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# Behavioural Intention for Digitalization in Mosque Tourism for Sustainability: Integration of the UTAUT & TAM model

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ABSTRACT

The unique architecture of mosques and its heritage has attracted tourists and contributed to the growth of the tourism industry. However, this uniqueness is not enough to make mosque tourism stay relevant and grow in the tourism industry. Newer digital technologies are continually being introduced in this sector, rendering them increasingly accessible to a wider audience. Through an integration of the UTAUT Theory and TAM model, the study found that "Effort Expectancy (EE), Performance Expectancy (PE), Perceived Ease of Use (PEOU), and Social Influence (SI)" through Trust as the mediator, significantly influenced the Behavioural Intention (BI) in adapting digitalization in mosque tourism. Meanwhile, Trust was the mediating effect in between Facilitating Conditions (FC) and Perceived Usefulness (PU) insignificant to Behavioural Intention (BI) of mosque tourism digital platform credibility. This study is significantly important to facilitate the responsible growth of the mosque tourism industry looking at the current needs of digitalization approaches.

## 1. INTRODUCTION

Muslim and non-Muslim visitors are captivated by a mosque's distinctive architecture, it functions as a memorial to the faith of Islam (Moghavvemi et al., 2021). Today, Middle Eastern nations, including Egypt, Iran, Saudi Arabia, and the UAE, are actively promoting their ancient mosques and cultural heritage via

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tourist marketing initiatives. In addition, mosque tourism has also been recognised for its economic contribution (Campoy-Muñoz et al., 2023), with potential growth opportunities within this niche market and continuous investments towards its expansion (Wong, 2021).

In Malaysia, various efforts have been taken by Islamic Tourism Malaysia (ITC) towards promoting mosque tourism, for example, JAKIM had released "Guidelines on Mosque Tourism" and the ITC created a "Mosque Trails guide for Malaysia" and mosque profiles for travellers (Moghavvemi et al., 2021). However, the growth of mosque tourism in Malaysia looks to be gradual in contrast to other nations (Sutrisno et al., 2022). Therefore, digitalization is seen as one of the best approaches for promoting mosque tourism to enhance the local economy. Within the realm of tourism, internet-of-things (IoT) technology has emerged as an influential player, implementing technology equipment like geolocation wristbands, mobile guide applications for visitors, and ticket payment systems applications that facilitate swift transactions, and virtual reality technological advancements that enhance immersive experiences (Natocheeva et al., 2020; Van Tuan et al., 2021; Foris et al., 2022).

Thus, the intent of this project was to investigate the potential sustainable growth of mosque tourism through digitalization. Empirical conduct was established through the integration of the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Technology Acceptance Model (TAM). These theories were employed due to their extensive utilisation of established theoretical frameworks throughout the realm of technologies and innovation, as well as to acquire a profound understanding and formulate forecasts on consensus of novel technology by visitors.

The UTAUT encompasses several constructs including Effort Expectancy, Performance Expectancy, Facilitating Conditions, Social Influence, Perceived Usefulness, and Perceived Ease of Use. Meanwhile, TAM is represented by the constructs of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU). In addition to these factors, trust was incorporated as a mediator variable in the research framework. This study was important as it suggested ways to improve the operationalisation of and accessibility to a wider range of tourists towards commercialising mosque tourism for the sustainable growth of this industry.

## 2. LITERATURE REVIEW

### 2.1 Current Development of Mosque Tourism

Mosques are generally the place of worship for Muslims (Radwan, 2020), on top of serving as a social and gathering place and an education centre for the surrounding neighbourhood (Hussain et al, 2023). Mosques are adorned with calligraphy, geometric designs, and Quranic verses to signify their holy nature and communicate a spiritual message to observers and worshippers (Bashar, 2021). Besides that, some mosques are designed to show the cultural values of the country, attracting either local or international tourists. Undeniably, mosques have become popular tourist destinations because of their distinctiveness. Some tourist mosques have dual usage, i.e., serving as a place of worship and a tourist attraction (Navajas-Romero et al., 2020). Mosques are regarded as tourist attractions due to their uniqueness and have excellent service.

In Malaysia, tourist mosques are visited by local and foreign tourists who are attracted by their design and cultural values. According to Moghavvemi et al. (2021), mosques are meant to be an 'International

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Source of Knowledge' for visitors as they represent the religious and cultural expressions of a certain place through their architecture, programmes, and events. Towards developing the Malaysian mosque tourism industry, local mosques are receiving a surge of tourists from diverse nations. For example, the Putra Mosque located in Putrajaya and the Jamek Mosque in Kuala Lumpur have received many tourists from South Korea and China (Wong, 2021). The Crystal Mosque in Terengganu is also popular among tourists due to its remarkable construction and scenic riverfront location. In addition, the mosque is strategically situated in close proximity to the pier, facilitating easy access to the nearby islands (Islamic Tourism Centre of Malaysia). Likewise, the Al Hussain Mosque in Kuala Perlis is built on a floating platform and is in close proximity to the Kuala Perlis Jetty. Located near the jetty that connects to Langkawi, this mosque stands out due to its distinctive architectural design and tranquil seaside setting, providing visitors with an immersive experience (Islamic Tourism Centre of Malaysia).

