Human Development Index and Halal Tourism Performance: Case Study of The Country with The Lowest Safety for Muslim Tourists

Rukiah[*1], Wanda Khairun Nasirin[2], Aam Slamet Rusydiana[3], Dwi Ratna Kartikawati[4]

[1,2] UIN Syekh Ali Hasan Ahmad Addary, Padangsidimpuan, Indonesia.
[3] Sharia Economic Applied Research and Training (SMART), Indonesia.
[4] Universitas Krisnadwipayana, Indonesia.

Abstract

The purpose of this study is to see the cause and effect between the Human Development Index and the Global Muslim Travel Index. This research was conducted using quantitative research methods for a dataset of five countries with low security levels. The study was analyzed by the Bayesian Vector Autoregression Panel using Eviews 10. The findings reveal that there is no interaction and contribution between the Human Development Index and the Global Muslim Travel Index in countries with weak security levels for Muslim tourists. However, according to the PBVAR estimate, the Human Development Index affects the Global Muslim Travel Index, as well as the Global Muslim Travel Index affects the Human Development Index. Then the results of the IRF test explained that the Human Development Index and the Global Muslim Travel Index had a stable response in the second period. Finally, the decomposition analysis explains that the Human Development Index and the Global Muslim Travel Index have their respective roles from the first period to the tenth period. Through this research, it is hoped that the relevant state governments can mix policies and anticipate shocks that occur. Therefore, the researcher proposes to increase security for Muslim tourists visiting their country and implement various facilities that support comfort for Muslim tourists.

Keywords*: Human development; Halal tourism; HDI*

Cite this document: APA 11th edition
Rukiah, Nasirin, W. K., Rusydiana, A. S., & Kartikawati, D.R. (2023). Human Development Index and Halal Tourism Performance: Case Study of the Country With the Lowest Safety for Muslim Tourist. *Amwaluna: Jurnal Ekonomi dan Keuangan Syariah*, 7 (2), 243-257. https://doi.org/10.29313/amwaluna.v7i1.11135

1. Introduction

In this century, tourism has become an important and fastest growing sector in many countries, so the study of tourism seems to dominate. For years, tourism scholars have investigated tourism development issues and disseminated their research results through articles published in academic journals (Čorak et al., 2020; Rusydiana et al., 2021). As the review conducted by Leong et al. (2021) demonstrates a bibliometric analysis of tourism review by revealing ten thematic trend areas,

including sustainability studies. The need for these themes is to welcome a new era called the green tourism era.

Basically, the tourism sector is a complex field that has an impact on the economy and environment. According to the World Tourism Travel Council (WTTC), tourism accounts for the majority of jobs in these countries and impacts the economies of 185 countries and 25 economic geographic regions in the world (Global Infographics). In addition, the tourism sector has a negative effect on the environment, one of which is due to most of the holidays through climate change caused by aircraft emissions. The United Nations estimates that air traffic accounts for 2,5% of carbon dioxide production in the form of a greenhouse gas (Cooper, 2018; Lawal & Irhue, 2021; United Nations Environmental Programme, 2014). The impact on the economy and environment has a huge effect on the sustainability of future generations to meet their own needs. With good planning and policies, these impacts can be mitigated (Cooper, 2018). Therefore, it is time to rejuvenate the tourism system, especially halal tourism by adopting the principles of sustainable halal tourism development. In fact, halal tourism is not only developing in Muslim countries, but also in Muslim minority countries (Rusydiana & Marlina, 2020).

The development of sustainable halal tourism makes it possible to meet current needs by taking full account of the current and future economic and environmental impacts. So that the final destination is obtained that can meet the needs of Muslim tourists, the halal industry, the environment and nurture the local Muslim community. This is in line with the score published by The World's Leading Authority on Halal Travel (see Figure 1).
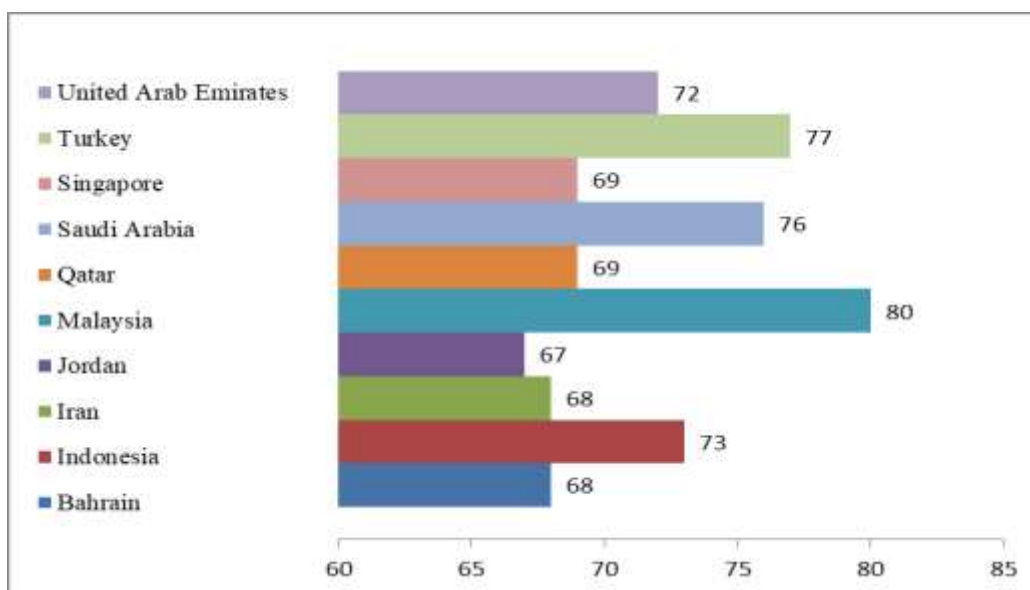

