INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 9, (2025) E-ISSN: 2222-6990

Smart Mosque Information System (SMIS): A Framework for Digital Daʿwa and Religious Tourism in Malaysia

Haziah Sa'ari, AlBakri Mohammad, Razifah Othman

Faculty of Information Science, Universiti Teknologi MARA Cawangan Negeri Sembilan, Kampus Rembau, Negeri Sembilan, Malaysia

Email: haziah095@uitm.edu.my, albakri@uitm.edu.my, razif879@uitm.edu.my

DOI Link: http://dx.doi.org/10.6007/IJARBSS/v15-i9/26428

Published Date: 04 September 2025

Abstract

Mosques have historically served as centers of worship, education, governance, and community life. In the contemporary era, this role is expanding into socio-digital domains where Smart Technologies shape religious communication, community engagement, and tourism. Although research on smart tourism and digital religion has explored technologies such as QR codes, mobile applications, AR/VR, and artificial intelligence, the integration of these technologies into the Smart Mosque Information System (SMIS) to support digital daʿwa and religious tourism remains limited, particularly in Islamic and Malaysian contexts. Although research on smart tourism and digital religion has explored technologies such as QR codes, mobile applications, AR/VR, and artificial intelligence, the integration of these technologies into the SMIS to support digital daʿwa and religious tourism remains limited, particularly in Islamic and Malaysian contexts. The SMIS builds on the foundations of conventional Mosque Information Systems (MIS) by extending their scope into smart, digitally enabled services that address both spiritual and tourism needs. This study develops a conceptual framework for SMIS adoption through an integrative review of Scopus-indexed literature published between 2010 and 2025, drawing on global research alongside Malaysian contributions. The framework synthesizes the Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), and the Technology–Organization–Environment (TOE) framework from perspectives of Digital Religion and Peace Communication (DR/PC). This approach reframes SMIS adoption by emphasizing spiritual legitimacy, inclusivity, and intercultural trust. PC is identified as a mediating mechanism that channels technology adoption into stronger community cohesion and interfaith understanding. The framework aligns with Malaysia's national digital strategies, including MyDIGITAL and Smart State NS 2027, and offers mosque authorities, policymakers, and tourism stakeholders practical guidance to implement scalable and future-oriented systems. Conceptually, it extends adoption research in faith-based contexts by embedding religious communication and peacebuilding into models of smart technology use. This positions SMIS as both a

technological and socio-cultural innovation that advances digital transformation, strengthens community resilience, and promotes sustainable religious tourism.
Keywords: Smart Mosque Information System, Religious Tourism, Digital Daʿwa, Technology Adoption, Digital Religion, Peace Communication, Mosque Digitalization, Malaysia

Introduction

Religious tourism has emerged as one of the most dynamic sectors in global tourism, attracting millions of pilgrims and faith-oriented travelers to sacred destinations in search of spiritual fulfillment and cultural enrichment. Defined as travel motivated by religious purposes, it encompasses pilgrimages, visits to holy sites, and participation in ritual or educational programs that reinforce spiritual identity and communal belonging (Taneja, 2023; Au-Yong-Oliveira et al., 2024). Beyond its spiritual dimension, religious tourism also contributes to socio-economic development by generating employment, supporting local income, and fostering intercultural understanding that promotes tolerance and respect (Srivastava et al., 2024; Muzurura et al., 2022).

The emergence of smart tourism has further reshaped visitor engagement, embedding digital technologies such as mobile applications, the Internet of Things (IoT), and big data into destination management. These innovations enable real-time decision-making, personalization, and sustainability while strengthening heritage preservation (Gretzel et al., 2015; Kumar & Pham, 2024). Within Islamic contexts, mosques embody both continuity and transformation: while remaining sacred spaces of worship, they also function as community hubs and cultural landmarks with the potential to attract diverse visitors (Aljunied, 2018; Al-Khalifa & Ghasrah, 2025).

Although global scholarship increasingly examines the intersection of smart technologies and religious tourism, the focus continues to be directed towards large-scale pilgrimages and monumental heritage sites, whereas local mosques remain underexplored as digitally enabled religious destinations (Ramos, Henriques, & Lanquar, 2016; Talukder, Kabir, Mia, & Khan, 2024). This observation is significant because mosques represent the most accessible and community-oriented religious institutions in Muslim societies, sustaining daily worship, education, and intercultural dialogue (Mughal, 2015).

