

Tourism Demand and Corruption: Are the Impacts of Relative Corruption on International Tourist Arrivals in Thailand Relevant?

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Abstract

This article evaluates the impact of relative corruption on international tourist arrivals in Thailand using a generalized least squares estimator. We compile a panel dataset that consists of data from 29 countries from 2010 to 2017. The results suggest that relative corruption has a detrimental impact on international tourist arrivals. Moreover, the effect of relative corruption is greater as the distance of corruption between Thailand and the country of origin increases. As a consequence, tourist authorities should develop specific marketing strategies based on the relative levels of corruption exhibited in the tourist market. Furthermore, governments should build long-term and short-term tourism policies that aim at improving tourist perception of corruption in Thailand.

Keywords: relative corruption, tourism demand, Thailand, international tourist arrivals

JEL Codes: Z30, Z38

1. Introduction

The importance of the tourism industry is evident in Thailand since it is a generator of income and employment, and is a source of economic growth (Chancharat, 2011; Chulaphan & Barahona, 2018). The tourism sector contributes directly and indirectly 12% to 15% of the GDP and is a crucial driver of economic recovery (OECD, 2020; World Bank, 2021). However, a significant issue is the prevalence of corruption in the public and private sectors. OECD (2018) reported that the perception of corruption in Thailand was lower than the average for ASEAN countries and that it was one of the three most prominent obstacles to doing business in Thailand. The effects of corruption could be detrimental to the development of the tourism industry in Thailand since corruption affects tourism demand (Saha & Yap, 2015). Therefore, it is necessary to investigate what are the effects of corruption on tourism demand in Thailand.

Research in international tourism demand has undergone several phases. Early studies focused on measurement issues related to the proper identification of independent variables and acceptable proxies for these variables. Later the focus shifted to modelling and forecasting techniques to study tourism demand (Dogru et al., 2017). As of late, there is a growing literature exploring how tourism demand is affected by the political environment in tourist destinations (Song et al., 2019).

In brief, several authors find that excellent governing institutions are likely to stimulate economic growth and encourage tourism stakeholders to invest and develop more tourism-related products, programs, and infrastructure (Tang, 2014). Among governance indicators, the absence of corruption, the rule of law that protects property rights, and bureaucratic quality are among the most relevant traits (Lee, 2015). Furthermore, countries with lower levels of corruption are associated with greater democracy and economic freedom (Goel & Nelson, 2005; McMann et al., 2019). Thus, corruption is observed to undermine interpersonal trust in society (Lee, 2015), and affect macroeconomic well-being (Poprawe, 2015). Consequentially, corruption is detrimental to the

economy as a whole, particularly to the tourism industry (Lee, 2015).

Several studies have shown that tourism destinations with lower levels of corruption are likely to attract more tourist arrivals (Poprawe, 2015; Tang, 2018) and improve tourism revenue (Yap & Saha, 2013). These studies have used absolute measures of corruption to estimate the effects of corruption on tourism demand. For example, using the corruption perception index from transparency international, Poprawe (2015) argued that a traveler's decision to visit a destination is affected by their perception of corruption in the destination country. In turn, other studies investigate how tourism demand is affected by the actual corruption of the destination's government (Tang, 2018; Yap & Saha, 2013). Tang (2018) said that better control of corruption would increase tourism demand because it will deter government officials from delaying bureaucratic processes to attract bribery.

A growing literature investigates how relative measures of corruption affect inter-country flows of trade and finance. In the literature, studies using relative corruption often investigate how corruption affects investments of foreign companies within a host country (Driffield et al., 2010). However, investigation of how relative corruption affects tourism demand is limited. Demir and Gozgor (2017) found that relative corruption has a detrimental effect on tourism demand. Tourists would be comfortable visiting a country with similar levels of corruption, but would be less comfortable visiting a relatively more corrupt nation. However, what is not known is whether the impact of relative corruption on tourism demand varies between origin countries who are exceedingly less corrupt to origin countries who are moderately less corrupt. Such an investigation is significant within the context of Thailand, whose economy depends on the tourism sector's performance and has a corruption perception index score of 36 (Transparency international, 2019).