To set rules for the growth and evolution of Malaysia's mosque tourism industry, the Islamic Tourism Centre (ITC) is responsible for promoting mosques in the country as tourist attractions and supporting the development of this industry. The ITC acknowledges the growing interest of tourists in visiting mosques in this country, and hence has taken the initiative to facilitate this growth by allowing non-Muslims to visit mosques under the proper guidance. The ITC has published a standard Mosque Trails in Malaysia as well as mosque profiles for tourists' reference (Sidik et al., 2023). According to the ITC (2021), Malaysia has set up requirements for mosque tourism, particularly for areas within two kilometres of a metropolis. These include a natural setting, distinctive communities, regional food, and other nearby attractions. The ITC is committed to continuously promote mosque tourism in Malaysia and has collaborated with many academic institutions to enhance the experience of tourists while trip to the mosques.

### 2.2 Digitalization in Islamic Tourism

Tourism is undergoing a period of dramatic transformation because of the ways in which digital technologies are redefining and altering people's daily lives, places of employment, and methods of doing business. Digitalization has introduced innovations across various fields. Also, the tourism industry is at the forefront of using cutting-edge tech like VR/AR, the IoT, and AI to create new and exciting products, services, and experiences. Cloud computing, data analytics, advanced robotics, automation, mobile technologies, and advanced robotics are all examples of technologies that fall under this category (Rane et al., 2023).

Specific to the tourism industry, Pencarelli (2020) examined the digital revolution advantages, such as simplified payment services, enhanced travel decision-making, and emerging travel patterns. Digitalization has fundamentally changed the way people travel and widely used in the tourism industry through online sales of packaged tours, mobile app development for tourists, online training for beginner traveler's, virtual tours, QR codes, mobile guides, and reference materials (Natocheeva et al., 2020). Therefore, digitalization was expected to be actively utilised in Islamic tourism via the usage of mobile applications which show interesting places to visit, halal restaurants, prayer times, Qiblat direction, Islamic hotels, and location of mosques.

In terms of mosque tourism, digitalization was also practised by several mosques in Malaysia. The management of mosques had started using QR codes to record visitors' details and collect donations, digital television screens to spread information about activities and programmes organised by the mosque, and QR codes to obtain information about the mosque's history and architecture. Furthermore, most of the mosques

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have started to promote their programmes and activities through their official social media accounts. To attract local and foreign tourists, the management of mosques needed to utilise popular media platforms i.e TikTok, YouTube, and Facebook rather than depending solely on their official website.

### 2.3 UTAUT and TAM Model in Tourism Study

The UTAUT provides a framework for understanding the process by which individuals adopt and integrate new technologies into their lives (Berhanu & Raj, 2024). The UTAUT model consists of four constructs which were used to analyse customers' intentions known as performance expectation, effort expectancy, social influence, and facilitating condition (Abbad, 2021). The term expectation performance describes a person's belief about how utilising a system will increase their productivity. The effort expectancy relates to how easy it will be to use the technology. Then, social influence refers to how much an individual appreciates the opinions of others while deciding whether or not to adopt a new system. Meanwhile, the facilitating conditions concern a person's view of the availability of technological and organisational assistance for using the system.

Previously, researchers in the field of tourism used the UTAUT model, like Ali et al. (2022), who looked at how tourists use information and communication technology (ICT). The study found that performance expectations, interest, and behaviour intentions had a big effect on people's plans to use information and communication devices. However, effort expectancy, social influence, and facilitating conditions did not show any significant advantage. Chang et al. (2022) investigated and analysed the influential variables affecting adoption of advanced technology in Jeju Island, Korea, which is widely known for its tourism industry. The results of the empirical analysis showed that blockchain's trust transparency had an effect on both success and effort expectations.

Meanwhile, the TAM elucidates the adoption of information systems by individuals (Marikyan & Papagiannidis, 2023). The TAM consists of two factors: perceived usefulness and perceived ease of use (Wicaksono & Maharani, 2020). Basiouni (2023) used the TAM to investigate the benefits of augmented reality (AR) in improving navigation at the Grand Mosque of Makkah. The study found that AR adoption was influenced by perceived value, utility, and user behaviour. Meanwhile, Rakhmad and Hidayat (2021) investigated the level of preparedness among the population of East Java in adopting digitalization. This study examined the transition from a traditional or manual marketing procedure to an digitalization marketing approach that is devise an internet connection. The findings revealed the intrinsic element, particularly perceived usefulness (PU) and perceived ease of use (PE), tremendous effect on how people in East Java accepted digitalization. However, it was observed that the internal factors related to PE did not have any influence on the adoption of digitalization in East Java culture.

In conclusion, The UTAUT and TAM theory gave important insights into the factors that affect how tourist in the tourism industry feel about digitalization, it has the potential to be utilised in understand and enhance Islamic tourism experiences. They shed light on the role of perceived usefulness, ease of use, and other relevant factors.