In Malaysia, digital initiatives connected to mosques remain fragmented and insufficiently coordinated, even though the country is internationally recognized for leadership in Muslim-friendly tourism (Srivastava, Nigam, & Tripathi, 2024) and is advancing ambitious digital transformation agendas such as MyDIGITAL and Smart State NS 2027 (Tang, 2023; Kalbaska et al., 2017). Existing innovations, including QR codes, mobile applications, and IoT-based systems, have been successfully applied in large-scale religious contexts such as Hajj to enhance navigation, safety, and accessibility. However, their application in mosque settings remains limited, with initiatives often introduced in isolation and with limited integration into comprehensive frameworks that combine tourism, daʿwa, heritage, and intercultural engagement.

This landscape points to two interrelated concerns. First, a theoretical absence, as established adoption models such as the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Technology–Organization–Environment

(TOE) framework have seldom been contextualized within mosque environments, where spiritual legitimacy, trust, and cultural values are central to technology acceptance (Campbell & Cheong, 2022; Prabowo, Che Hanapi, & Ahmad, 2024). Second, a practical concern, as policymakers and religious authorities continue to require structured and culturally legitimate blueprints that can guide mosque digitalization in alignment with both community needs and national digital strategies.

In response, this paper aims to conceptualize a Smart Mosque Information System (SMIS) as a low-cost, scalable, and culturally sensitive framework that enriches visitor experiences, strengthens digital daʿwa, and fosters intercultural harmony. By integrating insights from TAM, UTAUT, TOE, and Digital Religion (DR) with Peace Communication (PC), the framework provides a theoretically informed and policy-oriented contribution to advancing smart religious tourism in Malaysia. Guided by these concerns, the objective of this paper is to develop a conceptual SMIS framework that (i) integrates TAM, UTAUT, TOE, DR and PC Pinto a coherent adoption model; (ii) positions peace communication as a mediating mechanism that embeds cultural legitimacy and inclusivity; and (iii) aligns mosque digitalization with Malaysia's digital transformation agendas.

Literature Review

Smart and Religious Tourism

Prior studies typically describe MIS as administrative or operational tools that help mosques manage data and services. For example, Nursari and Linuwih (2021) designed a MIS for Jami Kautsar Mosque that focused on basic functions such as member data, financial recording, and activity scheduling. Such systems improve transparency and efficiency but remain limited to management tasks rather than community engagement or religious tourism. In contrast, this paper extends the scope of MIS into the SMIS, which incorporates smart technologies to support daʿwa, inclusivity, and tourism functions.

The intersection of religion and technology has increasingly attracted academic attention as tourism becomes deeply influenced by digital systems. The integration of smart technologies such as augmented reality (AR), virtual reality (VR), the Internet of Things (IoT), and mobile platforms has redefined religious destinations into interactive spaces where sacred experiences are mediated through digital innovation. AR/VR applications, for instance, allow the devotees to explore sites virtually before or during a visit, reducing geographical barriers while fostering immersive spiritual encounters (Ramos, Henriques, & Lanquar, 2016; Berry, 2025). IoT-enabled monitoring and big data analytics enhance visitor management, security, and personalization, while mobile applications provide context-sensitive guidance and interpretive content that deepen learning and engagement (Mishra, Mishra, Tamta, & Sahu, 2025; Yaghmour, 2024). These studies demonstrate that religious tourism is embedded in the broader transformation of smart tourism, where pilgrimage, heritage, and faith experiences are increasingly shaped by technology.

Beyond logistical functions, smart technologies also strengthen cultural preservation and enrich spiritual encounters at sacred destinations. Intelligent systems enable adaptive storytelling and curated historical narratives, allowing visitors to engage with religious and cultural meanings in more dynamic ways. Avci and Kayar (2020) describe this process as the "technological power of mysticism," emphasizing that digital interventions can amplify the

aura of sacredness rather than diminish it. Case studies such as Batu Caves in Malaysia illustrate the delicate balance between tourism growth and devotional authenticity (Kasim, 2011), while research in India shows that digital literacy determines the extent to which smart applications create meaningful religious encounters (Rashmi, Rajan, Chand, & Jamgade, 2024).

From an economic and cultural perspective, religious tourism has been shown to generate employment, stimulate regional development, and reinforce cultural capital, with these outcomes magnified when combined with digital infrastructures. Srivastava, Nigam, and Tripathi (2024) provide evidence of job creation linked to religious tourism, whereas Kuri, Banik, and Valeri (2025) highlight its role in preserving intangible heritage and sustaining social cohesion. The introduction of smart systems in Saudi Arabia's Al-Ula demonstrates how technological mediation contributes to branding, attracts repeat visitors, and enhances satisfaction (Talukder, Kabir, Mia, & Khan, 2024).

