

# Factors influencing Muslim tourists' decision making on choosing a destination: Case study of Muslim tourists from Organization of Islamic Cooperation

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**Abstract** | The purpose of this research is to analyze factors influencing the decision making of Muslim Tourists on choosing their tourist destination. The study estimated the model by applying Gravity Model. The general variables influencing tourist demand as well as the specific variables which impact the Muslim Tourist decision making, Global Muslim Tourism Index (GMTI), are included in the model. The research results show that the gross domestic product (GDP) of the origin country, population of origin country, exchange rate, whether they use the same language, sharing of common border, whether they were visa free, have a direct flight, and being ASEAN countries significantly affect increasing the Muslim tourists' demand while the distance between an origin country and a destination country has a negative impact on the number of Muslim tourist arrivals. Additionally, Muslim tourists' requirement variables, which are family friendly destination, number of Muslim visitor arrivals, dining options and assurance, halal friendly accommodation, encourage Muslim tourists to choose the countries as their destinations. The results confirm the Muslim tourists' specific requirements also significantly influence the decision making.

**Keywords** | Halal Tourism, tourists' decision making, Muslim travel

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## 1. Introduction

Over the past few decades, tourism activities have shown substantial and flourishing growth in term of tourism expenses and number of tourists. The tourism industry mainly contributes to many countries economic growths by creating jobs for the local people. Supporting this industry is another way to promote demand for domestic products. Moreover, tourism can be an influential element to other related industries/businesses such as transportation, retails, foods and beverages, so it is the main source of income for countries. Additionally, tourism is the key factor to encourage better income distribution.

In the last decade, Islamic market has been growing and has become important to the world GDP. Moreover, the expansion of Muslim tourists outbound is significant across the globe. According to Global Muslim Travel Index (GMTI), it is found that the number of Muslim travelers has increased from 98 million in 2010 to 131 million in 2017. Its proportion covered 10% of the total global tourists (Mastercard-Crescentrating, 2018). The 57 member countries of the Organization of

Islamic Cooperation (OIC<sup>1</sup>) are the major source market for the global Islamic tourism industry. More than 78 percent of Muslim tourists are from the OIC and the major sources of markets are from the OIC countries in Middle East (SESRIC, 2015). Both Muslim and non-Muslim countries try to develop their own facilities in order to target Muslim tourists as a consequence of these impressive increases.

### 1.1. The Potential of Islamic Economy

#### 1.1.1. Population Size

According to Pew Research Center (2017), the population size of Muslims was 1.752 billion in 2015, equivalent to 24.1% of the world population, and it is expected to be 2.987 billion in 2060, equivalent to 31.1% of the world population. Between 2015 and 2060, the population size is estimated to increase by 70%, which is the highest growth among other religious populations (Pew Research Center, 2017) as shown in table 1.

**Table 1 |** The world population generated by religions in 2015 and estimated in 2060

Religious	Year 2015		Year 2060 (Estimation)		Average Growth Rate Year 2015 – Year 2060
	No. of Population	%	No. of Population	%	
Christians	2,276,250,000	31.2%	3,054,460,000	31.8%	34%
Muslims	1,752,620,000	24.1%	2,987,390,000	31.1%	70%
Unaffiliated	1,165,020,000	16.0%	1,202,300,000	12.5%	3%
Hindus	1,099,110,000	15.1%	1,392,900,000	14.5%	27%
Buddhists	499,380,000	6.9%	461,980,000	4.8%	-7%
Folk Religions	418,280,000	5.7%	440,950,000	4.6%	5%
Other Religions	59,710,000	0.8%	59,410,000	0.6%	0%
Jews	14,270,000	0.2%	16,370,000	0.2%	15%
World Total	7,284,640,000	100.00%	9,615,760,000	100.00%	32%

Source: Pew Research Center (2017)

<sup>1</sup>OIC is the largest Muslim organization and the second largest organization after the United National. Beside the OIC, there are other Muslim organizations, but none of them covers as many countries as the OIC

### 1.1.2. Economic Size

Organization of Islamic Cooperation (OIC)'s economic size has played an important role in the global arena. From 2013 until now, their gross national product (GDP) was based on purchasing

power parity (PPP), proportional to 15% of the global GDP. Their economic growth in 2018 was 3.1%. The economic growth in 2019 was 2.9%. In 2019, those countries' economic size was at 15.1% of the global GDP as shown in table 2. This reflected the purchasing power of these countries.

