 parameter estimates, a one percentage point increase in income raises tourism demand by 1.227 percentage points while an increase by one percentage point in exchange rate raises tourism demand by around 0.371 percentage points. Furthermore, the variables related to the host country's

Table 2

Descriptive statistics of variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
<i>ln(TOUR)</i>	286	14.263	1.260	11.923	16.968
<i>ln(Income)</i>	286	9.685	1.132	6.697	10.954
<i>ln(Exchange Rate)</i>	286	4.566	0.208	4.003	5.621
<i>ln(GG_VOICE)</i>	22	4.446	0.058	4.289	4.522
<i>ln(GG_POLI)</i>	22	4.083	0.188	3.621	4.413
<i>ln(GG_GOVEFF)</i>	22	4.512	0.015	4.466	4.534
<i>ln(GG_QUALITY)</i>	22	4.517	0.033	4.449	4.560
<i>ln(GG_LAW)</i>	22	4.516	0.013	4.482	4.533
<i>ln(GG_CORRUP)</i>	22	4.494	0.032	4.415	4.531
<i>ln(GGI)</i>	22	4.441	0.033	4.349	4.508

Obs: Observation; Std. Dev: Standard Deviation; Min: Minimum; Max: Maximum; The descriptive statistics for dummy variables are not reported.

Table 4

Unit root test.

Variable	CIPS	Δ CIPS	DF-GLS	Δ DF-GLS
<i>ln(TOUR)</i>	−1.979	−3.806***		
<i>ln(Income)</i>	−1.701	−2.821***		
<i>ln(Exchange Rate)</i>	−1.434	−3.643***		
<i>ln(GG_VOICE)</i>			0.892	−3.386***
<i>ln(GG_POLI)</i>			−2.509**	
<i>ln(GG_GOVEFF)</i>			−3.992***	
<i>ln(GG_QUALITY)</i>			−1.959**	
<i>ln(GG_LAW)</i>			−1.210	−5.908***
<i>ln(GG_CORRUP)</i>			−0.643	−4.352***
<i>ln(GGI)</i>			−0.447	−3.752***

Δ signifies the first difference of relevant tests.

CIPS test is estimated with a lag.

DF-GLS is a time-series test proposed by Elliott et al. (1996).

DF-GLS test is estimated with a lag.

Significance levels at the 1%, 5% and 10% levels are denoted by “***”, “**” and “*”, respectively.

Table 5

Parameter Estimations with Disaggregated Data.

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
$\ln(\text{Income})$	1.227**	1.194**	1.253***	1.251***	1.194**	1.142**	1.351***	1.107**
$\ln(\text{Exchange Rate})$	0.371***	0.382***	0.467***	0.341***	0.442***	0.357***	0.384***	0.367***
d_{crises}	-0.187***	-0.190***	-0.187***	-0.189***	-0.191***	-0.187***	-0.195***	-0.190***
$d_{\text{government}}$	0.144***	0.148***	0.148***	0.147***	0.114***	0.144***	0.146***	0.147***
$\ln(\text{GG_VOICE})$		-0.011						
$\ln(\text{GG_POLI})$			0.051*					
$\ln(\text{GG_GOVEFF})$				0.726**				
$\ln(\text{GG_QUALITY})$					-0.245			
$\ln(\text{GG_LAW})$						-0.719		
$\ln(\text{GG_CORRUP})$							-0.150	
$\ln(\text{GGI})$								-0.350
constant	0.041**	-0.039**	-0.181	-3.241	1.163	0.043**	0.039**	0.046**
Observation	273	273	273	273	273	273	273	273
Wald	213.55***	210.71***	240.12***	179.03***	178.80***	202.34***	194.36***	275.42***
CD	-0.81	-0.94	-0.63	-0.97	-1.16	-0.63	-0.72	-0.96
CIPS	-3.122***	-2.928***	-3.186***	-3.242***	-3.287***	-3.162***	-3.156***	-3.397***

Sample averages are considered for parameter estimations.

Wald is a chi-square test in which whole slope coefficients equal to zero.

CD test: cross-sectional dependence.

CIPS is a test for unit root and implemented with a lag.

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

economic and political factors are also significant factors. Specifically, the domestic and global crises (September 11 attack, 2008–2009 financial Crisis, and Covid-19 pandemic) have an adverse effect on the international tourist arrivals to the US. One of the striking results is that the country image through the lens of the party in control of the White House is a statistically significant factor for US tourism demand. Specifically, the number of international arrivals into the US is approximately 15% higher during Democratic presidencies compared to Republican presidencies.

6. Robustness check

As the 9/11 terrorist attacks left a severe negative impact on US tourism, one would expect the results to change dramatically over the period 2003 onwards. Therefore, we re-estimate the slope coefficients in Eq. (1) with the data from 2003 onwards. Table 6 reports these estimation results.