This paper aims to investigate the effects of relative corruption on international tourist arrivals in Thailand. For this, we measure relative corruption based on the Control of Corruption index provided by the World Governance Indicators (WGI) and estimate its effects on tourism demand in the

form of international tourist arrivals to Thailand from 29 major countries using an autoregressive distributed lag model (ADLM). This research contributes to the body of literature by providing evidence that international tourists are influenced by the corruption levels relative to those in their country of origin. Furthermore, the impact of corruption on tourism demand is more prominent as relative corruption widens.

2. Materials and Methods

2.1 Modelling Tourism Demand

In contrast to the demand for tangible goods, tourism demand is a composite of different goods and services that are consumed at the same time as they are produced (Stauvermann & Kumar, 2017). For such reason, several measures have been used in the literature to represent tourism demand, including tourist arrivals, tourism receipts, and length of stay at the tourist destination (Song et al., 2010). The selection of which variable best represents tourism demand is subject to data availability as well as the goal the research wishes to accomplish. To investigate the impact of corruption on tourism demand, we use tourist arrivals because corruption more likely will discourage tourists from traveling to the destination if they perceive it as being too corrupt or unstable.

Following Tang (2018), we model tourism demand based on the theory of consumer behavior, which states that tourism is a function of income in the origin country, tourist prices, exchange rate, and a set of determinants of tourism (as shown in Equation 1).

$$TD_{it} = f(Y_{it}, PI_{it}, PS_{it}, ER_{it}, X_{it}) \quad (1)$$

where TD_{it} represents tourist arrivals from country i in year t . Y_{it} is the GDP per capita in the tourist's homeland. PI_{it} represents the price levels in Thailand relative to those in the origin country, and PS_{it} is a weighted price index consisting of the prices of competing tourist destinations. In turn, ER_{it} is the exchange rate, and X_{it} is a set of tourism demand shifters. Based on a

modified version of the Li et al. (2013) model, we propose that tourism demand is specified in the following way:

$$TD_{it} = \alpha Y_{it}^{\beta_1} PI_{it}^{\beta_2} PS_{it}^{\beta_3} ER_{it}^{\beta_4} e^{\delta_i X_{it} + \epsilon_{it}} \quad (2)$$

In the literature, several authors have posited that tourist prices are related to exchange rates (Song & Li, 2008). These variables are usually included separately in the demand models because tourists might be more responsive to changes in exchange rates than differences in costs of living (Cheng, 2012). On the other hand, Dogru, Sirakaya-Turk, and Crouch (2017) mentioned that including these variables separately could bring about problematic results. For this reason, we adjusted tourist prices with the exchange rate (Balli et al., 2013). The new tourist prices will then contain information that will reflect both the effects of prices and the exchange rate, making it easier to interpret the findings and focus on the impact of other determinants of tourism demand.

Song et al. (2019) mentioned that tourism demand models are often specified using two forms of prices. The first, PI , measures the cost of living at a destination relative to the origin country. PI is included in the model to capture the effects of differences in prices between the destination and origin country and will help determine whether tourists prefer domestic or international tourism. In turn, the second price variable, PS , measures the price differences among competing tourist destinations and is included to capture the effect of tourists' preferences for competing destinations.

Following Dogru et al. (2017), we constructed two versions of PI (PI_{1it} and PI_{2it}). PI_{1it} equals the CPI in Thailand divided by the CPI of the origin country i . In turn, we estimate PI_{2it} by adjusting the price levels with the bilateral exchange rate using Equation 3.

$$PI_{2it} = \frac{CPI_{THt}}{CPI_{it} \times EX_{it}} \quad (3)$$

CPI_{THt} is the consumer price index (2010 = 100) in Thailand in year t , and CPI_{it} is the consumer price index of the origin country i in that same year, and EX_{it} is the bilateral exchange rate.