### 2.4 Trust as A Mediator for Intention to Adopt Digitalization in the Islamic Tourism Industry

Trust plays a pivotal purpose in the research, influencing the interaction among tourists' inclination to engage in digitalization within the framework of mosque tourism. Annahl et al. (2021) examined the role of trust as a significant factor in shaping the attitudes of Indonesian Muslims towards contributing funds to

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mosques. Widiyanto et al. (2021) highlighted that institutional credibility and information build trust towards zakat contribution. The acceptance and deployment of digitalized technologies within the domain of mosque tourism were heavily influenced by the presence of trust. The establishment of trust had a pivotal role in persuading travellers to confidently engage with digital channels associated with mosque tourism.

Other studies have also found that trust had significant influence on how swiftly technology was used in tourism. For instance, Ratnasari et al. (2021) discovered that trust played a significant role in the adoption of electronic commerce for travel-related goods and services. Similarly, Budi et al. (2021) found that trust influenced the adoption of location-based services for tourism. Furthermore, prior studies have shown that incorporating the digital revolution into the tourism industry had a clear influence on trust, as indicated by the levels of consumer satisfaction and feedback received on websites (Sutrisno et al., 2022). The outcomes of this study indicated that the implementation of digitalization in mosque tourism is dependent on the level of trust that tourists have in digital platforms. Trust played a crucial role not just in the correlation among visitors towards digital platforms, but also within the internal dynamics of tourism organisations.

Within this particular framework, trust can be delineated as the level of assurance an individual possesses in information systems (Tam et al., 2020) and the extent to which a technology is designed for utilisation (Venkatesh, 2022). Prior studies have indicated that trust played a crucial role in the acceptance of technology by consumers. In addition, Vahdat et al. (2021) discovered a robust correlation between trust and behavioural intention, a finding that was corroborated by Perez-Morote et al. (2020), who observed that trust can influence the adoption of information technology. This suggests that trust played an vital function in guaranteeing the effective adoption and execution of digitalization in mosque tourism, as it impacted tourists' attitudes, assurance, and readiness to interact with digital platforms and services.

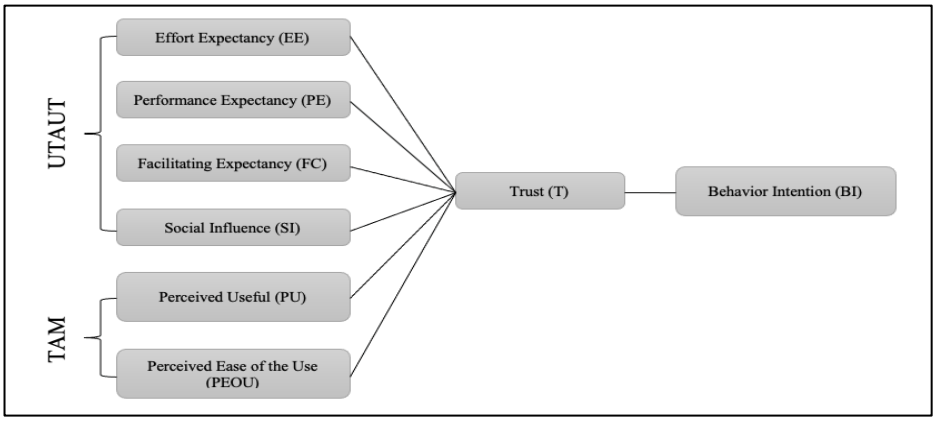


Figure 1. Integration of UTAUT and TAM in Research Framework

## 2.5 Hypotheses

The following were the research hypotheses developed for the current study:

**H1:** Trust mediates the relationship between Effort Expectancy (EE) and Behavioural Intention (BI).

**H2:** Trust mediates the relationship between Performance Expectancy (PE) and Behavioural Intention (BI).

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**H3:** Trust mediates the relationship between Facilitating Expectancy (FE) and Behavioural Intention (BI).

**H4:** Trust mediates the relationship between Social Influence (SI) and Behavioural Intention (BI).

**H5:** Trust mediates the relationship between Perceived Usefulness (PU) and Behavioural Intention (BI).

**H6:** Trust mediates the relationship between Perceived Ease of Use (PEOU) and Behavioural Intention (BI).

## 3. METHODOLOGY

Understanding the study approach was essential to comprehend how the overall research was carried out and why the topic was selected. This study applied a deductive approach looking at the integration of existing theories and knowledge specifically UTAUT and TAM to explore the mediating role of trust in tourism behaviour. The integration of these theories was a novelty in this field, entailing the constructs of effort expectancy, performance expectancy, facilitating conditions, social influence, perceived usefulness, perceived ease of use, trust, and behavioural intention.

Upon receiving ethical approval from the university, a set of questionnaires was distributed to a total of 300 respondents following the minimum sample size stipulated by g*power. The respondents consisted of tourists and individuals who utilised digital technology for mosque tourism. A total of 270 questionnaires was returned over a period of one month. The questionnaires were analysed using SPSS 28 and PLS-SEM 4.0, utilising a 5-point Likert scale.