Figure 1. Global Muslim Travel Index
Source: GMTI (2021)

Based on data compiled by The World's Leading Authority On Halal Travel through the Global Muslim Travel Index in 2021 from 140 countries, there are five countries that provide the best access, communication, environment and services for Muslim tourists in the world, namely Malaysia, Turkey, Saudi Arabia, Indonesia and United Arab Emirates. The GMTI score proves that these countries are recommended for Muslim tourists. Because Muslim tourists have several faith-based needs that vary in their level of importance. These needs are prioritized based on Need To have, Good To Have and Nice To Have. The need to have from a country that receives Muslim tourists provides halal food facilities, facilities for prayer, rest rooms for ablution, as well as safety and security from Islamophobic acts. Good to have from a country that receives Muslim tourists visiting by showing

the social activities of the visiting country, Ramadan experiences and local Muslim experiences such as heritage sites and interacting with the Muslim community of the visiting country. Nice to have from a country that welcomes Muslim tourists provides recreational space facilities with privacy and no non-Halal activities including alcohol, discotheques or gambling resorts in the vicinity.

The facilities provided by Muslim tourist destinations are a top priority so that sustainable tourism survives in a changing business environment. These challenges require tourist destination countries to improve their competitive ability by creating quality management and systems, which can be used as a way for the country to achieve its goals. The current era of knowledge-based economy triggers a shift in the pattern that halal tourism requires a theoretical and empirical approach. The literature that refers to the topic of knowledge management explicitly emphasizes the key role in the knowledge creation process on the performance of new companies (Durst & Runar Edvardsson, 2012; Maalaoui et al., 2020) . In other words, the creation of knowledge in new businesses is one of the key factors for the successful implementation of the right strategy by countries that develop the concept of halal tourism.

The main issues being discussed in this area refer to the use of knowledge management and how Islamic countries can have access and mobilize resources to develop halal tourism. While prior research does not appear to have contributed to this. Even though the number of Muslim tourists is quite large in a global scope. Reporting from GMTI (2021), international Muslim tourist arrivals grew from an estimated 108 million in 2013 to 160 million in 2019. As the pandemic had a major impact on the travel sector, Muslim arrivals fell to 42 million in 2020. More than 90% of This trip took place in the first quarter of 2020 before most destinations closed their borders. As international borders are expected to open gradually by the end of 2021, it is estimated that Muslim visitor arrivals will reach 26 million by 2021. It is also projected that the Muslim travel market will recover to 80% by 2023.

Based on the phenomena that occur, this study proposes a human development index to achieve this goal so as to contribute to knowledge management and explain how the specifics of knowledge management among the human development index, performance and sustainability strategies of halal tourism. The first original point of this study is to link two sets of literature reviews that are almost never discussed together, namely the knowledge management literature and halal tourism. In addition, this study reveals how knowledge management encourages the sustainability of halal tourism. This is because poor growth in new social enterprises is not always related to a lack of resources, but rather an inefficient knowledge management process (Maalaoui et al., 2020).

As a first attempt to establish the relationship between development index, and halal development strategy, this study proposes to complete research using PBVAR. The human development index makes a significant contribution to improving lives through access, communication, environment and services operating in the halal tourism sector. The existence of halal tourism is still neglected, further research is needed to examine the relationship between the human development index, performance and halal tourism strategy using the Global Muslim Travel Index (GMTI) among 5 countries that have a high tendency towards Islamophobia.

Several prior research have shown that in recent years extensive theoretical studies on tourism demand have been carried out (Biancone et al., 2019; Buhalis, 2020; Cooper, 2018; Čorak et al., 2020; Dogru et al., 2021; Ivanov & Webster, 2020; Koseoglu et al., 2019; Krajňák, 2021; Li et al., 2021; Liu et al., 2021; Long et al., 2019; McKercher & Mak, 2019; Nguyen et al., 2022; Song et al., 2019). Based on the study, technological advances made it possible to introduce the concept of rejuvenating halal tourism. According to Sundiman et al. (2016), technology revolutionized the tourism industry by synthesizing technological developments for tourism and proposing future perspectives. The existence of technology can change the structure, process and practice of tourism. The successful implementation of new technologies depends on many factors including efficient management of resources. Furthermore, recent research has shown that intellectual assets and

resources can be utilized much more efficiently and effectively if organizations apply knowledge-based techniques to increase their resources and stimulate national tourism (Engström et al., 2003; Ferreira & Franco, 2017a, 2017b; Gomezelj Omerzel & Smolčić Jurdana, 2016; Khalique et al., 2020; Koseoglu et al., 2019; Sundiman et al., 2016). According to Ognjanovic (2017), intellectual capital has a significant role in improving the performance of the hospitality industry and Gomezelj Omerzel & Smolčić Jurdana, (2016) states that intellectual capital makes a significant contribution to improving the viability and performance of SMEs operating in the tourism sector. They argue that the tourism sector is still neglected and further research is needed to assess intellectual capital for the sustainability of SMEs, so this study aims to fill this gap based on research gaps.