**Table 2 | Economic Size (PPP), Economic Growth Rate, and GDP per capita**

		2013	2016	2017	2018	2019
Economic Size	OIC	15%	15%	15%	15.2%	15.1%
	Non-OIC Developing Countries	41%	43%	41%	43.9%	44.5%
	Developed Countries	43%	42%	41%	40.9%	40.3%
	Global GDP, PPP (US\$ trillion)	105.05	115.82	122.05	129.46	135.28
Growth	OIC	4.4%	4.4%	.38%	3.1%	2.4%
	Global	2.67%	3.4%	3.8%	3.6%	2.9%
GDP per Capita (US\$)	OIC	8,987	6,556	6,888	10,265	10,275
	OIC Top 10 GDP per cap	33,411	23,655	25,049	27,816	27,233
	OIC Top 20 GDP per cap	21,378	15,189	16,127	17,826	17,539
	Thailand	6,168	5,993	6,593	7,296	7,817

Source: Compiled by Authors based on data from OIC Economic Outlook 2020 (SESRIC, 2020) and World Bank (World Bank, 2021)

In 2017, the economic size of OIC countries was highly concentrated. The economies of the top ten largest countries of OIC was proportional to 73.9% of the OIC economic size. Indonesia covered the largest portion of the economic size at 15.5%, followed by Turkey (12.9%), Saudi Arabia (10.4%), Iran (6.6%), and UAE (5.7%), respectively (SESRIC, 2018). In 2019, the top 10 OIC countries produced 74.2% of the total GDP of OIC countries. In current prices, Indonesia has the highest share (17.4%) followed by Turkey (11.0%), Saudi Arabia (8.8%), and Iran (6.9%). The overall economic performance of the group of OIC member countries remained highly dependent on the developments in the top ten countries (SESRIC, 2020).

Not only was the importance of the Islamic economy focused on the OIC, but the non-OIC countries where a large number of Muslims resided also played an important part such as India (140 million), China (40 million), the USA (8 million), the Philippines (6 million), and France (6 million). It was estimated that the number of Muslims in non-OIC countries could be well over 350 million.

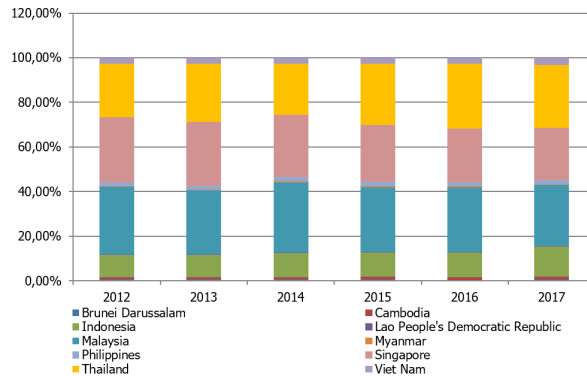
### 1.2. The Muslim Inbound Tourists in ASEAN Countries

Although the main destinations of the global tourists are still in Europe followed by Asia and Pacific, the highest growth rate of inbound tourists in 2019 is Southeast Asia which increased by 7 percent. This rate is higher than the average rate of inbound tourists visiting across the globe (approximately 4 percent) according to the World Tourism Organization (UNWTO) report (UNWTO, 2019). Furthermore, there are 4 countries from Southeast Asia that are in the top 10 OIC destinations (Mastercard-CrescentRating, 2019). From the evidence, ASEAN has become an attractive destination for Muslim tourists. The proportion of the origin countries and number of the tourists has shown the popularity towards their holiday destinations, so it is vital to analyze these figures in detail.