At the same time, scholars underline the ethical dilemmas associated with embedding information and communication technologies (ICT) into sacred contexts. Concerns include the commodification of spirituality, surveillance risks, and inequities created by the digital divide (Berry, 2025; Talukder, Kabir, Kumar, & Das, 2025). Taneja (2023) stresses the importance of preserving harmony and holiness, cautioning that unregulated commercialization risks undermining the authenticity of pilgrimage experiences. Collectively, these findings establish both opportunities and challenges in the growth of smart religious tourism, and they point to the importance of governance strategies that safeguard inclusivity, authenticity, and respect for sacred values.

Digital Da'wa and Mosque Digitalization

The rapid digitalization of religious life has reshaped how Islam is practiced, taught, and disseminated. In Southeast Asia, particularly in Indonesia and Malaysia, digital platforms have created new religious spaces that extend mosque-based traditions into online environments. This development shows that DR functions as a multidimensional domain where communication, authority, ideology, and legitimacy are actively constructed. Mudhofi, Supena, Adeni, and Suyurno (2025) describe how Aswaja digitalization initiatives in Indonesia and Malaysia employ online platforms to counter extremist ideologies and encourage moderation. In Lombok, Zaenuri (2025) documents how Tuan Gurus adopt social media and websites to maintain relevance, broaden their reach, and generate new economic opportunities through digital daʿwa. In parallel, Salih, Khalid, Kahar, and Zahari (2019) identify the proliferation of Islamic websites in Malaysia, which has widened access to religious knowledge while raising concerns regarding credibility and authority.

A significant transformation in digital daʿwa is the rise of celebrity preachers and digitally mediated authority. Raya (2024, 2025) illustrates how charismatic figures leverage online platforms to attract audiences, merging spiritual leadership with commercial branding. This expansion of reach is accompanied by the commodification of religion, which blurs the boundaries between sacred and commercial domains. Rohid, Sugihartati, Suyanto, and Zikri (2025) highlight another dimension: the use of social media for digital activism and political mobilization, which can foster participation but also intensify polarization and contested interpretations. These developments underscore the vulnerabilities of digital religious

ecosystems, where misinformation, radicalization, and ideological disputes are amplified through the very tools designed for engagement.

The governance of Islamic communication in the digital era has therefore it's a critical issue. In Indonesia, Kholili, Izudin, and Hakim (2024) emphasize the limitations of broadcasting regulations in curbing the expansion of revivalist groups, pointing to the need for context-sensitive frameworks that address the dynamics of digital publics. Abubakari (2025) argues that digital technologies hold strong potential for Islamic education by supporting lifelong learning and global competitiveness, although their effectiveness depends on alignment with existing practices and the digital self-efficacy of both educators and learners.

The literature demonstrates that digitalization has redefined Islamic communication by generating opportunities for outreach, empowerment, and education, while also producing vulnerabilities related to credibility, regulation, and theological integrity. For mosques, these findings highlight both promise and challenge: digital tools can enhance visitor engagement and strengthen daʿwa, but their adoption requires institutional frameworks that safeguard accountability, legitimacy, and alignment with religious values.

Peace Tourism and Intercultural Dialogue

The literature on religious tourism, peacebuilding, and interfaith dialogue emphasizes the strategic role of sacred sites in promoting harmony, diplomacy, and inclusive engagement. Azam (2025) demonstrates this through the Kartarpur corridor, where pilgrimage creates structured opportunities for cultural exchange and interfaith interaction. In the same direction, Senbeto (2022) argues that interfaith tourism contributes to peace and socio-economic development, although its transformative potential is often constrained by fragmented infrastructure and limited stakeholder participation. At the community level, Corpuz (2025) documents how faith-based movements in conflict-affected regions of the Philippines facilitate dialogue, build trust, and strengthen peace through grassroots initiatives. Broader peacebuilding frameworks reinforce this view, with Abu-Nimer (2004) and Kadayifci-Orellana (2013) showing how religious traditions enrich interpretative strategies that address identity-based conflicts.

Heritage tourism is also positioned as an anchor for peace narratives. Timothy (2023) contends that heritage destinations advance reconciliation when inclusively framed, while Pratt and Liu (2016) maintain that peace and stability constitute prerequisites for tourism success rather than automatic outcomes of visitation. Da Silva, Breda, and Carbone (2020) highlight tourism's function as a bottom-up peacebuilding mechanism, creating encounters that transcend political boundaries.

Within Islamic contexts, mosques hold particular significance as spaces of sanctity, pluralism, and intercultural dialogue. Said, Maram, and Imam (2023) stress the importance of respecting interfaith sensitivities in mosque construction and use, while Funk and Gyulkhandanyan (2019) show that sacred sites across traditions function as "heritage for peace" when supported by inclusive governance structures. Kruja (2022) extends this argument by underlining the role of education in sustaining interfaith understanding and transmitting coexistence values across generations.