The comparison of the results presented in Tables 5 and 6 is worth mentioning. The estimated coefficients on dummy variables presented in Table 6 are fairly higher in terms of absolute value, indicating the

growing importance of crises and the control of the White House on tourism demand after the 9/11 terrorist attacks. Given the estimated coefficients on good governance dimensions, however, we find that the results are robust to the analysis period.

It is well-known that there is a high correlation between the tourist arrivals in the current year and the tourist arrivals in the previous year. Therefore, we check whether the slope coefficients in Eq. (1) vary within a dynamic model setup including a lagged value of the TOUR variable (*Lagged TOUR*). Table 7 reports the findings obtained from the dynamic model.

Empirical findings presented in Table 7 show that the impact of Voice and accountability (*GG_VOICE*) is also statistically significant alongside the political stability and absence of violence/terrorism (*GG_POLI*) and government effectiveness (*GG_GOVEFF*) variables, indicating that the results do not vary considerably between static and dynamic model settings.

7. Policy discussions

Empirical results obtained from the regression analyses have several

Table 6

Robustness check (2003–2020).

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
$\ln(\text{Income})$	1.340***	1.128***	1.182***	0.834**	1.243***	1.146***	1.868***	1.058**
$\ln(\text{Exchange Rate})$	0.332***	0.442***	0.397***	0.300**	0.411***	0.306***	0.328***	0.254***
d_{crises}	-1.426***	-1.493***	-1.450***	-1.448***	-1.442***	-1.433***	-1.391***	-1.463***
$d_{\text{government}}$	1.601***	1.609***	1.602***	1.602***	1.597***	1.601***	1.599***	1.600***
$\ln(\text{GG_VOICE})$		0.126						
$\ln(\text{GG_POLI})$			0.054*					
$\ln(\text{GG_GOVEFF})$				0.578**				
$\ln(\text{GG_QUALITY})$					0.033			
$\ln(\text{GG_LAW})$						-0.241		
$\ln(\text{GG_CORRUP})$							0.416	
$\ln(\text{GGI})$								0.036
constant	-0.175***	-0.169**	-0.416*	-2.871	-0.314	-0.173***	-0.204**	-0.162***
Observation	234	234	234	234	234	234	234	234
Wald	9093.5***	6875.5***	6756.8***	7574.3***	5984.5***	9773.8***	5522.4***	10424***
CD	1.26	-0.97	-1.31	-1.18	-1.52	-0.95	-0.76	-1.04
CIPS	-6.129***	-6.419***	-6.543***	-7.628***	-7.598***	-5.952***	-7.022***	-6.334***

Sample averages are considered for parameter estimations.

Wald is a chi-square test in which whole slope coefficients equal to zero.

CD test: cross-sectional dependence.

CIPS is a test for unit root and implemented with a lag.

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

Table 7
Robustness Check (Dynamic Model).

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
$\ln(\text{Lagged_TOUR})$	0.249**	0.265**	0.094***	0.315**	0.274**	0.310***	0.227**	0.284**
$\ln(\text{Income})$	1.544***	1.645**	1.953***	1.843**	1.695***	1.810***	1.829***	1.786**
$\ln(\text{Exchange Rate})$	-0.003	0.172	0.197	0.003	0.114	0.061	0.180	0.058
d_{crises}	-0.267***	-0.384***	-0.397**	-0.484***	-0.421***	-0.383***	-0.301***	-0.228***
$d_{\text{government}}$	0.181***	0.153***	0.145**	0.202***	0.197***	0.177***	0.099***	0.164***
$\ln(\text{GG_VOICE})$		0.152**						
$\ln(\text{GG_POLI})$			0.389***					
$\ln(\text{GG_GOVEFF})$				0.411***				
$\ln(\text{GG_QUALITY})$					0.148			
$\ln(\text{GG_LAW})$						0.220		
$\ln(\text{GG_CORRUP})$							0.016	
$\ln(\text{GGI})$								0.209
constant	-0.198***	-0.102***	-0.211***	-0.071***	-0.114***	-0.100***	-0.094**	-0.151***
Observation	260	260	260	260	260	260	260	260
Wald	74.74***	67.53***	80.59***	74.75***	78.45***	81.81***	65.22***	73.89***
CD	-1.12	-0.43	-0.66	-0.49	-0.91	-0.45	-0.66	-0.34
CIPS	-4.022***	-4.422***	-4.313***	-4.298***	-4.475***	-5.153***	-4.922***	-5.021***

Sample averages are considered for parameter estimations.

Wald is a chi-square test in which whole slope coefficients equal to zero.