To avoid problems with correlation, we used the approach by Song et al. (2012) to measure PS_{it} . PS_{it} was measured by constructing a price index that is adjusted by the real effective exchange rate (REX_{jt}) and is weighted by the share of international tourist arrivals to a k group of substitute tourist destinations (w_{ijt}) using Equation 4:

$$PS_{it} = \sum_{j=1}^k \frac{CPI_{jt}}{REX_{jt}} w_{ijt} \quad (4)$$

In the literature, two hypotheses underpin the theory of corruption in tourism development (Sekkat & Méon, 2005). The “sanding of wheels” theory refers to the detrimental effects of corruption on tourism development through setbacks in investment caused by bribery payments. The second hypothesis, “greasing of the wheels,” states that bribery facilitates the development of the tourism sector through accelerating tourism investments by avoiding bureaucratic hurdles. The former is more in line with the aim of this research since corruption can obstruct tourist transactions and influence a traveler’s decision to visit a tourist destination (Poprawe, 2015). For this reason, papers investigating the effects of corruption on tourism demand either include variables that measure absolute levels of corruption or the perception of corruption in the demand model.

The perception of corruption plays a vital role since a person’s decision to travel to a destination may be informed by the levels of corruption at the tourist destination (Sekkat & Méon, 2005). It is essential to mention that the perception of a destination country may be influenced by the levels of corruption experienced in the tourist’s own country. Visitors would decide whether to visit a tourist destination based on the levels of corruption in the destination country relative to the corruption levels they experience in their own country (Demir &

Gozgor, 2017). Tourists who live in countries with lower levels of corruption (high ranking in terms of control of corruption) would be discouraged from traveling to countries with greater levels of corruption (low ranking in terms of control of corruption). For this reason, we included relative corruption as a shifter of demand in Equation 2.

We measured relative corruption based on the conceptualization of relative corruption by Duanmu (2011) and Demir and Gozgor (2017). Relative corruption can be measured by measuring the distance between the corruption index of the two countries (Duanmu, 2011). However, the index used to measure relative corruption in Demir and Gozgor (2017) is political risk from the PRS group. Aggregated indicators like the Control of Corruption from the WGI and the Corruption Perceptions Index are built based on these risk measures (Rao, 2012) and have good performance in reporting overall corruption (Hamilton & Hammer, 2018). Therefore, we decided to use aggregate indicators instead of risk indicators.

It is worth noting that the aggregate indicators are different in the way they are estimated. We will not go through a full review of the advantages and disadvantages of the aggregate indicators of corruption because it is out of the scope of the paper. However, Budsaratragoon and Jitmaneeroj (2020); Hamilton and Hammer (2018), and Treisman (2007) provide insights into this issue. Although Control of Corruption and the Corruption Perception Index center on different purpose,s several papers have reported that aggregate measures like Control of Corruption and Corruption Perception index are highly correlated, and with recent developments in the measurement of both indexes, the correlation has strengthened (Ahmad, 2001; Hamilton & Hammer, 2018; Treisman, 2007). Therefore, they can be used as proxies. Based on this discussion, we follow Tang (2018), who used Control of Corruption to investigate factors that affect inbound tourism demand in Malaysia.

Relative corruption was constructed by first finding the difference between the world ranking of control of corruption for the origin country and Thailand's corruption ranking. Later we build two dummy variables (*CorrDI*

and *CorrD2*) based on the value of the difference. The first dummy variable, *CorrD1*, groups the slightly better countries than Thailand at controlling corruption. *CorrD1* will equal one if it is not lower than zero and not greater than 30 ranking points. Otherwise, *CorrD1* is equal to zero. In turn, *CorrD2* identifies the countries that exhibit control of corruption rankings that are far better than those reported by Thailand. *CorrD2* is equal to one if the difference between the ranking of control of corruption between the country of origin and Thailand is more than 30 ranking points. *CorrD2* is equal to zero when the difference is less than or equal to 30 points.