2. Literature Review

The Human Development Index (HDI) is a statistical measure used to evaluate the level of social welfare and economic development of a population (Sari, 2018). It is composed of three dimensions: 1) Education, this dimension is measured by the average number of years of schooling for adults aged 25 years and older and the expected years of schooling for children of school-entry age. 2) Health, this dimension is measured by life expectancy at birth. And 3) living standards, this dimension is measured by gross national income (GNI) per capita, adjusted for purchasing power parity (PPP) (Tambunan et al., 2022). The HDI reflects the social and economic status of people in different regions (Alves & Lima, 2021). The index ranges from 0 to 1, with 1 representing the highest level of development. The HDI is calculated by taking the geometric mean of the normalized indices for each of the three dimensions (Sari, 2018). The HDI is also used to evaluate the effectiveness of development policies and programs (Hammarstrand & Sundsmyr, 2013).

Halal tourism is a type of tourism that caters to the needs of Muslim travelers and adheres to Islamic Shariah teachings. It is a growing segment of the tourism industry that has received increased attention in both Muslim and non-Muslim regions (Rasul, 2019). Halal tourism is based on the concept of "Halal," which means anything that is allowed by Shariah and is good for human beings (Azam et al., 2019). The term "Halal tourism" carries different interpretations and confusion in research, and there is an urgent need for a global agreement on what constitutes Halal tourism (Mannaa, 2019). Halal tourism includes various dimensions such as conceptions and definitions, principles, scope and impacts, trends, opportunities, and challenges (Rasul, 2019). It can address several of the seventeen sustainable development goals (SDGs) and can have a significant contribution towards sustainability and Human Development Index (HDI) (Azam et al., 2019).

The correlation between HDI and halal tourism is significant, as the human development index plays a vital role in enhancing quality of life through access, communication, environmental sustainability, and services within the halal tourism sector. However, the existence of halal tourism is still largely overlooked, necessitating further investigation to examine the relationship between the human development index, performance, and the implementation of halal tourism strategies using the Global Muslim Travel Index (GMTI), particularly among five countries with a high tendency towards Islamophobia.

Extensive theoretical studies on tourism demand have been conducted in recent years by various researchers (Biancone et al., 2019; Buhalis, 2020; Cooper, 2018; Čorak et al., 2020; Dogru et al., 2021; Ivanov & Webster, 2020; Koseoglu et al., 2019; Krajňák, 2021; Li et al., 2021; Liu et al., 2021; Long et al., 2019; McKercher & Mak, 2019; Nguyen et al., 2022; Song et al., 2019). Sundiman et al. (2016) highlighted that technology has revolutionized the tourism industry, integrating technological advancements and proposing future perspectives. Technological advancements can reshape the structure, processes, and practices within tourism. Successful implementation of new technologies depends on several factors, including efficient resource management. Moreover, recent research indicates that intellectual assets and resources can be utilized more efficiently and effectively when organizations employ knowledge-based techniques to enhance their resources and stimulate national

tourism (Engström et al., 2003; Ferreira & Franco, 2017a, 2017b; Gomezelj Omerzel & Smolčić Jurdana, 2016; Khalique et al., 2020; Koseoglu et al., 2019; Sundiman et al., 2016). According to Ognjanovic (2017), intellectual capital plays a crucial role in improving the performance of the hospitality industry, while Gomezelj Omerzel & Smolčić Jurdana (2016) assert that intellectual capital significantly contributes to enhancing the viability and performance of small and medium-sized enterprises (SMEs) in the tourism sector. They argue that the tourism sector continues to be overlooked, necessitating further research to assess intellectual capital for the sustainability of SMEs. Hence, this study aims to address this research gap.

3. Methodology

This research was conducted using quantitative research methods using secondary data in 2013-2019. The population in this study as many as 140 world countries using a sampling technique, namely probability sampling with the criteria of the weakest level of security for Muslim tourists from a country with a value below 50 (see Table 1).

Table 1. Global Muslim Travel Index

Countries	Safety Index
Belgium	26
Denmark	47
India	45
Poland	44
United States	50

Source: Organisation of Islamic Cooperation (2016)

The data were analyzed by Panel Bayesian Vector Autoregression (PBVAR). The data were obtained from various sources, namely halal tourism performance obtained from the Global Muslim Travel Index (www.gmti.crescrentrating.com), and the human development index obtained from the United Nations Development. Programs (www.undp.org). The analytical techniques used are determining lag length, Granger Causality test, PBVAR estimation, Impulse Response Function (IRF) and Variance Decomposition (VD).

Considering that the model in this study is a causality model for several tourist destination countries, panel data is used to test the hypothesis. Panel data is a combination of time series and cross section data. The use of panel data can use the Bayesian Vector Autoregression (BVAR) test tool and is generally called Panel Bayesian Vector Autoregression (PBVAR). According to Koop (2009, 2017), BVAR is able to combine historical and a priori information so that it can overcome over-parameterization problems and collinearity problems.

The cause of over-parameterization is because there are too many variables and the lag is too long, causing a large number of parameters with a limited number of observations. In addition, the VAR model formed will be so complex that it causes collinearity problems in the VAR model (Rusydiana, 2009). Therefore, the use of BVAR is one of the best solutions for over-parameterization problems and collinearity problems. This is corroborated by Pesaran & Wickens (1999). "Bayesian VARs are known to produce better forecasts than unrestricted VAR and, in many situations, ARIMA or structural models."