Sampling is the act of choosing a subset of a broader population in order to carry out research or gather data in a representative manner. In this study, purposive sampling was selected focusing on tourists or digital users in the context of mosque tourism, i.e., those who use utilise gps bracelets, smartphone applications, e-wallets that facilitate swift transactions, virtual reality technologies, and so on. In this study, the researcher adapted the questionnaires from Chao (2019), Lewis (2019), Arkorful et al. (2020), Manrai and Gupta (2020), Chayomchai (2021), Ho et al. (2021), and Liu et al. (2022) entailing questionnaire items on effort expectancy, performance expectancy, facilitating conditions, social influence, perceived usefulness, perceived ease of use, trust, and behavioural intention.

Effort expectancy measured the level of comfort and usefulness that users experience when using a particular digital system. Performance expectancy referred to the belief that using a specific digital can enhance, be advantageous, or extend an individual's performance. Next, facilitating condition referred to the level of confidence that an individual has in the ability of the current organisational and technological infrastructure to support the use of digitalization. Social influence referred to intentional and unintentional efforts to influence another person's beliefs, attitudes, or behaviour. Trust referred to the level of confidence that users had in the reliability and security of a digital system, as well as the integrity and competence of those who operated and managed it. Perceived usefulness referred to the level at which people think a technology would be helpful, while perceived ease of use was defined as the level to which people believed a technology was simple to use.

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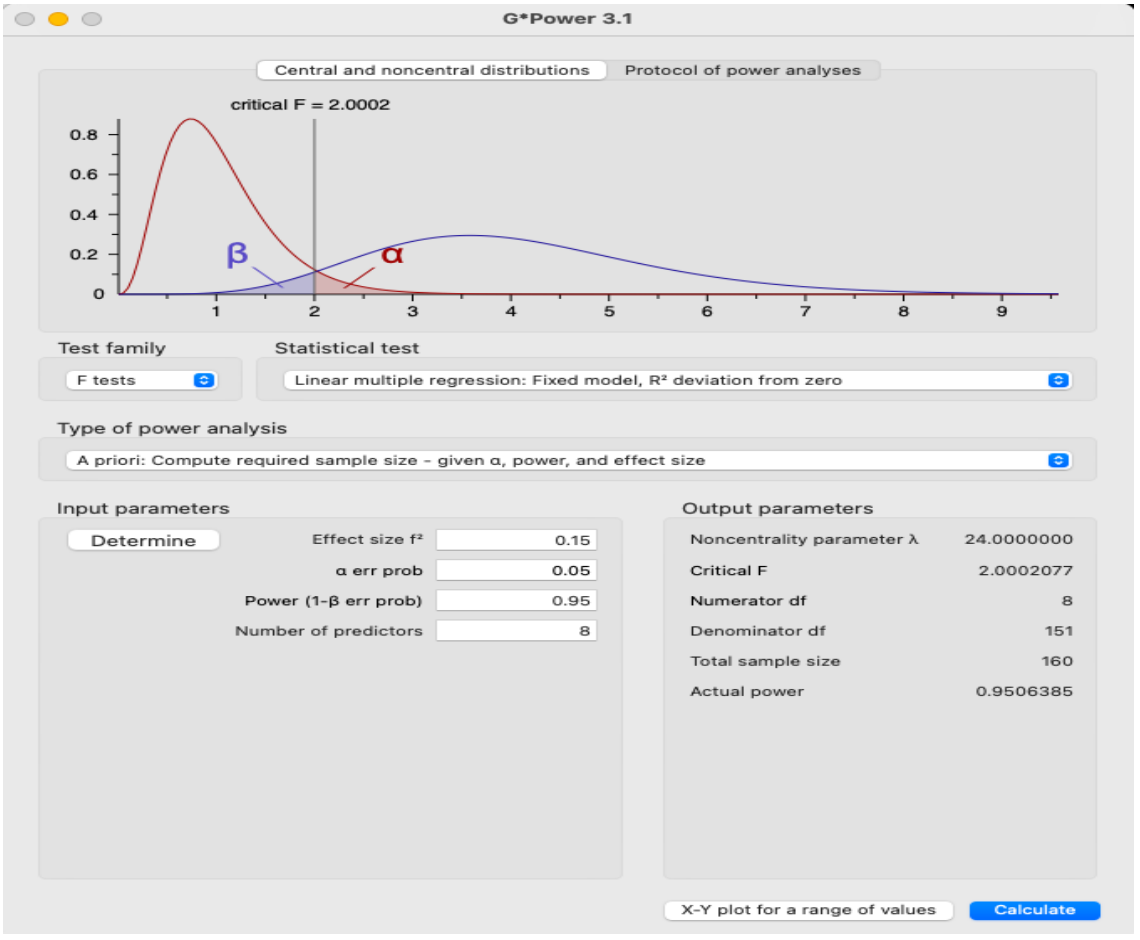


Figure 2. G*Power Analysis

## 4. DATA ANALYSIS AND FINDING

There were two parts to the study's inferential statistical analysis in PLS-SEM using SmartPLS 4.0. In the first step, the measurement model was looked at to see if the research model was suitable. During this part of the study, several statistical tests were used, such as the Average Variance Estimates (AVE), Composite Reliability (CR), Cronbach's Alpha, discriminant validity, and Heterotrait-Monotrait (HTMT) test. The second step was to look closely at the structural model to test the study hypotheses and find out how the variables were connected and how they affected each other. In this study, beta values, t-statistics significance, and coefficient of determination ($R^2$) were used to rate the model (2020 Hair et al.).