According to figure 1, it is found that the tourist proportion for OIC traveling to the ASEAN countries changed slightly between 2012 and 2017. The top three popular countries for OIC tourists were Malaysia, Thailand, and Singapore. Howe-

ver, the number of tourists who made Indonesia their holiday destination climbed up steadily from 2010 to 2017. Moreover, it is found that these 4

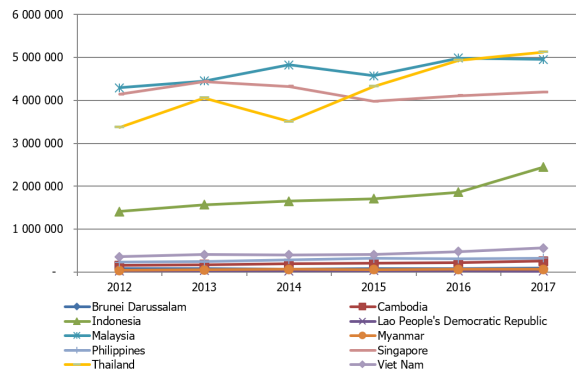
countries are the top ranks in OIC inbound tourist destinations.



**Figure 1** | The Proportion of OIC Tourists Generated By Countries in the ASEAN Region  
Source: Compiled by Authors based on the data from World Tourism Organization

From figure 2, it is revealed that the number of OIC tourists to ASEAN countries was corresponding to the proportion of OIC tourists' analysis in figure 1. The most popular destinations for OIC tourists were Malaysia, Thailand, and Singapore followed by Indonesia. However, the number of

OIC tourists to Malaysia has grown steadily in contrast to Singapore where the OIC tourist number has declined since 2013 despite the total number from both countries not showing a considerable difference in 2012.



**Figure 2** | The Number of OIC Tourists in ASEAN Countries  
Source: Compiled by Authors based on the data from World Tourism Organization

Additionally, the number of OIC tourists to Indonesia has continuously risen. It is found that the growth rate is relatively high compared to other countries in ASEAN. Thailand became the third most popular destination in ASEAN countries and the increasing rate has outpaced Malaysia and Sin-

gapore. Until 2016, it was found that the OIC tourist number in Thailand was similar to the number of OIC tourists in Malaysia. Moreover, in 2017, Thailand became the top most popular destination for OIC tourists when compared with the other ASEAN countries.

**Table 3 | The Growth Rate of OIC Tourists in The Top Four Popular Destinations in ASEAN**

	2013	2014	2015	2016	2017	Average
Malaysia	3.62	8.54	- 5.36	9.07	- 0.58	3.06
Singapore	7.25	- 2.61	- 8.02	3.38	1.96	0.39
Thailand	20.26	- 13.62	23.42	14.10	3.87	9.61
Indonesia	10.99	5.33	3.44	8.83	31.28	11.97

Source: Compiled by Authors based on the data from World Tourism Organization

With the average growth of OIC tourists traveling inbound to the top four popular destinations in ASEAN from 2013 to 2017, Indonesia became the top favorite place with a proportion of 11.97% which continued to reach 31.28% in 2017 followed by Thailand. Thailand was the second favorite place in ASEAN for OIC tourists with an average growth starting from 9.61% to 23.42% in 2015.

### 1.3. The Key Characteristics of Muslim

In terms of belief, Muslims have the strongest hold to their religious lessons and conventions when compared with the other religious followers. Regarding The Pew Forum Survey in 2012, 87% of total Muslims worldwide opinionated that their religion was important to their lives at the highest level. The level of religious importance was heightened to 93% during the Ramadan period. When compared to the western world, less than 30% of the Europeans and 56% of the Americans admitted that religion was very important to their lives. More obviously, in 2015, it was found that 97% of the population in Islamic countries perceived the importance of religion at a 'very important level' (Myers, 2016) As well as this, the comparative study between Thai Buddhists and Malaysian Muslims by Kamaruddin (2007) found that Islamic rules played a greater role in Muslims' shopping habits including services' purchasing than Buddhism did to its followers with statistical significance (Kamaruddin, 2007).

Muslims have lived their lives according to religious principles that mean they have to obey the rules inscribed in Koran, the Muslim Bible. The rules in Koran have equally applied to every Muslim including priests while in Buddhism, the monks need to follow 227 rules and the followers have only five rules to practice. The rules in Koran have covered daily routines from waking up in the morning to going to bed at night, and from their private lives to public exposure. 'Halal' (حلال), derived from the Arabic language, means 'permission' while Haram (حرام) means 'prohibition'. Therefore, every Muslim has to follow the permission and prohibition indicated in Halal's regulation resulting in a way of life. In short, they need to relate those activities to Halal's regulation when they run economic activities at myriad levels: individual, household, manufacturing, domestic, and international.