4. Results And Discussion

The most commonly used application in this model is Eviews. Following are the steps in analyzing the data:

Lag Length Criterion

It is important to determine the best lag length because the applied independent lag is no more than endogenous lag and can affect acceptance and rejection. The best lag is chosen before integration test, this is important before VAR calculation (Gujarati, 1970). In determining the lag duration, three forms of testing will be carried out in stages (Ekananda, 2016):

1. Stability Test

All lags are stable because all roots have a modulus less than one (Module < 1) and all lags are in the unit circle (Lütkepohl, 2005).

Table 2. Stability Test

Root	Modulus
0.969885	0.969885
0.314636	0.314636
-0.226235	0.226235
-0.112880	0.112880

Source: EVIEWS 10 (2022)

2. Optimal Lag

Determination of the optimal lag results obtained by two selected interval candidates based on the shortest lag, namely at lag 1.

Table 3. Optimal Lag

Lag	LogL	LR	FPE	AIC	SC	HQ
0	17.44224	NA	0.000732	-1.544224	-1.444651	-1.524787
1	80.02786	106.3955*	2.10e-06*	-7.402786*	-7.104066*	-7.344472*

Source: EVIEWS 10 (2022)
Note: *indicates the selected interval candidate.

Granger Causality Test

In the Granger Causality test using $\alpha = 1\%$, 5% and 10%. The results of the Granger causality test are summarized in the table below which is shown in the table the causal relationship between variables (Lubis, 2020).

Table 4. Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
HDI does not Granger Cause GMTI	20	1.50248	0.2370
GMTI does not Granger Cause HDI		0.00090	0.9765

Source: EVIEWS 10 (2022)

Based on the results of the Granger Causality test, there are three causal relationships between research variables which can be explained as follows:
1. Granger's test with HDI proxy shows that there is no one-way causality relationship, namely HDI is not related to GMTI.
2. Granger's test with GMTI proxy shows that there is no one-way causality relationship, namely GMTI is not related to HDI.

Panel Bayesian Vector Autoregression Estimation
In this steps, the PBVAR estimation results between research variables can be seen in the following table 5:

Table 5. PBVAR estimation

	GMTI	HDI
GMTI(-1)	0.257809	0.002154
	(0.08487)	(0.00927)
	[3.03782]	[0.23229]
HDI(-1)	0.376220	0.950657
	(0.15978)	(0.01758)
	[2.35461]	[54.0623]
C	2.643835	-0.003578
	(0.31290)	(0.03418)
	[8.44939]	[-0.10468]

Source: EVIEWS 10 (2022)

In table 5 test results obtained two PBVAR equations, namely:
1. GMTI
The following equation is formed, namely:
GMTI = 2.64 + 0.26 GMTI + 0.38
Based on the equation can be interpreted as follows:
a. The constant value is positive with a value of 2.64. This indicates that if GMTI and HDI are zero, then GMTI is 2.64%.
b. The GMTI regression coefficient value is positive with a value of 0.26. This indicates that if the HDI is zero, then for every 1% increase in GMTI, the GMTI is 0.26%. GMTI analysis in the GMTI equation model obtained a statistically significant t value at the 5% level, i.e. the value is more than 1.98 (3.04 > 1.98). That is, the GMTI variable affects the GMTI variable.
c. The HDI regression coefficient value is positive with a value of 0.38. This indicates that if the GMTI is zero, then for every 1% increase in HDI, the GMTI will increase by 0.38%. Analysis of HDI in the GMTI equation model obtained a statistically significant t value at the 5% level, that is, the value is more than 1.98 (2.35 > 1.98). That is, the HDI variable affects the GMTI variable.
2. HDI
The following equation is formed, namely:
HDI = -0.004 + 0.951 HDI + 0.002 GMTI
Based on the equation can be interpreted as follows:
a. The constant value is negative with a value of 0.004. This indicates that if GMTI and HDI are zero, then GMTI is 0.004%.

b. The HDI regression coefficient value is positive with a value of 0.951. This indicates that if the HDI is zero, then for every 1% increase in HDI, the HDI is 0.951%. Analysis of HDI in the HDI equation model obtained a statistically significant t value at the 5% level, namely the value is more than 1.98 (54.06 > 1.98). That is, the HDI variable affects the HDI variable.

c. The value of the GMTI regression coefficient is positive with a value of 0.002. This indicates that if the HDI is zero, then for every 1% increase in GMTI, the HDI will decrease by 0.002%. GMTI analysis in the HDI equation model obtained statistically insignificant t value at the 5% level, which is less than 1.98 (0.23 < 1.98). That is, the GMTI variable does not affect the HDI variable.

Impulse Respon Functions (IRFs)