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### 4.1 Measurement Model

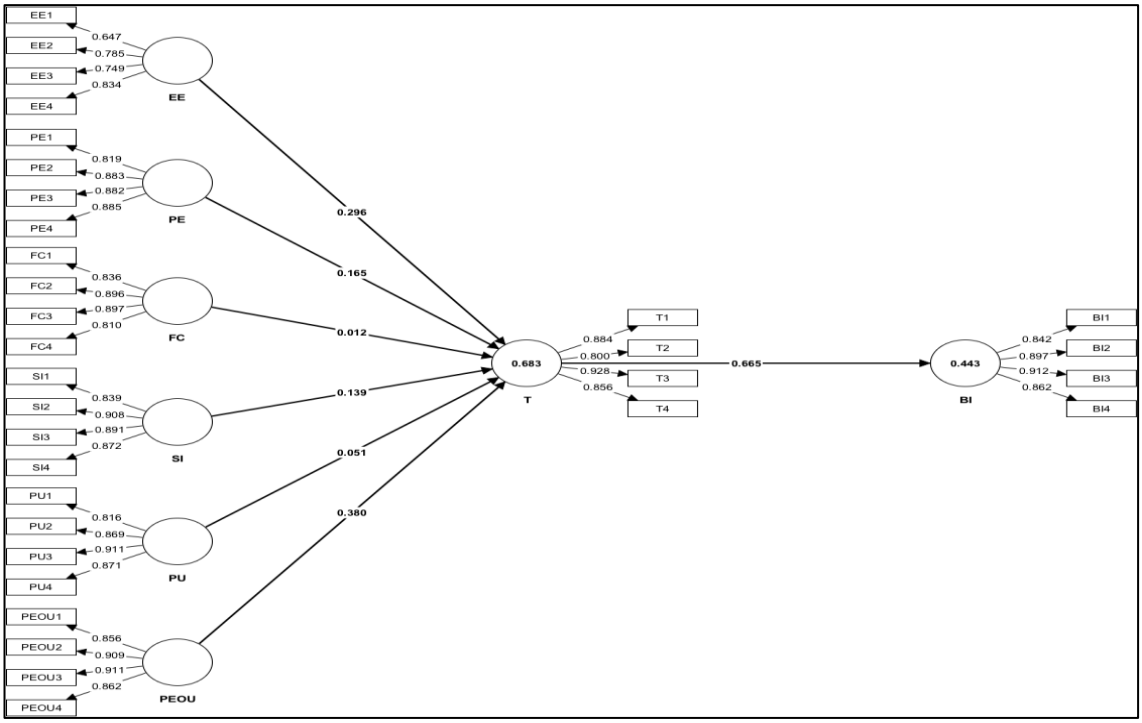


Figure 3. Measurement Model

The study variables and constructs must meet the standards for composite reliability (CR), average variance extracted (AVE), and factor loadings (Fornell & Larcker, 1981; Hair et al., 2020). The ideal value for the composite reliability (CR) should be between 0.6 to 0.70, whilst the recommended value for the factor loadings should exceed 0.7. Conversely, the ideal value for the AVE should exceed 0.5. Henseler et al. (2009: 277-319) decided to use the Heterotrait-Monotrait (HTMT) ratio instead of the commonly used Fornell-Larcker's criterion to evaluate the discriminant validity of their model. According to the conservative hypothesis testing and model testing (HTMT), the value should be below the 0.85 thresholds. The measurement model output is reported in Tables 1 and 2.

The present study demonstrated that the factor loadings of the construct were above the criterion of 0.7. Additionally, the composite reliability (CR) value surpassed the threshold of 0.70, while the average variance extracted (AVE) value exceeded the threshold of 0.50. According to Hanafiah (2020), the findings shown in Table 1 demonstrated that the measurement model exhibited acceptable levels of discriminant validity. The HTMT value was below the suggested threshold (<0.90) (Henseler et al., 2009), as seen in Table 2.