The attractiveness of Muslim tourist features as previously mentioned has influenced many countries: both Islamic and Non-Islamic countries, to take action to attract Muslim tourists based on various facilities which allowed them to travel comfortably and to practice their religious ritual easily. Hence, the policy to support and develop tourism for Muslims is crucial as this can be another way to increase the national income and to establish national acceptance and reliability of the tourism industry for Muslims. The study of the factors influencing their decision-making is essential because this can help the tourism service providers to organize proper facilities for Muslim tourists.

## 2. Objective

The purpose of this research is to study factors influencing the decision-making of Muslim tourists from OIC countries on choosing their holiday destination.

## 3. Literature Review

Ever since the tourism industry turned into an important sector to enhance economic growth in many countries, there have been multiplicities of literatures exploring the potential factors affecting the tourism demand. Most literatures defined the selected economic variables such as prices, incomes, and exchange rates as significant. In fact, the tourism sector is one of the service sectors which is attached to the leisure time of the consumers. With more leisure time, tourists are leveraging time to travel more.

According to the consumer choice theory, Lancaster (1966) proposed the concept of the consumer decision-making which is called the characteristic model. Consumers do not directly consume the product, but consumers will consume some characters of that product such as quality and attributes which also impact the consumer's utility. The attributes of the product or service are divided into relevant characteristics and irrelevant characteristics. However, the study determines only relevant characteristics of tourism products which relate to tourists' decision-making (Kaosa-ard et al., 2013). The variables that determine international tourism demand according to the concept of the characteristic model can be classified into several categories such as climate, natural resources, infrastructure, leisure facilities, economic, political and social conditions such as language, religion and politics (Ashworth & Goodall, 2013).

For instance, countries which have an abundance of natural resources, rich cultures, and great

history, attract more tourists. Otherwise, fascinating characters of the tourism environment also creates demand (Pholphirul, 2010). This section introduces the six factors influencing the decision-making of Muslim tourists consolidated from the previous researches.

### 3.1. Economic Factors

There are three economic factors involved in decision-making. Those are income, price, and expense.

Daniel and Rodrigues (2007) found that income and disposable income are the variables which are often used for the tourism demand estimation model. Moreover, income has impacted the length of holidays. Seyidov and Adomaitiene (2017) found that high-income tourists had longer holidays than lower-income ones (Seyidov & Adomaitiene, 2017). Moreover, Al-Nahdi and Islam (2011) have shown the relationship between the income level and service purchased selection and that the high-incomers chose the service providers from luxurious appearance (Al-Nahdi & Islam, 2011). While the level of income is an important determinant of tourism demand, there is significant long run relationship with number of tourist arrivals for only some countries (Borhan & Arsad, 2016).

In terms of price, the factor was found that the Middle East tourists are highly price-sensitive, so the satisfaction after receiving service is important when compared with the expense spending (Phunlarp, 2008; Kraipornsak, Tourism Demand Analysis Project of Foreign and Middle Eastern Tourists in Thailand, 2011; Borhan & Arsad, 2016). This also supported the conclusion made by Josiam, Sohail, and Monteiro (2007) who found out that price is an important element in decision making.

Nonetheless, it is predicted that the future transportation cost is decreasing owing to technological developments such as the availability of

low-cost airlines, or the shortened process of reservations. These lower the traveling cost, so the traveling demand will be rising (Kraipornsak, 2014).

### 3.2. Social Factors

Al-Nahdi and Islam (2011) and Ramadhani, Kurniawati and Nata (2020) agreed that social influence played an important role in decision-making among Muslim tourists as they traveled with an extended family. Therefore, the family members' satisfaction towards the destination was important (Al-Nahdi & Islam, 2011; Ramadhani, Kurniawati, & Nata, 2020).

Moreover, personal attitudes have impacted decision-making on choosing holiday destinations. Muslim tourists are concerned about the security of their lives and belongings during the trip. Therefore, their destinations must not contain Islamophobia, the irrational fear of Islam (Mastercard-Crescentrating, 2018). Otherwise, they will feel insecure and unwelcome. Additionally, the increase of violent news about the Muslim protest caused misunderstanding and were misleading towards Islamic people which consequently, made Muslim tourists feel more concerned about their security in their trip. Furthermore, Muslims have become more aware of social responsibility, so the tourism service operating with social responsibility awareness can appeal to Muslim tourists.