Linearizing Equation 2 and substituting *CorrD1* and *CorrD2* for X_{it} , we obtain the following tourism demand models (Equations 5 and 6).

$$\begin{aligned} \ln TD_{it} = & \sigma + \beta_1 \ln Y_{it} + \beta_2 \ln PI_{1it} + \beta_3 \ln PS_{it} + \beta_4 \ln ER_{it} + \\ & \delta_1 \text{CorrD1}_{it} + \delta_2 \text{CorrD2}_{it} + \epsilon_{it} \end{aligned} \quad (5)$$

$$\begin{aligned} \ln TD_{it} = & \sigma + \beta_1 \ln Y_{it} + \beta_2 \ln PI_{2it} + \beta_3 \ln PS_{it} + \delta_1 \text{CorrD1}_{it} \\ & + \delta_2 \text{CorrD2}_{it} + \epsilon_{it} \end{aligned} \quad (6)$$

We proceeded to estimate two models to test the most appropriate price index for our study. The first model (Equation 5) includes the unadjusted relative tourist price and the exchange rate, whereas the second model (Equation 6) contains the relative tourist prices adjusted for the exchange rate (PI2).

A problem comes in the selection of what countries are competitive tourist markets for Thailand. Based on closeness and similarity to Thailand, major tourist countries within the ASEAN region are known to be significant tourist competitors. Furthermore, despite having several economic and cultural differences, countries within Northern and Northeastern Asia, including Japan, South Korea, and China, are major tourist destinations in Asia that may arguably be considered competitors for Thailand. For this reason, three different measures of *PS* were constructed (PS_{ASE} , PS_{NE} , and PS_{ALL}) and included in Equations 5 and 6. PS_{ASE} represents the weighted index of differences in prices between competing destinations in the ASEAN region (based on the

availability of data, countries included in this group are Indonesia, Malaysia, and the Philippines). In turn, PS_{NE} reflects the weighted price index of major tourist destinations in the North-Northeastern region of Asia, including China, Hong Kong, Japan, and Singapore. Singapore was included in PS_{NE} because the country shares more similarities in terms of economic development and tourist services with countries in the North-Northeastern region of Asia in comparison to other countries in Southeast Asia. Lastly, PS_{ALL} is the weighted average of prices from countries in both areas.

Equations 5 and 6 are static demand models and are not able to capture the dynamic nature of the tourist decision-making process (Song & Li, 2008). For this reason, Equations 5 and 6 were modified into an autoregressive distributed lag model (ADLM) of the forms shown in Equation 7 and 8.

$$\begin{aligned} \ln TD_{it} = \sigma + \sum_{j=1}^k \vartheta_j \ln TD_{it-j} + \sum_{j=0}^k \gamma_j \ln Y_{it-j} + \sum_{j=0}^k \rho_j \ln PI_{1it-j} + \sum_{j=0}^k \varphi_j \ln PS_{it-j} \\ + \sum_{j=0}^k \pi_4 \ln ER_{it} + \delta_1 \text{CorrD1}_{it} + \delta_2 \text{CorrD2}_{it} + \epsilon_{it} \end{aligned} \quad (7)$$

$$\begin{aligned} \ln TD_{it} = \sigma + \sum_{j=1}^k \vartheta_j \ln TD_{it-j} + \sum_{j=0}^k \gamma_j \ln Y_{it-j} + \sum_{j=0}^k \rho_j \ln PI_{2it-j} + \sum_{j=0}^k \varphi_j \ln PS_{it-j} \\ + \delta_1 \text{CorrD1}_{it} + \delta_2 \text{CorrD2}_{it} + \epsilon_{it} \end{aligned} \quad (8)$$

We followed a general-to-specific approach, similar to Song et al. (2012). We first proceeded to estimate the tourism demand models, as shown in equations 7 and 8 (using a maximum k lag of 2 for each determinant of tourism demand). We then proceeded to eliminate the lags of independent variables that were found to be insignificant. Wald tests were performed on the addition of the coefficients when more than one lag period was found significant. Finally, to avoid issues related to heteroscedasticity, we proceeded to estimate Equations 7 and 8 using a generalized least squares estimator.