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Table 1. Evaluation of Measurement Models

| Code | Items | Loading | Cronbach Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|---|
| Effort Expectancy (EE) | | | 0.748 | 0.761 | 0.572 |
| EE 1 | I thought that digitalization in mosque tourism should be easy to use. | 0.647 | | | |
| EE2 | I can learn to use digitalization in mosque tourism by myself. | 0.785 | | | |
| EE3 | I start using digitalization in mosque tourism by myself because it is clear and easy to understand. | 0.749 | | | |
| EE4 | I think, I would be able to use digitalization in mosque tourism fluently and skilfully. | 0.834 | | | |
| Performance Expectancy (PE) | | | 0.891 | 0.902 | 0.753 |
| PE1 | Digitalization can be useful in managing mosque tourism. | 0.819 | | | |
| PE2 | Digitalization can be valuable as digital marketing on mosque tourism. | 0.883 | | | |
| PE3 | Digitalization can be advantageous in the long run on mosque tourism. | 0.882 | | | |
| PE4 | Using digitalization increases my probability to get more information about mosque tourism. | 0.885 | | | |
| Facilitating Conditions (FC) | | | 0.883 | 0.895 | 0.741 |
| FC1 | A digitalization platform such QR Code, PayWave, and many more has been set up in every mosque tourism. | 0.836 | | | |
| FC2 | Mosque tourism has provided a complete procedure "how to use" for existing digital. | 0.896 | | | |
| FC3 | Digitalization platform in mosque tourism are well-matched with other technologies I used. | 0.897 | | | |
| FC4 | I am helped by others at times when I have difficulties using digital platform. | 0.81 | | | |
| Social Influence (SI) | | | 0.901 | 0.909 | 0.771 |
| SI1 | I want to use the digitalization in mosque tourism because my friends and my family do so. | 0.839 | | | |
| SI2 | I want to use digitalization in mosque tourism because most people there (mosque) do so. | 0.908 | | | |
| SI3 | I want to use digitalization in mosque tourism because I see a lot of positive feedback from influencers on using digitalization platforms (Websites, Applications and others) regarding mosque tourism. | 0.891 | | | |
| SI4 | I want to use digitalization in mosque tourism because the mosque staff introduced the use of digitalization to me. | 0.872 | | | |
| Perceived Useful (PU) | | | 0.89 | 0.892 | 0.753 |
| PU1 | Using digitalization in mosque tourism will give greater experience on my travel. | 0.816 | | | |
| PU2 | Using digitalization in mosque tourism would increase productivity in planning my travel. | 0.869 | | | |
| PU3 | Using digitalization in mosque tourism would enhance my effectiveness in planning my trip. | 0.911 | | | |

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| Code | Items | Loading | Cronbach Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|---|
| PU4 | Using digitalization would improve the performance on mosque tourism. | 0.871 | | | |
| Perceived Ease of the Use (PEOU) | | | 0.907 | 0.909 | 0.783 |
| PEOU1 | Learning to use digitalization in mosque tourism would be easy for me. | 0.856 | | | |
| PEOU2 | I expect to become skilled in using digitalization on mosque tourism. | 0.909 | | | |
| PEOU3 | I expect digitalization on mosque tourism to be accessible for tourist to use. | 0.911 | | | |
| PEOU4 | Digitalization in mosque tourism is flexible to interact with . | 0.862 | | | |
| Trust (T) | | | 0.89 | 0.896 | 0.754 |
| T1 | I believe that digitalization platform in mosque tourism is trustworthy and will not misuse personal information. | 0.884 | | | |
| T2 | I believe that digitalization platform in mosque tourism provider is honest. | 0.8 | | | |
| T3 | I believe in the service and quality of digitalization platform in mosque tourism. | 0.928 | | | |
| T4 | I believe the digitalization platform in mosque tourism has the ability to fulfil consumers need. | 0.856 | | | |
| Behavioural Intention (BI) | | | 0.902 | 0.905 | 0.772 |
| BI1 | Overall, the use of digitalization in mosque tourism is interesting. | 0.842 | | | |
| BI2 | Overall, I love to use digitalization in mosque tourism. | 0.897 | | | |
| BI3 | I intend to use digitalization in mosque tourism consistently in the future. | 0.912 | | | |
| BI4 | I predict I would try more digitalization platform in mosque tourism on the future. | 0.862 | | | |

Table 2. HTMT Assessment

| | BI | EE | FC | PE | PEOU | PU | SI | T |
|---|---|---|---|---|---|---|---|---|
| **BI** | | | | | | | | |
| **EE** | 0.616 | | | | | | | |
| **FC** | 0.366 | 0.426 | | | | | | |
| **PE** | 0.609 | 0.639 | 0.324 | | | | | |
| **PEOU** | 0.666 | 0.697 | 0.41 | 0.728 | | | | |
| **PU** | 0.708 | 0.673 | 0.437 | 0.707 | 0.795 | | | |
| **SI** | 0.415 | 0.287 | 0.729 | 0.287 | 0.353 | 0.488 | | |
| **T** | 0.738 | 0.818 | 0.467 | 0.713 | 0.826 | 0.733 | 0.442 | |

## 4.2 Structural Model

Expectations for Effort (EE), Expectations for Performance (PE), Facilitating Conditions (FC), Social Influence (SI), Perceived Usefulness (PU), Perceived Ease of Use (PEOU), and Behavioural Intention (BI)

 

were all linked in the study. Trust was seen as an important factor in the interaction. In Table 3, it can see the path coefficient that was found by analysing the structure model.