Furthermore, language is an important variable in the social factor and plays an imperative role in tourism. The communication skills create abilities to improve tourists' satisfaction, therefore language skills are becoming more necessary to motivate international tourists (Thitthongkam & Walsh, 2010)

### 3.3. Geographic Factors

Distance between the origin countries to the

destination is one of the important variables. The relationship of the distance between the two countries and the number of tourists found that fewer tourists were likely to travel a long-distance (Tangvitoontham & Sattayanuwat, 2017). Additionally, the distance between the two countries can be considered as one of the attributes used to define tourism demand based on the concept of a characteristic model (Pattanarangsarn, 2010). It also reflects the cost of travelling. However, MaKercher (2018) objected that the long-distance did not obstruct their decision of making a trip, but the tourist can feel less interested in the destination (McKercher, 2008).

Timothy, Saarinen and Viken (2016) also found that the frequency of tourist physical flow across the border was high because it was easier for them to travel and copious tourism enhanced programs had been promoted such as shopping centers for shopping sprees (Timothy, Saarinen, & Viken, 2016).

### 3.4. Tourist Attractions

Plenty of research studies found that countries with a richness of tourism resources: wide varieties of tourism, natural resources, and cultural legacy, can arouse tourists' attentions around the world (Koca & Yildirim, 2018). Kraipornsak (2011) and Khasuwan and Komolsewin (2014) concluded that most Muslim tourists tended to make their trips to Islamic countries with a long history related to Islam rather than non-Islam countries. Nevertheless, economic tourist magnets like shopping centers and natural places can be a choice for them as well (Khasuwan & Komolsewin, 2014; Kraipornsak, 2011).

### 3.5. Facilities

Halal facilities for Muslim tourists are the varia-

bles reflecting the infrastructure of Muslim-friendly tourism and are considered as significant attributes in the characteristic model. Seyidov and Adomaitiene (2017) found out that the Islamic basic facility was an influential element affecting the decision-making. There must not be any Non-Halal Services available such as alcohol or casinos. This is because those tourists often travel in a big family and they always raise their concerns about the Haram, the prohibited activities. It is recommended the business that serves the needs of those tourists must refrain from offering Haram activities. The results are supported by Mastercard-CrescentRating (2019) (Seyidov & Adomaitiene, 2017; Mastercard-CrescentRating, 2019). There are essential facilities for the tourism businesses to be kept in mind as follow.

### 3.5.1. Halal Food

The very top-most important facility for Muslim tourists is Halal Food. This claim is supported by several studies (Ramadhani, Kurniawati, & Nata, 2020; Zannierah Syed Marzuki, Hall, & Ballantine, 2012; Tangvitoontham & Sattayanuwat, 2018; Tangvitoontham & Sattayanuwat, 2019). Ramadhani, Kurniawati and Nata (2020) found that the level of Halal food acceptance is individually different among Muslims, so the authority should promote Halal food service providers in the tourism spots. Those businesses should be accredited and checked thoroughly by authorities, especially in the key tourism places. Moreover, the number of Halal businesses should be increased in many parts of the country to enhance Muslim consumable confidences (Tangvitoontham & Sattayanuwat, 2019). This is because the servicing capability of non-Halal businesses was lower than the accredited Halal service providers (Tangvitoontham & Sattayanuwat, 2018).

Additionally, Malaysian Muslims' consuming behaviors have changed. They were likely to dine out more frequently than before as they would like

something different. Hence, they needed to be assured that the diet they had was Halal registered (Zannierah Syed Marzuki, Hall, & Ballantine, 2012). Wan-Hassan and Awang (2009) studied the need for Halal diets for Muslim tourists in New Zealand and found that the Halal accredited restaurants were scarce, so the tourists had to cook by themselves. However, New Zealand was Muslim friendly country and was one of the main Halal meat exporters in the world (Wan-Hassan & Awang, 2009). Noticeably, both Malaysian and Middle East Muslims shared something in common which was that the Middle East Muslims also felt concerned about the Halal food available in the restaurant, especially processed food such as sausages (Zannierah Syed Marzuki, Hall, & Ballantine, 2012; Ireland, 2011).