CD test: cross-sectional dependence.

CIPS is a test for unit root and implemented with a lag.

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

policy implications for the tourism sector. As discussed by [Das and Dirienzo \(2010\)](#), higher government effectiveness can help produce high quality public goods and services as well as improve the quality of tourism products. Therefore, increasing government effectiveness is essential for an improvement in the efficient use of tourism resources. Since the tourism industry is highly dependent on numerous interrelationships among multiple agencies, the US government should undertake a directive function in coordinating the efforts among different constituencies for the production of goods and services consumed by tourists.

As in line with the bulk of the literature, the findings obtained from this study show that political stability is mandatory for a successful tourism industry. Instabilities related to unexpected events such as war and terrorism are likely to influence the political environment and limit and distort the effective execution of governmental operations. Given the fact that tourism demand is very delicate in nature, tourism planners should incorporate precautions in their strategies in order to handle these instabilities. Governments are more inclined to address those political instabilities and pay less attention to tourism related issues. Under such circumstances, as suggested by [Issa and Altinay \(2006\)](#), tourism planners should keep in mind that these prioritizations would probably affect the success of tourism development and ruin the tourism related resources. Notice also that political instabilities may unearth conflicting groups. Thus, tourism authorities should encourage those groups to work in tandem to develop an inclusive and prosperous tourism planning process. Overall, policymakers in the US should increase government effectiveness and political stability towards the development of effective tourism policies, hence promoting tourism related products.

This study indicates for the US that tourism demand models that do not consider government effectiveness, as well as political stability and absence of violence/terrorism are likely to underestimate the demand for tourism. This could result in over tourism if actual tourism demand exceeds planned tourism demand, which, in turn, leads to planning

problems in securing adequate supplies for visitors' needs and even perhaps destruction of the natural ecosystem. Apart from global consequences, habitat destruction issues are of great concern for policymakers given that more than 50% of wetlands in the U.S. have been destroyed over the last 200 years. If unplanned or not properly managed, tourism might have irreversible effects on fragile environments as well as local communities.

Accurate demand forecasting is essential for a wide range of players from the key travel sectors for effective planning and scheduling to meet the tourism demand. Since infrastructure and promotional activities are important for the development of the tourism industry and require a considerable amount of investment, accurate forecasting also matters for governments and tourism organizations in yielding a positive return on investment. On the other hand, key travel sectors such as airlines, greatly benefit from an accurate demand forecast for pricing, availability, staffing, purchasing, and budgeting purposes. Moreover, special attention should be given to the hospitality industry, which is very sensitive to the fluctuations in tourism demand. Unexpected increases in tourist inflows might lead to saturation problems due to a shortage in accommodation ([De Luca & Rosciano, 2020](#)). The results also highlight that the party that controls the White House has a significant role in influencing tourism demand in the US. Therefore, it is very likely that tourism development policies may fall short of intended targets if policy goals do not incorporate the impact of party effect alongside the significant governance indicators on US tourism demand.

The comparison of the findings obtained from this study and previous literature is worth mentioning. Unlike previous studies, this study reveals the absence of a statistically significant effect of the aggregate governance variable on tourism demand, indicating the role of aggregation bias in demand forecasting as well as developing policies for building a competitive tourism industry. The highly correlated nature of governance indicators might yield an insignificant impact within a heterogeneous panel time-series framework. Previous literature also

reveals that the response of tourism demand to governance quality is volatile across governance indicators. To be more specific, [Detotto et al. \(2021\)](#) show that voice and accountability and rule of law are the most significant indicators affecting tourism demand for an encompassing panel where the majority of the countries are developing. Similarly, the results by [Hor \(2021\)](#) for ASEAN countries confirm that the lowest impact among the Worldwide Governance Indicators comes from the political stability and government effectiveness dimensions. Given this split, one can infer that dimensions related to legality and freedom are of particular importance for tourists visiting developing countries, whereas tourists visiting advanced countries tend to care more about the government perceptions as well as the quality of public and civil services. Since destination branding reflects the social and cultural characteristics of a destination, as argued by [Das and Dirienzo \(2010\)](#), perceptions of any kind of crime, fraudulent business, as well as discriminatory and dishonest law enforcement practices, can damage the image of the destination and, as a consequence, lead to a decrease in tourism demand.

Consistent with the importance of disaggregated markets in destination marketing policies, the results of this study are of particular interest for bordering countries. International travelers from Canada and Mexico make up over 50% of tourist arrivals into the USA. In addition, Canada and Mexico are the USA's largest trading partners. So, the stable and consistent political environment among the three nations of North America are important for the development of sustainable tourism demand in the USA. In order to mitigate potential fallout, the government should follow good governance practices to establish a positive and consistent country image. We also found that the policies that the White House implements have significant ramifications on the bordering countries.