2.2. Data

The dataset compiled for this study covers 29 countries that provide the highest number of tourists to Thailand over the years 2010 to 2017. International tourist arrivals from each of the 29 nations were gathered from the Ministry of Sports and Tourism of Thailand. In turn, international tourist arrivals to competitive countries (Indonesia, Malaysia, Philippines, China, Hong Kong, Japan, and Singapore), CPI, and GDP per capita were extracted from the World Bank Open Data website. The bilateral exchange rate was extracted from the Bank of Thailand. The real broad effective exchange rate was obtained from the Federal Reserve Bank of Saint Louis' FRED Economic Data database. The rankings of control of corruption for the 29 countries and Thailand were gathered from the World Governance Indicators (WGI) database.

The data were used to calculate the different variables as indicated in the previous section. The descriptive statistics for the variables used in this study are shown in Table 1.

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Max	Min
<i>TD</i>	232	736201.600	1195703.000	10267017.000	59817.060
<i>Y</i>	232	1221032.000	710282.400	3187864.000	42647.190
<i>PI₁</i>	232	99.103	7.201	113.250	66.175
<i>PI₂</i>	232	1037.962	4742.940	28571.430	1.882
<i>ER</i>	232	18.294	15.106	53.505	0.004
<i>CorrD1</i>	232	0.194	0.396	1.000	0.000
<i>CorrD2</i>	232	0.685	0.465	1.000	0.000
<i>PS_{ALL}</i>	232	107.518	5.110	117.048	100.000
<i>PS_{ASE}</i>	232	117.218	13.360	139.028	100.000
<i>PS_{NE}</i>	232	103.995	2.494	109.241	100.000

Note: *TD* is the total international tourism arrivals to Thailand, *Y* is the foreign country GDP per capita in Thai Baht, *PI₁* is the relative price levels of Thailand to origin countries, and *PI₂* is the relative prices levels of Thailand to origin countries adjusted by the bilateral exchange rate. *ER* is the bilateral exchange rate (baht per local currency), *CorrD1* and *CorrD2* are dummy variables representing relative corruption. Finally, *PS_{ALL}*, *PS_{ASE}*, and *PS_{NE}* are weighted price indexes of major tourist destinations in the Asian region, the Southeast Asian region, and the North-Northeastern region.

Sources: Ministry of Sports and Tourism of Thailand, World Bank Open Data, Bank of Thailand, Federal Reserve Bank of Saint Louis' FRED Economic Data database, and World Governance Indicators database.

3. Results and Discussion

Columns 1, 2, and 3 of Table 2 report the estimates of the tourism demand model where the tourist prices and exchange rate are included separately (Equation 7). In turn, columns 4, 5, and 6 show the estimates of the tourist demand model in equation 8. Findings of the effects of relative corruption on tourist arrivals in Thailand are reported in Table 2. The coefficients for *CorrD1* and *CorrD2* were significant ($P < 0.05$) and negative, which means that holding other variables constant, countries with a lower level of corruption compared to Thailand travelled less to the kingdom. Similar findings are reported by Demir and Gozgor (2017). They found that measures of relative corruption have a detrimental effect on tourist arrivals in Turkey. Furthermore, the coefficient of *CorrD2* was considerably more negative than *CorrD1*. As can be seen in Table 2, the coefficient of *CorrD1* ranged from -0.07 to -0.11. In turn, the coefficient for *CorrD2* ranged between -0.20 to -0.23, which is more than double the magnitude of the coefficients reported for *CorrD1*. These findings indicate that as the distance of relative corruption is greater, so are the impacts of corruption on tourism demand. Therefore, the magnitude of the effects of relative corruption is more significant when the corruption distance between Thailand and the tourist's homeland is further.