### 3.5.2. Accommodation

Accommodation for Muslims should be properly arranged according to Islamic regulations. For example, there should be a place for religious rituals accompanied with Koran, an accurate direction spot and a prayer carpet, and an Arabic television channel. Accommodation regulation should be set following Halal's restrictions: no spirits and smoking place available in the room (Ramadhani, Kurniawati, & Nata, 2020; Mastercard-CrescentRating, 2018).

### 3.5.3. Transportation Hubs

Regarding an interview with Muslim tourists in COMCEC's report (2016), it found that the tourists were anxious about the prayer place during their trips such as along the highways, land transportation hubs, or airports. Although the prayer place was not as important as Halal food, those tourists still prayed several times a day during their trip. Thus, the Islamic prayer places should be easily accessible, close to the tourism spots, and set along the main tourism routes (COMCEC, 2016).



According to the report from Mastercard-Crescentrating (2018), an airport is the first place to welcome tourists and the last place where they use its service before departing. The very top concerns for Muslims were Halal restaurants in the buildings which needed to be officially accredited to promote the consumers' confidence. As well as this, the prayer room should be sufficiently prepared in the passengers' halls and areas for connecting flights (Mastercard-Crescentrating, 2018).

It is inevitable to state that Halal food services and prayer rooms are essential elements in any kind of transportation terminals, waiting areas, or rest areas along the highway during a long-distance trip.

### 3.6. Service Quality and Image

The tourism workers in the industry are an essential element to impress the tourists' feelings since their performance reflected the service quality and could create a positive or negative image of tourism. The staff's interpersonal skills could affect tourists' decision-making. They must be knowledgeable in Islamic regulations and daily routines including awareness of providing services to Muslim tourists (Josiam, Sohail, & Monteiro, 2007).

Owing to Thailand's positive image and friendly welcome, Muslim tourists were likely to make Thailand their holiday destination (Kraipornsak, 2008; Khasuwan & Komolsewin, 2014; Santisat, 2014). The famous destination with a positive image also attracted Muslim tourists from foreign countries, too. For example, Lombok Island, Indonesia, has won World Best Halal Tourism Destination for several years in a row. This could be the dream destination for Muslims around the world (Ramadhani, Kurniawati, & Nata, 2020).

Moreover, other elements to be promoted in wellness services are to give the finest care to the consumers by professional Arabic translators and staff who have a good understanding of the Arabic

language and culture (Khasuwan & Komolsewin, 2014).

## 4. Model

This research study has applied the gravity model initiated by Tinbergen (1962) and Linne-mann (1967) because this model has been used to analyze and estimate bilateral trade flows, human flows, or international tourist flow for more than ten years. This is an econometrics empirical model that describes the variables attracting the flow between two economic criteria such as distance and price. The distance is defined as one of the essential attributes in geographic factor in this research. Moreover, the gravity model focuses on the bridging concept of merchandise or human flows between two areas or more. With this concept, when the area feature has changed, it will affect the flow between two areas. Therefore, this model is appropriate to estimate the flow to reflect the traveling cost between two places or more based on the distance and the difference between two places: the origin country of the tourists and the destination.

A function can be formed as followed:

$$\text{Number of Muslim Tourists} = f(\text{Economic, Geographic, Service, Muslim tourists' factor})$$

In this study, the number of Muslim tourists at their destination has been used to reflect their decision-making. The primary variable has been generated into four groups which are economic factor, geographic factor, service factor, and special needs for Muslim tourists' factor (MT).

The first variable represents an economic variable that consists of a GDP of the origin country reflecting the tourists' income; the number of populations reflecting the size of the Muslim tourist market, and the exchange rate between destina-

tion’s currency and USD 1 reflecting the price of destination’s goods and service.

The second variable represents the variable in the gravity model and geography variable that is the distance between the origin country and destination reflecting the traveling cost across the border between two countries and the continent where the destination is located.

The third variable reflects the basic tourism service options such as direct flights and similar language communication between the origin and destination countries, English language proficiency of the destination’s people, and a visa waiver program for tourists.