The transition that occurs in the response of the GMTI and HDI variables to the impulses of the GMTI and HDI variables in a period of 10 periods. The following is the resulting response.
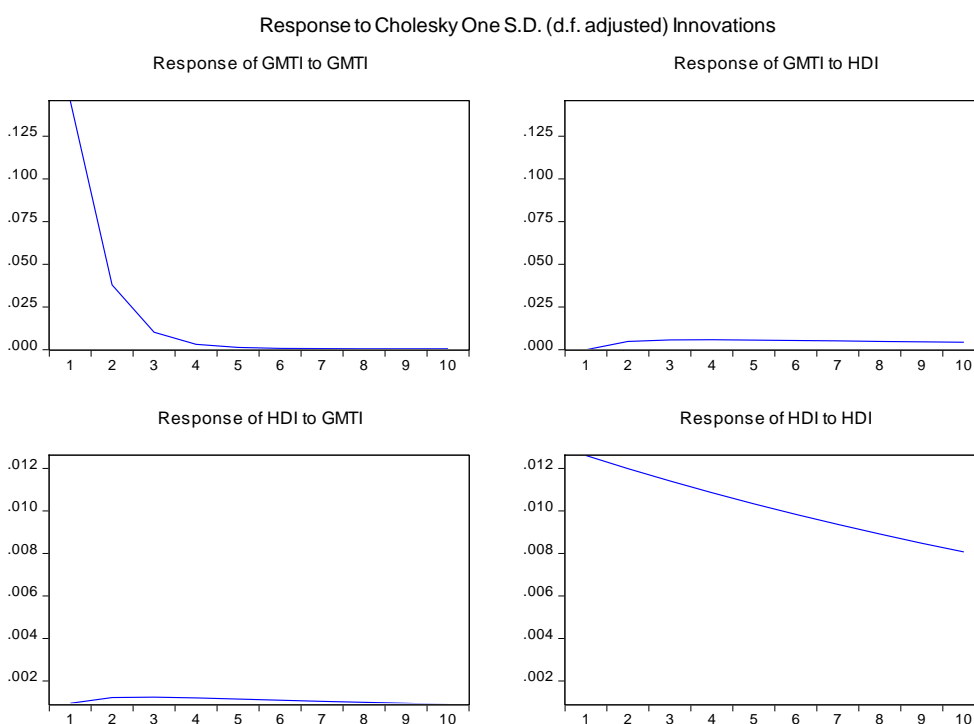

Figure 2. GMTI and HDI Response to GMTI and HDI Impulses
Source: EVIEWS 10 (2022)

Based on the IRF analysis, the GMTI and HDI responses were shocks to themselves in the initial period. While the GMTI response to HDI, as well as HDI's response to GMTI started from zero in the first period. However, the GMTI shock to GMTI decreased until the fifth period then stabilized for the next period. However, the HDI shock to HDI decreased from the first period to the tenth period. The shock that occurred in the HDI variable was due to a sudden shock in the initial period so that the HDI value continued to decline, so the researcher proposed an anticipatory policy before the second period so that the decline in HDI did not occur in the next period. Furthermore, the GMTI response to shocks caused by HDI occurred in the second period, but remained stable in the next period until the tenth period. Likewise, HDI's response to shocks caused by GMTI occurred in the second period, but in the next period it was stable until the tenth period. The shock that occurred in the second period, the researcher proposes a policy mix ahead of the second period with the aim of keeping the value stable.

Forecast Error Variance Decompositions (FEVD)
The following are the VD results on the PBVAR model of GMTI (see Table 6).

Table 6. Variance Decomposition of GMTI

Response of GMTI: Period	GMTI	HDI
1	0.145717	0.000000
2	0.037925	0.004743
3	0.010236	0.005732
4	0.003106	0.005768
5	0.001253	0.005571
6	0.000755	0.005323
7	0.000606	0.005072
8	0.000548	0.004829
9	0.000515	0.004596
10	0.000488	0.004375

Source: EVIEWS 10 (2022)

Decomposition of the GMTI equation with the variations of GMTI and HDI plays a role in the variation of the GMTI equation from the first period to the tenth period, because GMTI is a shock, the variation of the HDI variable only changes after one period, when the shock of other variables has not played a role. The role in the GMTI equation is dominated by GMTI alone. In the GMTI column, the GMTI variant is getting longer, its role is getting smaller until the tenth period.

Table 7. Variance Decomposition of HDI

Response of HDI: Period	GMTI	HDI
1	0.000952	0.012608
2	0.001219	0.011986
3	0.001240	0.011404
4	0.001201	0.010854
5	0.001149	0.010331
6	0.001095	0.009833
7	0.001042	0.009359
8	0.000992	0.008908
9	0.000944	0.008479
10	0.000899	0.008071

Source: EVIEWS 10 (2022)

The decomposition of the HDI equation with the variations of GMTI and HDI plays a role in the variation of the HDI equation from the first period to the tenth period, because HDI is a shock, the variations of the GMTI and HDI variables only change after one period. The role in the HDI equation is dominated by GMTI in the second to the tenth period. In the HDI column, the HDI variant is getting longer, its role is getting smaller until the tenth period.

Findings

The Human Development Index and the performance of halal tourism in nations with the lowest levels of security for Muslim tourists are two intriguing conclusions based on the research mentioned above. The first study reveals that in nations with a low level of security for Muslim visitors, there is no interaction and no contribution between the Human Development Index and the Global Muslim Travel Index. This assertion, however, conflicts with estimations from PBVAR that show a correlation between the Global Muslim Travel Index and the Human Development Index. This can occur in nations where there is a low level of protection for Muslim visitors. The increase of Islamophobia in Europe, America, and even Asia is a factor in the low level of security. The general public's anxiety and concern for the Muslim community stem from their perception of Islam as a radical and violent religion connected to terrorist groups.

In addition, those who harbor islamophobia consider Islamic civilization and culture to be exceedingly inferior and incomparable to their own (Monica, 2021). Naturally, this has a detrimental effect on Muslims who wish to travel or who visit nations where there is a high incidence of Islamophobia. The German Ministry of the Interior verified an increase in Islamophobia symptoms in 2018 with 570 occurrences of attacks on Muslims, according to numerous cases, one of which was in Germany. Attacks on Islamic institutions have also dramatically escalated. As many as 40 Muslims suffered injuries as a result of this incident in 2018. (Rahmah & Tapotubun, 2020). The discriminatory policies implemented by the government, particularly under Donald Trump's presidency, have drawn a lot of attention from the international community to the phenomena of Islamophobia in the United States (Zulian, 2019). This is sufficient to establish that Islamophobia is a serious barrier to the development of halal tourism.