The findings revealed that Effort Expectancy (β=0**; p<0.001), Perceived Ease of Use (β=0**; p<0.001), Perceived Usefulness (β=0.002*; p<0.05), and Social Influence (β=.009*; p<0.05) through Trust as the mediator, significantly influenced the Behavioural Intention (BI) in adapting digitalization in mosque tourism. Meanwhile, the mediating effect of Trust in the link between Facilitating Conditions (FC), Perceived Usefulness (PU), and Behavioural Intention (BI) is not significant of mosque tourism digital platform credibility. In brief, the study revealed a noteworthy association between trust and the behavioural intention to participate in digitalization within the context of mosque tourism.

Table 3. Path Analysis

| Path | Beta Value | Std error | t-value | p-values | f-square |
|---|---|---|---|---|---|
| EE -> T -> BI | 0.197 | 0.037 | 5.395 | 0.000** | - |
| FC -> T -> BI | 0.008 | 0.037 | 0.21 | 0.834 | - |
| PE -> T -> BI | 0.11 | 0.035 | 3.132 | 0.002* | - |
| PEOU -> T -> BI | 0.253 | 0.045 | 5.669 | 0.000** | - |
| PU -> T -> BI | 0.034 | 0.04 | 0.861 | 0.389 | - |
| SI -> T -> BI | 0.093 | 0.035 | 2.626 | 0.009* | - |
| *Notes: $R^2$ = 0.443 $Q^2$= 0.332; p-value<0.001**; p-value<0.05** | | | | | |

R-Square ($R^2$) quantifies the extent to which fluctuations in exogenous factors contribute to variations in endogenous variables, revealing both their strengths and shortcomings (Wardana et al., 2020). This study demonstrated a moderate explanatory power with an $R^2$ of 0.443. Chin (1998) used the predictive sample reuse method ($Q^2$) to test how well the structural model could predict things. The results showed that both study models were good at making predictions. Chin (1998) came up with the impact size function ($f^2$), which figured out the change in the inner model that was linked to the effect size.

## 5. RESULT AND DISCUSSION

Digital technologies are significantly altering various aspects of human life, including as living, working, traveling, and conducting business. Consequently, these technologies are also revolutionizing and restructuring the tourism industry. In the context of mosque tourism, even with unique architectures and history to attract local and international tourists, digitalization is still seen as important for mosque tourism to stay relevant and competitive. The study's findings also showed the significant relevance of digitalization in mosque tourism, looking at the integration of UTAUT and TAM. These theories were used to assess the expectation and perception of users in potentially adopting digitalization in mosque tourism.

There were three constructs from UTAUT that significantly influenced the trust and behavioural intention to apply digitalization in mosque tourism namely Effort Expectancy (EE), Performance Expectancy (PE) and Social Influence (SI). Meanwhile, the another constructs namely Facilitating Conditions (FC) were shown to be insignificant. Then, for TAM, Perceived Ease of Use (PEOU) was shown to have a significant influence and Perceived Useful (PU) was shown to be insignificant on the trust and behavioural intention to adopt digitalization in operationalising the mosque tourism sector in Malaysia.

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Performance expectancy (PE) refers to the extent to which an individual believes that employing a system would enhance their job performance (Abbad, 2021). In this study, the element of the usefulness of digitalization can be advantageous for the mosque tourism sector in managing, developing, and communicating information to the public. The significant result of the study showed that performance expectancy, through trust, influenced the behavioural intention of users in adopting digitalization in the mosque tourism sector. This was because the user believed that digitalization should assist in improving mosque tourism operations and service delivery, ultimately leading to the sector's growth and sustainability. This finding was supported by Nguyen et al. (2022) mentioned that performance expectancy exerted a strong and beneficial influence on customer trust and behavioural intention towards technology adoption.

Then, as stated by Al-adwan (2022), the degree of simplicity involved with using the systemwas referred to as Effort Expectancy (EE). Thus, from the study, EE was preferred by the respondents in adopting digitalization towards operationalising mosque tourism in Malaysia. This was because EE played a crucial role in determining the ease of using digital tools for mosque tourism, leading to greater acceptance and adoption among users in Malaysia (Berakon et al., 2023). For instance, the use of mobile apps for mosque tourism allows visitors to easily access information (Aljuwaiber & Elnagar, 2022) about prayer times, specific rituals, historical facts, and architectural features of the mosques in a user-friendly and convenient manner, thus enhancing their overall experience. QR codes were also utilized in some mosques, enabling visitors to easily make donations or access guides for a more immersive and informative experience (Maulana et al., 2022). In short, the integration of digital tools in mosque tourism in Malaysia enhanced the visitors' overall experience and facilitated easy access to relevant information and services. Thus, this study had significantly proven that users will trust the operators of digital mosque tourism when there was simplicity in using the platform, ultimately leading to the intention to use the digital platform. This finding was significantly supported by El-Sofany and Abou El-Seoud (2022) who mentioned that a user-friendly interface and easy navigation were key factors in gaining trust and increasing the intention to use digital platforms for mosque tourism. Therefore, the operators of mosque tourism need to ensure that the platform used for operationalising mosque tourism was simple.