The last variable represents the special needs of Muslim tourists (MT) such as the total score of readiness for welcoming Muslim tourists, friendly destination for family travelers, a favorite destination for Muslim tourists, Accredited Halal food services, friendly accommodations, and transpor-

tation hubs for Muslims with easily accessible to a prayer room. Those variables are provided by Global Muslim Travel Index (GMTI)

### 5. Data

Since this research was conducted before the COVID-19 pandemic, the study used secondary data derived from the Cross-Sectional Data method in 2017 from three sources. The data of tourists’ numbers were derived from the World Tourism Organization (UNWTO). The tourist arrival data are from 57 countries of OIC to 159 destinations globally. Economic data was derived from the World Bank Organization. The special needs of Muslim tourists’ data were derived from Global Muslim Tourism Index (GMTI). The important variable and source of data are shown in table 4 below.

**Table 4 |** The important variables, source of data, and hypothesis of correlation between dependent and independent variables

Variables	Source of Data	Hypothesis
Number of Muslim Tourists Arrival at the Destination (Dependent Variable)	World Tourism Organization (UNWTO)	
GDP of Origin Countries	World Bank	(+)
Population of Origin Countries	World Bank	(+)
Exchange Rate (Destination Currency: USD)	World Bank	(+)
Distance	GlobeFeed.com (Distance Calculator based on flight time estimation)	(-)
English Score of Destination Country	English Proficiency (EF)	(+)
Specific Needs for Muslim Tourists	Global Muslim Tourism Index (GMTI)	(+)

Source: Compiled by Authors

### 6. Estimation Results

The control variables of this study consist of economic, geography, and basic services of tourism industry variables while the target variables needed to investigate are the variable reflecting the special needs of Muslim tourists as shown in

table 5.

The empirical results are relevant to the previous literatures. Control variables in all models have expected signs. The key variables of the gravity model in both economic factors and geographic factors are statistically significant.

Table 5 | Estimation Results

	Model 1	Model 2	Model 3
In_GDP of origin country	0.3672*** (0.0533)	0.4017*** (0.0533)	0.4377*** (0.0488)
In_Population of origin country	0.6402*** (0.0342)	0.6788*** (0.0340)	0.7116*** (0.0312)
In_Exchange Rate (destination currency: US\$)	0.0014 (0.0146)	0.0355** (0.0146)	0.0342** (0.0135)
In_Distance	-1.2113*** (0.0996)	-1.0723*** (0.0992)	-1.4011*** (0.0940)
In_English Proficient Score of destination country of Destination Country	3.0328*** (0.5277)	2.0060*** (0.5428)	-1.0476* (0.6180)
<b>Global Muslim Tourism Index (GMTI)</b>			
In_GMTI Total Score of Destination Country		1.6537*** (0.2859)	
In_Family Friendly Destination			4.0732*** (0.4064)
In_Popular Destination for Muslim			0.1864** (0.0820)
In_Dining Options and Assurance			0.5648*** (0.1714)
In_Halal Friendly Accommodation			0.5550** (0.2575)
In_Access to Prayer Spaces			-0.2239 (0.1708)
In_Airport Services			-0.5172*** (0.1908)
<b>Dummy Variables</b>			
Sharing Common Border	2.3992*** (0.3246)	2.2466*** (0.3114)	1.9767*** (0.2856)
Using Same Language	0.7713*** (0.2163)	0.4825** (0.2144)	0.7626*** (0.1963)
Visa Free	0.5515*** (0.1519)	0.3456** (0.1511)	0.5156*** (0.1404)
Having Direct flight	2.1164*** (0.1454)	1.8079*** (0.1448)	1.3599*** (0.1376)
ASEAN Country	0.7376*** (0.2408)	0.3191 (0.2354)	0.3953* (0.2283)
ASEAN Direct flight	-0.1384 (0.1086)	-0.0167 (0.1043)	0.0062 (0.0954)
ASEAN Visa Free	-0.5550 (0.3582)	-0.5710 (0.3510)	-0.6200 (0.3289)
Asia	0.9216*** (0.2026)	0.7481*** (0.2250)	0.4033* (0.2255)
Europe	0.0950 (0.2232)	0.3651 (0.2547)	-0.1520 (0.2599)
North America	-0.8280*** (0.2550)	-0.5120 (0.3236)	-0.6132* (0.3540)
South America	-0.5210** (0.2552)	-0.2463 (0.3240)	-0.5022 (0.3676)
_cons	-9.2539 (2.1641)	-13.3501 (2.7437)	-10.3006 (2.3794)
R Square	0.6350	0.6661	0.7246
Adjust R Square	0.6306	0.6615	0.7197
Number of Observations	1,348	1,251	1,246