The outcomes of the IRF test and the decomposition analysis constitute the foundation for further discoveries. It is clarified that the Global Muslim Travel Index and the Human Development Index both respond steadily in the second period and play their respective roles from the first to the tenth period. Given the growth in the world's Muslim population, which also continues to grow every year, Rahmah and Topotubun (2020) say that the phenomena of the development of global halal tourism in the globe is a pretty complex issue and has emerged as a new medium in global economic competitiveness. Halal tourism is also neither ominous nor a threat to the existence or culture of other people or things. According to Fatkurrohman in Rahmah and Topotubun (2020), halal tourism can be a supplement to already-existing conventional tourism as well as a substitute for Islamic visitors looking to satisfy both their spiritual and recreational demands.

Al-Qital et al., (2022) also stated that the tourism sector is one of the sectors that has the potential to improve a country's economy because tourism including halal tourism is one of the sources of income that is considered capable of bringing in foreign exchange for the country. In addition, within the framework of developing halal tourism in a country, other industries such as halal food and other halal industrial sectors will certainly have a positive impact. Of course, this will happen if the management of the halal industry including the halal supply chain (Antonio et al., 2020) is managed properly.

For this reason, it is hoped that the government or decision-makers can establish anticipatory policies in halal tourism to minimize shocks and pay attention to the function of the Human Development Index and the Global Muslim Travel Index in each period based on the findings of the analysis. In addition, Islamic organizations like the OIC, organizations that uphold human rights, the United Nations, and others are crucial in defending Muslims' rights against all sorts of prejudice (Monica, 2021). According to the European Commission against Racism and Intolerance (ECRI), more incidents of violence, intimidation, and prejudice against foreign visitors and/or Muslim clients occur frequently in public settings as a result of the fact that they use hotel amenities or services that stir up questions of religion and belief. This has an impact on the viability and growth of halal tourism

(Al-Ansi et al., 2022). Additionally, Ruiz-research Bejarano's from 2017 describes manifestations of Islamophobia meant to halt the expansion of the halal market as well as variations in governmental and institutional policies and attitudes when confronted with the need to balance economic growth with cultural prejudice and intolerance. For this reason, in order to overcome this, the roles of connected parties are urgently needed because halal tourism, or the halal sector is not only about Islam but also touches on aspects of the world economy and future possibilities.

5. Conclusion

Based on the results of the Granger Causality test, it can be concluded that there is no interaction and contribution between the Human Development Index and the Global Muslim Travel Index in countries with weak security levels for Muslim tourists. However, according to the PBVAR estimate, the Human Development Index affects the Global Muslim Travel Index, as well as the Global Muslim Travel Index affects the Human Development Index. Rahmah and Topotubun (2020) say that the phenomena of the development of global halal tourism in the world is a pretty complex issue and has emerged as a new medium in global economic competitiveness. Then the results of the IRF test explained that the Human Development Index and the Global Muslim Travel Index had a stable response in the second period. Finally, the decomposition analysis explains that the Human Development Index and the Global Muslim Travel Index have their respective roles from the first period to the tenth period. Through this research, it is hoped that the relevant state governments can mix policies and anticipate shocks that occur. Therefore, the researcher proposes to increase security for Muslim tourists visiting their country and implement various facilities that support comfort for Muslim tourists.

Authors Contribution Statement

Conceptualization: Rukiah

Data curation: Wanda Khairun Nasirin

Formal analysis: Wanda Khairun Nasirin

Investigation: Rukiah, Wanda Khairun Nasirin

Methodology: Aam Slamet Rusydiana

Project administration: Wanda Khairun Nasirin

Writing-original draft: Rukiah, Wanda Khairun Nasirin

Writing-review & editing: Dwi Ratna Kartikawati, Aam Slamet Rusydiana

References

Al-Ansi, A., Chua, B. L., Kim, C. S., Yoon, H., & Han, H. (2022). Islamophobia: Differences across Western and Eastern community residents toward welcoming Muslim tourists. *Journal of Hospitality and Tourism Management*, *51*, 439-450. https://doi.org/10.1016/j.jhtm.2022.04.018

Alves, J. G., & Lima, T. P. (2021). COVID-19 lethality in non-elderly individuals in cities with different Human Development Index. *Tropical Doctor*, *51*(1), 124-125. https://doi.org/10.1177/0049475520943716

Al Qital, S., Sunarya, S. L., & Rusydiana, A. S. (2022). Manajemen Pariwisata Halal. *Ar Rehla: Journal of Islamic Tourism, Halal Food, Islamic Traveling, and Creative Economy*, *2*(2), 140-157.

Antonio, M. S., Rusydiana, A., Laila, N., Hidayat, Y. R., & Marlina, L. (2020). Halal value chain: A bibliometric review using R. *Library Philosophy and Practice (e-journal)*, *4606*.

Azam, M.S., Abdullah, M., & Razak, D.A. (2019). Halal tourism: definition, justification, and scopes towards sustainable development.