Goel and Nelson (2005) and McMann et al. (2019) mentioned that corruption is a complex phenomenon brought about by low levels of democratic and economic freedom. Furthermore, these variables are found to affect tourism demand, and the magnitude of their effect varies depending on the level of economic-political freedom (Saha et al., 2017). These may play an essential role in shaping a tourist's perception because he/she will associate the levels of corruption experienced in their country with the country's democratic and economic freedom and use that as a point of comparison whenever they decide on a tourist destination. Therefore, the magnitude of the effects of relative corruption on tourist arrivals may vary depending on the distance of corruption between the origin and destination country.

Table 2. Determinants of tourism demand

Variables	Equation 7			Equation 8		
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable: Tourism Demand						
	-0.104***	-0.114***	-0.087**	-0.075**	-0.077**	-0.073**
	-0.238***	-0.256***	-0.219***	-0.205***	-0.217*	-0.206***
	0.516***	0.514***	0.538***	0.550***	0.564***	0.540***
	1.778***	1.533***	1.116***	0.472***	0.994***	0.294**
	-0.282	-0.429	-0.484	-0.500***	-0.420***	-0.491***
	0.376***	0.371***	0.359***			
	-1.778*			-0.830***		
		-0.907***			-0.918***	
			1.319***			-0.632***
Constant	-0.256	-5.270	-5.338	8.159***	5.165**	13.432***
R2	0.999	0.999	0.999	0.998	0.998	0.998
Adj.R2	0.998	0.998	0.998	0.997	0.997	0.997

Notes: *** p<0.01, ** p<0.05, * p<0.1

Source: Authors' calculations.

Table 2 also shows that “word of mouth” has a significant impact on tourist arrivals, as seen in the positive coefficient for the tourist arrivals during the lag period. These findings agree with previous results that indicate that the lagged dependent variable was an essential indicator of tourist arrivals (Song et al., 2010; Tang, 2018). Furthermore, results show that income in the form of GDP per capita has a substantial impact on tourist arrivals. When the price level and exchange rate were separated, an increase in the income of tourists will significantly increase ($P < 0.05$) the number of tourist arrivals. These results are analogous to previous tourism demand studies where income was the factor that most influenced tourism demand (Cheng, 2012; Song et al., 2010; Tang, 2018). However, coefficients for income are considerably different when the model consisted of the relative tourist prices adjusted for the exchange rate.

The results in Table 2 show that although the exchange rate effects were significant ($P < 0.01$), the non-adjusted relative prices did not significantly

affect the tourist demand. In contrast, when the price levels were adjusted with the exchange rate, the effects of the relative tourist price significantly reduced tourist arrivals. The findings agree with other studies where the impact of relative tourist price levels is significant when standardized with the exchange rate (Dogru & Bulut, 2018; Li et al., 2013; Song et al., 2012). These results point to the importance of standardizing the price levels with the exchange rate when conducting tourism demand studies.

In contrast with the findings of Song et al. (2012) and Song et al. (2003), our coefficient estimates from PS were reasonably consistent throughout the results. It is shown that most of the cross prices included in the model were complementary, as seen in the negative sign of the estimates for PS_{ALL} and PS_{ASE} . The results also show that when the exchange rate was included in the model, the coefficient for PS_{NE} was positive. However, when the exchange rate was excluded from the demand model, PS_{NE} turned negative and significant. Tang and Tan (2016) also found similar results where the neighboring countries in the Asian region were complementary.

Providing some context about the Asian tourism industry would help explain our findings. Several Asian economies heavily depend on the income generated by the tourism industry. Therefore, tourism development is a central issue when countries develop national and regional policies. A policy that has received attention in the ASEAN region is the liberalization of the air transport market. Policies that promote liberalizing the air transport industry help expand the airline industry (Álvarez-Díaz et al., 2019). Such is the case in Asia during the last decade. The region experienced a massive expansion of budget airlines that led to the opening of new routes and the offering of travel packages for tourists (for example, AirAsia's travel program). These developments facilitated the creation of a tourist hub in Asia where tourists would use traveling to Thailand as an opportunity to visit neighboring countries known for their major tourist attractions and vice versa. Consequently, tourists would see a fall in PS as a signal that traveling to the region is more affordable, and they would decide to visit multiple countries in the region, thereby increasing the number of tourist arrivals.