Meanwhile, it also supported hypothesis H4 which claimed that there was a notable correlation between the social influence and behavioral intention, which was influenced by trust. Social influence is the term used to describe how colleagues, friends, and social norms affect a person's decision to embrace and use new technology in order to enhance the tourist experience and help the user acquire knowledge and information while travelling. The current study also confirmed that social influence was significant in affecting trust and behavioural intention to adopt digitalization in the mosque tourism sector. This findingwas supported by Kaur and Arora (2020), Sharma et al. (2021), Amaliyah and Hartono (2022), and Bonang et al. (2024).

The concept was directly associated with the construct of Perceived Ease of Use (PEOU) derived from the TAM. PEOU refers to the view held by an individual or organization that a specific technology is user-friendly (Wicaksono & Maharani, 2020). There are several dimensions of PEOU including ease of navigation, fast response, ease of understanding the display or interface, and easy accessibility from anywhere and at any time. In this study, the ease of learning and understanding as well as the flexibility in using digitalization were significantly emphasised, indicating that the users were very concerned with the

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element of flexibility and simplicity in adopting digitalization in the mosque tourism sector. This finding was also supported by Al-Meshafi (2022) who showed a favourable correlation between the perceived ease of use and perceived utility of social media. If pilgrims perceived social media as user-friendly, it will positively influence their behavioural intents to utilise it for religious tourism, leading to a rise in their usage. Furthermore, the aforementioned research indicated a favourable correlation between the user-friendliness of social media platforms and individuals' attitudes towards utilising them. Specifically, if social media was perceived as easy to navigate and operate, it will influence individuals' inclination to use it.

## 6. CONCLUSION

Malaysia is renowned for its unique mosque design, which captivated a large number of tourists, regardless of religious background. Mosque designs in Malaysia have exhibited a remarkable fusion of traditional Islamic architecture and contemporary components, adding to their allure. The mosques' elaborate features, beautiful domes, and towering minarets not only showcased the country's abundant Islamic heritage, but also functioned as emblems of architectural brilliance. Upon entering these sacred spaces, tourists are immediately struck by a profound sense of wonder and reverence, as they behold the remarkable ingenuity and artistry employed in their creation.

However, this allure would be fleeting unless it adapted to the ever-advancing times, particularly in regards to digitalization which plays a crucial role in fostering the sustainable development of the mosque tourist business in Malaysia. In addition to the Jamek Mosque, Putrajaya Mosque, Crystal Mosque, and Al-Hussain Mosque, the Al-Busyro Mosque in Sungai Petani, Kedah, had created its own application known as AlBusyra2u. This comprehensive application provides detailed information on the mosque, as well as additional features such as the Quran, qibla indicator, prayer times, and almsgiving. Such digitalization initiative not only enhances visitor experience, but also showcased how technology can be utilised to promote Islamic values and practices. By embracing digitalization technologies, the Al-Busyro Mosque had revolutionised the mosque tourism business in Malaysia, setting a new standard for engaging and serving Muslim tourists.

Nevertheless, several factors must be considered when developing digital applications including functionality, performance, security, and user experience, which can significantly impact the adoption of digitalization, particularly in the tourism industry. Consequently, the study determined that Effort Expectancy (EE), Performance Expectancy (PE), Social Influence (SI), and Perceived Ease of Use (PEOU) all have a favourable and significant impact on individuals' trust and intention to adopt digitization in mosque tourism. Therefore, it can be inferred that the TAM and UTAUT were applicable for comprehending and enhancing the utilisation of digitalization in mosque tourism. The mosque tourism business must prioritise technology to stay current and to effectively compete in the constantly changing tourism scene.

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## 8. CONFLICT OF INTEREST STATEMENT

The authors agree that this research was conducted in the absence of any self-benefits, commercial or financial conflicts and declare the absence of conflicting interests with the funders.

## 9. AUTHORS' CONTRIBUTIONS

**Nazatul Aqilah Sutrisno**: Conceptualisation, methodology, formal analysis, investigation and writing-original draft; **Balkis Kasmon and Mohd Hafiz Zainal Abidin**: Conceptualisation, methodology, and formal analysis; **Masrul Hayati Kamarulzaman and Aunkrisa Sangchumnong**: Conceptualisation, formal analysis, and validation; **Siti Sara Ibrahim**: Conceptualisation, supervision, writing- review and editing, and validation.

## 10. DECLARATION OF GENERATIVE AI IN THE WRITING PROCESS

During the preparation of this work, the author(s) used **Grammarly, QuillBot** and **ChatGPT** in order to enhance language clarity and improve sentence structure of the manuscript, while maintaining the originality and integrity of the research content. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

## 11. ETHICS STATEMENT

The authors declare that this research did not involve human or animal subjects. All experimental procedures were performed in accordance with the institutional Safety, Health, and Environmental (HSE) protocols of Universiti Teknologi MARA and were reviewed and approved by the Institutional Ethics Committee Approval No: REC/07/2022 (PG/MR/162). All procedures involving human participants/animal subjects complied with the ethical standards of the 1964 Helsinki Declaration. Informed consent was obtained from all participants, and data anonymity was strictly maintained throughout the study.

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