Biancone, P. P., Secinaro, S., Radwan, M., & Kamal, M. (2019). Halal Tourism: An Opportunity for the Global Tourism Industry. *Tourism Analysis*, *24*(3), 395–404. https://doi.org/10.3727/108354219X15511865533112

Buhalis, D. (2020). Technology in tourism-from information communication technologies to eTourism and smart tourism towards ambient intelligence tourism: A perspective article. *Tourism Review*, *75*(1), 267–272. https://doi.org/10.1108/TR-06-2019-0258

Cooper, C. (2018). Managing tourism knowledge: A review. *Tourism Review*, *73*(4), 507–520. https://doi.org/10.1108/TR-06-2017-0104

Čorak, S., Boranić Živoder, S., & Marušić, Z. (2020). Opportunities for tourism recovery anddevelopment during and after COVID-19: Views of tourism scholars *versus* tourism practitioners. *Tourism*, *68*(4), 434–449. https://doi.org/10.37741/t.68.4.5

Dogru, T., Bulut, U., & Sirakaya-Turk, E. (2021). Modeling tourism demand: Theoretical and empirical considerations for future research. *Tourism Economics*, *27*(4), 874–889. https://doi.org/10.1177/1354816619894460

Durst, S., & Runar Edvardsson, I. (2012). Knowledge management in SMEs: A literature review. *Journal of Knowledge Management*, *16*(6), 879–903. https://doi.org/10.1108/13673271211276173

EIR2022 Global Infographics Page 1.pdf. (n.d.).

Ekananda, M. (2016). *Analisis ekonometrika time series* (2nd ed.). Mitra Wacana Media.

Engström, T. E. J., Westnes, P., & Furdal Westnes, S. (2003). Evaluating intellectual capital in the hotel industry. *Journal of Intellectual Capital*, *4*(3), 287–303. https://doi.org/10.1108/14691930310487761

Ferreira, A., & Franco, M. (2017a). Strategic alliances, intellectual capital and organisational performance in technology-based SMEs: Is there really a connection? *International Journal of Business and Globalisation*, *18*(1), 130. https://doi.org/10.1504/IJBG.2017.081024

Ferreira, A., & Franco, M. (2017b). The Mediating Effect of Intellectual Capital in The Relationship Between Strategic Alliances and Organizational Performance in Portuguese Technology-Based SMEs:

Strategic Alliances and Intellectual Capital. *European Management Review*, *14*(3), 303–318. https://doi.org/10.1111/emre.12107

Gomezelj Omerzel, D., & Smolčić Jurdana, D. (2016). The influence of intellectual capital on innovativeness and growth in tourism SMEs: Empirical evidence from Slovenia and Croatia. *Economic Research-Ekonomska Istraživanja*, *29*(1), 1075–1090. https://doi.org/10.1080/1331677X.2016.1211946

Gujarati, D. (1970). Use of Dummy Variables in Testing for Equality between Sets of Coefficients in Linear Regressions: A Generalization. *The American Statistician*, *24*(5), 18–22. https://doi.org/10.1080/00031305.1970.10477220

Hammarstrand, L., & Sundsmyr, S. (2013). Aid Effectiveness on Living Standards - How Does Aid Affect Human Development Index HDI in Sub-Saharan Africa.

Ivanov, S., & Webster, C. (2020). Robots in tourism: A research agenda for tourism economics. *Tourism Economics*, *26*(7), 1065–1085. https://doi.org/10.1177/1354816619879583

Khalique, M., Hina, K., Ramayah, T., & Shaari, J. A. N. bin. (2020). Intellectual capital in tourism SMEs in Azad Jammu and Kashmir, Pakistan. *Journal of Intellectual Capital*, *21*(3), 333–355. https://doi.org/10.1108/JIC-11-2018-0206

Koop, G. (2009). Bayesian Multivariate Time Series Methods for Empirical Macroeconomics. *Foundations and Trends® in Econometrics*, *3*(4), 267–358. https://doi.org/10.1561/0800000013

Koop, G. (2017). Bayesian Methods for Empirical Macroeconomics with Big Data. *Review of Economic Analysis*, *9*(1), 33–56. https://doi.org/10.15353/rea.v9i1.1434

Koseoglu, M. A., Mehraliyev, F., & Xiao, H. (2019). Intellectual connections in tourism studies. *Annals of Tourism Research*, *79*, 102760. https://doi.org/10.1016/j.annals.2019.102760

Krajňák, T. (2021). The effects of terrorism on tourism demand: A systematic review. *Tourism Economics*, *27*(8), 1736–1758. https://doi.org/10.1177/1354816620938900

Lawal, M. O., & Irhue, K. Y. (2021). Exploration of The Interplay Between Tourism, Global Warming And Health In Nigeria. *Administrative Law*, *4*(1), 19.

Leong, L.-Y., Hew, T.-S., Tan, G. W.-H., Ooi, K.-B., & Lee, V.-H. (2021). Tourism research progress – a bibliometric analysis of tourism review publications. *Tourism Review*, *76*(1), 1–26. https://doi.org/10.1108/TR-11-2019-0449

Li, Z., Zhang, X., Yang, K., Singer, R., & Cui, R. (2021). Urban and rural tourism under COVID-19 in China: Research on the recovery measures and tourism development. *Tourism Review*, *76*(4), 718–736. https://doi.org/10.1108/TR-08-2020-0357

Liu, A., Fan, D. X. F., & Qiu, R. T. R. (2021). Does Culture Affect Tourism Demand? A Global Perspective. *Journal of Hospitality & Tourism Research*, *45*(1), 192–214. https://doi.org/10.1177/1096348020934849

Long, W., Liu, C., & Song, H. (2019). Pooling in Tourism Demand Forecasting. *Journal of Travel Research*, *58*(7), 1161–1174. https://doi.org/10.1177/0047287518800390

Lubis, R. (2020). Analysis Relationship of Economic Growth, Fiscal Policies and Demographic to Islamic Human Development Index in Indonesia (Granger Causality Approach). *FITRAH:Jurnal Kajian*

Ilmu-Ilmu Keislaman, *6*(1), 31–46. https://doi.org/10.24952/fitrah.v6i1.2490

Lütkepohl, H. (2005). *New Introduction to Multiple Time Series Analysis*. Springer.