Source: Estimated by Authors

The first model illustrated the estimated values of controlled variables for the economy and basic tourism services. It found that the direction of the relationship between dependent and independent variables is expected regarding the hypothesis and literatures. R Square value is 0.63 which means this model can fit to interpret the data. The estimated results revealed that the GDP of the origin country, the number of population and the currency exchange rate have a positive correlation to the number of Muslim tourists at the destination country. The high income of tourists in their origin country allows them to have a better-exchanging rate in the destination country. By this, it means they will gain more money at the destination per USD 1. This encourages the increase of OIC Muslim tourists' number at the destination country. The high population in the origin country means the extended size of Muslim tourists' markets. This was influential to the rise of Muslim tourist numbers at the destination.

The long-distant flight between the origin and destination countries can discourage the tourist numbers because it may make their trip more difficult and the tourists face higher costs. On the other hand, the number of tourists who prefer crossing border tourism is still positive, especially the tourists among the ASEAN countries.

The high number of English language proficient people in the destination country or the similar language used between the origin and destination countries can promote the growth of Muslim tourists. As well as this, a tourist visa waiving program and copious direct flights can encourage the rise of tourists in the destination country.

According to the second model, there were estimated control variables and variables reflecting the Muslim special needs derived from the total score of GMTI. The result of a statistical significance level and the directions of the variables relationship are similar to the first model's. The destination country with high GMTI score can be influential in the growth of Muslim tourist numbers signifi-

cantly. The R-Square of the second model is 0.66.

Regarding to the third model, the variables to be estimated the relationships were the control variables and variables reflecting the Muslim special needs. Additionally, the details of each factor have been generated according to the dimension of their needs. It is found that most factors were related to the prior hypothesis except airport services. According to the literature (Mastercard-Crescentrating, 2018), the essential airport services which are required for Muslim tourists are Halal food services and prayer spaces. Obviously, these three variables are somehow correlated. The statistical test also found the high correlation among the variables. The bias and errors may take place and the consequence of misdirection may occur.

The economic factors gave positive impacts on the number of OIC Muslim tourists with statistical significance. In terms of geographic factors, the long distance between the origin and destination countries gave a negative impact on the number of tourists who traveled with a long-haul flight.

In contrast, cross-border tourism can promote more number of tourists. It is also found that OIC Muslim tourists were likely to choose the Asia continent for their holiday destination, especially the countries in the ASEAN region. According to the facilities, visa waiving programs and direct flight availability can be important elements to increase the number of tourists and enhance decision-making on choosing the holiday destination. According to the estimated value from the relationship between Muslims' special need factor and the number of Muslim tourists, it is found that the favorable destinations for a larger number of OIC Muslim tourists must be friendly to a big family traveling, a popular destination, and providing a wide variety of accredited Halal food and accommodation. Increased number of certified halal restaurants and accommodation, the institutional pressures is important (Othman, Ahmad, & Zailani, 2009). However, prayer room and prayer area availability does not affect the number of Muslim

tourists at a significant level which is concurrent to COMCEC's report that the prayer place was not as important as Halal food (COMCEC, 2016).

## 7. Conclusion

This research aims to investigate the factors which impact the decision-making of Muslim tourists from OIC countries on choosing their holiday destination. This study used cross-sectional data in 2017 from 57 countries of OIC to 159 destinations globally. It estimates the gravity model by using econometric technique. The overall macro-economic indicators such as exchange rate, GDP and market size which impact the tourism industry. The countries which desire to attract Muslim tourists need to prepare Muslim-Needs infrastructure especially dining options and assurance as well as Halal friendly accommodation. Also, promoting destination images as a Muslim friendly destination can create demand. Moreover, the basic privileges should be provided visa waiving programs and direct flights between origin and destination countries are significant to increase number of Muslim tourist arrivals.

## Acknowledgement

We need to express our gratitude to the Faculty of Economics, Srinakharinwirot University for funding and giving us the opportunity to work on this project. We would like to express gratitude to the research assistant team, Ms. Nattakarn Saipetch, Ms. Dollaporn Morkya, and Ms. Watcharee Pongpermkijwattana. Finally, I thank anyone who collaborated in producing this paper. Without all these supports, it is impossible to complete this project paper.

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