The findings also show that the coefficient for PS was near unit elastic when PS_{ASE} was included in the model. However, the magnitude was considerably lower when PS_{NE} was used instead. Countries in the ASEAN region are geographically close to each other, are famous for their tourist attractions, and are known to have low living costs in comparison to other tourist destinations in Asia (ECA, 2017). Furthermore, the expansion of budget airlines in ASEAN nations led to more air routes passing through Thailand, further integrating the country's tourism industry with the region. In contrast, the tourist industry of countries outside of the ASEAN region might not be as integrated and have tourist attractions and activities that are substantially different than those offered by Thailand. Consequently, the impacts of tourist prices in Northeast Asian nations could be lower than those observed by tourist prices in the ASEAN region.

4. Conclusions

This paper aims to investigate the magnitude of the effects of relative corruption on tourist arrivals. We constructed six different models to capture these effects. The results show that once country of origin GDP per capita increases, the number of tourist arrivals in Thailand also increases. Furthermore, when relative prices were adjusted with the exchange rate, the tourist prices showed a negative effect on tourist arrivals. We also found that alternative tourist destinations in Asia and Thailand were complements. Interestingly, the coefficient of the weighted price index for ASEAN countries was near unit elastic. In turn, the weighted price index for North-East Asian countries had smaller effects on tourist arrivals to Thailand. In terms of corruption, it was found that nations that exhibited lower levels of corruption in comparison to Thailand travelled less to Thailand. Not only was the tourist decision to travel to Thailand affected by the level of corruption in Thailand, but the magnitude of the level of corruption relative to their home country showed a greater effect. Therefore, the extent of the impact of relative corruption on tourist arrivals may vary depending on the distance of corruption between the origin

and destination country.

Our findings also show that alternative tourist destinations in Asia are complements of Thailand. A fall in the price levels in the ASEAN and North-East Asian region leads to an increase in travel to Thailand. Consequently, it is worth considering collaborative initiatives with other nations in the region that would promote and enhance travel to multiple Asian countries. Furthermore, with the enactment of the ASEAN Single Aviation Market (ASEAN-SAM), it is likely the tourism industry of nations within the ASEAN region will further integrate. Thus, policymakers must consider the dynamics of tourism price levels when developing tourism development policies.

The Thai government must pay careful consideration to the country's corruption since a lack of control of corruption deters visitors from traveling to Thailand. Control of corruption is often associated with the government's inefficiency at handling emergencies (for example, the SARS-CoV-2 pandemic). Therefore, to continuously expand the number of tourists, control of corruption must be at the center of the nation's long-run development agenda. Furthermore, smart technology could be expanded in the tourism sector as a means to enhance transparency and accountability. Moreover, indicators of corruption and transparency in the Thai tourism sector could be established and made publicly available as a way to monitor tourists' perception of corruption in the country and the progress of efforts to lower corruption. In the short run, tourist operators and policymakers can use relative corruption as a factor to prioritize and distinguish the type of marketing campaign used to promote Thai tourism. Regular marketing strategies can reach potential tourists in countries with equal or lower levels of corruption relative to Thailand.

For countries whose corruption is vastly lower relative to Thailand, policymakers could focus on specific tourist activities that would increase visitor numbers. For example, tourists from Europe are the biggest group to visit Thailand for medical services (Amornvivat et al., 2016). Policymakers and hospitals could form strategic partnerships to advertise Thailand as a med-

ical tourism destination, which could help attract a larger number of visitors from Europe. Furthermore, there is a possibility that tourists who have a high preference for alternative forms of tourism like adventure, ecotourism, etc., would not be as influenced by the country's level of corruption. Future studies could help investigate whether the preferences for these types of tourism lessen the effects of corruption on tourism demand.

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