Maalaoui, A., Le Loarne-Lemaire, S., & Razgallah, M. (2020). Does knowledge management explain the poor growth of social enterprises? Key insights from a systematic literature review on knowledge management and social entrepreneurship. *Journal of Knowledge Management*, *24*(7), 1513–1532. https://doi.org/10.1108/JKM-11-2019-0603

Mannaa, M.T. (2017). Is Islam with or against Tourism? Halal Tourism Perception; Definition and Requirements. https://doi.org/10.21608/jaauth.2017.50042

McKercher, B., & Mak, B. (2019). The impact of distance on international tourism demand. *Tourism Management Perspectives*, *31*, 340–347. https://doi.org/10.1016/j.tmp.2019.07.004

Monica, R. A. (2021). Upaya Organisasi Kerjasama Islam (OKI) dalam Menangani Islamophobia di Uni Eropa. *COMSERVA: Jurnal Penelitian dan Pengabdian Masyarakat*, *1*(7), 335-343. https://doi.org/10.36418/comserva.v1i7.43

Nguyen, C. P., Thanh, S. D., & Nguyen, B. (2022). Economic uncertainty and tourism consumption. *Tourism Economics*, *28*(4), 920–941. https://doi.org/10.1177/1354816620981519

Ognjanovic, J. (2017). Relations of intellectual capital components in hotel companies. *Industrija*, *45*(2), 181–196. https://doi.org/10.5937/industrija45-12144

Organisation of Islamic Cooperation. (2016). ON CANDIDACIES SUBMITTED BY OIC MEMBER STATES FOR POSTS IN INTERNATIONAL ORGANIZATIONS. *Organisation of Islamic Cooperation*. https://www.oic-oci.org/page/?p_id=178&p_ref=59&lan=en

Pesaran, M. H., & Wickens, M. R. (Eds.). (1999). Handbook of Applied Econometrics. Volume I: Macroeconomics. In *Handbook of Applied Econometrics. Volume I: Macroeconomics* (pp. 73–138). Blackwell Publishing Ltd. https://doi.org/10.1111/b.9780631215585.1999.00007.x

Rahmah, H., & Tapotubun, H. H. (2020). Narasi Industri Pariwisata Halal Di Negara Jepang Dan Jerman. *Jurnal Sosiologi Reflektif*, *14*(2), 287-306. https://doi.org/10.14421/jsr.v14i2.1830

Rasul, T. (2019). The trends, opportunities and challenges of halal tourism: a systematic literature review. *Tourism Recreation Research*, *44*, 434 - 450. https://doi.org/10.1080/02508281.2019.1599532

Ruiz-Bejarano, B. (2017). Islamophobia as a deterrent to halal global trade. *Islamophobia Studies Journal*, *4*(1), 129-145.

Rusydiana, A. S., Aswad, M., Pratomo, W. A., Hendrayanti, E., & Sanrego, Y. D. (2021). Halal Tourism Indicators: A Bibliometric Study. *Library Philosophy and Practice (e-journal)*, *5738*.

Rusydiana, A. S., & Marlina, L. (2020). Analisis sentimen terkait sertifikasi halal. *Journal of Economics and Business Aseanomics (JEBA)*, *5*(1), 69-85.

Rusydiana, A. S. (2009). Hubungan Antara Perdagangan Internasional, Pertumbuhan Ekonomi dan Perkembangan Industri Keuangan Syariah Di Indonesia. *Tazkia Islamic Finance and Business Review*, *4*(1).

Sari, Y.P. (2018). The Analysis Of Human Development Index In West Sumatera: Can It Replace GDP as a

Welfare Proxy?". https://doi.org/10.24036/ECONOMAC%2FVOL2-ISS4%2F72

Song, H., Qiu, R. T. R., & Park, J. (2019). A review of research on tourism demand forecasting: Launching the Annals of Tourism Research Curated Collection on tourism demand forecasting. *Annals of Tourism Research*, *75*, 338–362. https://doi.org/10.1016/j.annals.2018.12.001

Sundiman, D., Mursidi, A., & Putra, S. S. (2016). Knowledge Management Role on Creating Service Excellence: Case Study on Building Materials Supermarket In the city of Sampit - Indonesia. *Proceedings of the The 11th International Knowledge Management in Organizations Conference on The Changing Face of Knowledge Management Impacting Society*, 1–6. https://doi.org/10.1145/2925995.2926044

Tambunan, K., Harahap, I., & Tarigan, A.A. (2022). HUMAN DEVELOPMENT INDEX (HDI) IN THE QUR'AN FROM THE QURAISH SHIHAB'S PERSPECTIVE. *HUMAN FALAH: Jurnal Studi Ekonomi dan Bisnis Islam*. https://doi.org/10.30829/hf.v9i2.13367

United Nations Environmental Programme. (2014). *Environmental impacts of tourism: Global level*. United Nations Environmental Programme.