Appendix A. Cumulative markets share

Countries	2020 cumulative market share
Mexico	36.2%
Canada	60.9%
United Kingdom	64.7%
Japan	68.3%
South Korea	70.5%
Brazil	72.7%
China, PRC*	74.7%
India	76.4%
France	77.9%
Germany	79.4%
Colombia	80.8%
Australia	81.9%
Argentina	82.9%

* Excluding Hong Kong

Appendix B. Correlation matrix

8. Conclusion

This study empirically examines the effect of good governance on U. S. tourism demand. Using a data set of 13 different tourism markets, we take into consideration the possible aggregation bias while controlling for economic and political factors. Our study provides several profound empirical findings.

First, good governance does matter. Specifically, political stability and absence of violence/terrorism, as well as effective government, are important factors to attract more international arrivals into the country. Second, economic factors (income and exchange rate) and global crises (September 11 attack, 2008–2009 financial crisis, and Covid-19 pandemic) play important roles in the US tourism demand. Finally, the political party of the President has strong ramifications on international tourism. To summarize, policy makers must demonstrate and adhere to quality governance practices to have effective government policies, a stable political and economic environment, as well as a positive and consistent country image to foster sustainable tourism development.

Tourism economics literature addresses a great number of determinants affecting tourism demand. Due to the limitations related to control variables, this study includes only a certain number of economic and political factors and does not take socio-cultural dynamics into account. An extension of this study would be to incorporate other determinants to see whether the results remain consistent.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

	ln(TOUR)	ln(Income)	ln(Exchange Rate)	ln(GG_VOICE)	ln(GG_POLI)	ln(GG_GOVEFF)	ln(GG_QUALITY)	ln(GG_LAW)	ln(GG_CORRUP)	ln(GGI)	d _{crises}	d _{government}
ln(TOUR)	1											
ln(Income)	0.465	1										
ln(Exchange Rate)	0.051	0.051	1									
ln(GG_VOICE)	-0.116	-0.101	0.174	1								
ln(GG_POLI)	0.133	-0.006	0.117	0.118	1							
ln(GG_GOVEFF)	0.125	-0.016	0.104	0.310	0.251	1						
ln(GG_QUALITY)	-0.143	-0.085	0.104	0.565	0.007	0.462	1					
ln(GG_LAW)	-0.100	-0.092	0.163	0.810	0.314	0.451	0.685	1				
ln(GG_CORRUP)	-0.084	-0.087	0.111	0.798	0.084	0.339	0.588	0.639	1			
ln(GGI)	0.003	-0.077	0.188	0.722	0.716	0.514	0.560	0.790	0.674	1		
d _{crises}	-0.154	-0.010	-0.051	-0.241	-0.048	-0.449	-0.134	-0.141	-0.338	-0.241	1	
d _{government}	0.147	0.015	0.075	0.082	0.610	-0.057	-0.364	0.010	-0.186	0.311	-0.096	1

Appendix C. Regression results with the PCA

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
$\ln(\text{Income})$	1.227**	1.194**	1.253***	1.251***	1.194**	1.142**	1.351***	0.998***
$\ln(\text{Exchange Rate})$	0.371***	0.382***	0.467***	0.341***	0.442***	0.357***	0.384***	0.384***
d_{crises}	-0.187***	-0.190***	-0.187***	-0.189***	-0.191***	-0.187***	-0.195***	-0.189***
$d_{\text{government}}$	0.144***	0.148***	0.148***	0.147***	0.114***	0.144***	0.146***	0.161***
$\ln(\text{GG_VOICE})$		-0.011						
$\ln(\text{GG_POLI})$			0.051*					
$\ln(\text{GG_GOVEFF})$				0.726**				
$\ln(\text{GG_QUALITY})$					-0.245			
$\ln(\text{GG_LAW})$						-0.719		
$\ln(\text{GG_CORRUP})$							-0.150	
$\ln(\text{GGI})$								-0.344
constant	0.041**	-0.039**	-0.181	-3.241	1.163	0.043**	0.039**	0.101**
Observation	273	273	273	273	273	273	273	273
Wald	213.55***	210.71***	240.12***	179.03***	178.80***	202.34***	194.36***	269.39***
CD	-0.81	-0.94	-0.63	-0.97	-1.16	-0.63	-0.72	-0.91
CIPS	-3.122***	-2.928***	-3.186***	-3.242***	-3.287***	-3.162***	-3.156***	-3.4974**

Sample averages are considered for parameter estimations.

Wald is a chi-square test in which whole slope coefficients equal to zero.

CD test: cross-sectional dependence.

CIPS is a test for unit root and implemented with a lag.

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

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