Collectively, these studies establish mosques as more than places of worship: they emerge as institutional arenas for diplomacy, reconciliation, and peacebuilding. Religious tourism framed through such inclusive strategies reinforces cultural sustainability, deepens mutual understanding, and strengthens social harmony across diverse communities.

MIS to SMIS

Research on mosque digitalization has developed gradually from socio-cultural perspectives to technical and administrative applications. Mughal (2015), for example, described the mosque in Pakistan as a socio-cultural institution central to education, governance, and community life, though these roles were traditionally managed manually. Later efforts began to design MIS to modernize such functions, but they were largely confined to internal administration. Nursari and Linuwih (2021) demonstrated this through the development of a MIS for Jami Kautsar Mosque, focusing on data management, financial records, and scheduling, which improved efficiency yet remained limited to back-office tasks. At a broader scale, Dika, Hakim, and Susanto (2023) examined the implementation of SIMAS, a national web-based system by Indonesia's Ministry of Religious Affairs, which streamlined mosque and musalla data collection. While SIMAS enhanced transparency and accountability, its application was still bureaucratic rather than user- or community-driven. More recent discussions by Setiawan et al. (2024) highlight the need for mosque digital transformation, including the integration of smart features, but these remain largely conceptual and fragmented. Against this backdrop, the present study introduces the SMIS, which extends MIS beyond administration to incorporate smart technologies that support digital daʿwa, community engagement, and religious tourism.

Theoretical Lens

This study is grounded in a hybrid framework that combines established adoption models with perspectives from religious communication and peacebuilding. TAM explains how perceived usefulness and ease of use influence behavioral intention, providing a foundation for understanding user acceptance. UTAUT extends this view by integrating performance expectancy, effort expectancy, social influence, and facilitating conditions, offering a multidimensional account of adoption behavior. TOE contributes an institutional layer by emphasizing technological readiness, organizational capacity, and environmental pressures as determinants of feasibility and sustainability. Together, TAM, UTAUT, and TOE provide a structural explanation of adoption processes. Within mosque environments, however, adoption is also shaped by religious legitimacy, spiritual trust, and cultural authenticity, factors that cannot be fully captured by conventional adoption models.

To address these dimensions, the study incorporates DR and PC as complementary perspectives. DR highlights the ways digital platforms reshape rituals, authority, and identity, offering insight into the reconfiguration of daʿwa and religious engagement in contemporary Muslim societies. PC adds a normative dimension, emphasizing communicative practices that strengthen trust, inclusivity, and intercultural dialogue, ensuring that mosque digitalization advances harmony and cohesion. By synthesizing TAM, UTAUT, TOE, DR, and PC, the framework positions mosque digitalization as both a technical adoption process and a socio-religious transformation. This integrated perspective enables SMIS to be conceptualized as a culturally grounded innovation that strengthens daʿwa, preserves authenticity, and advances Malaysia's leadership in smart religious tourism.

The Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) has long been recognized as a leading framework for explaining individual-level adoption of technology. It centers on two key constructs, Perceived Usefulness (PU) and Perceived Ease of Use (PEOU), which together determine behavioral intention and actual system use. Its adaptability across multiple sectors, such as education, commerce, and hospitality, reinforces its analytical value (Li et al., 2024). Within religious contexts, including mosques, Islamic education, and tourism, TAM has gained scholarly traction as digitalization reshapes spiritual, cultural, and faith-based practices. For example, the model helps to assess whether congregants consider QR-enabled mosque systems beneficial in providing information and whether these tools can be adopted across age groups, including older or digitally less proficient users. This illustrates how TAM accounts for both functionality and cultural embeddedness in faith communities (Prabowo, Che Hanapi, & Ahmad, 2024).

Applications in Islamic settings reveal that TAM's original variables remain effective but are often extended with context-specific dimensions. In Brunei, studies on Islamic education incorporated Perceived Educational Compatibility (PEC) and Digital Self-Efficacy (DSE) into TAM, demonstrating that these, alongside PU and PEOU, explained over 64% of students' intention to adopt digital platforms (Abubakari, Zakaria, & Musa, 2024). In the sphere of e-daʿwa, systematic reviews confirm that PU and PEOU consistently drive acceptance of digital preaching tools (Prabowo et al., 2024). Similarly, in Islamic philanthropy, extended versions of TAM integrate trust, image, and religiosity, showing how these factors reinforce perceptions of ease and usefulness, thereby strengthening intentions to adopt financial technologies for charitable purposes (Usman, Mulia, Chairy, & Widowati, 2022).

Research in Indonesian higher education adds further nuance, where perceived trust and perceived validity were integrated into TAM to explain the adoption of digital religious resources. These factors proved critical, highlighting that credibility strongly influences technology uptake in scholarly contexts (Subiyakto, Sekarningtyas, Aini, Hakiem, Muslimin, Subchi, & Ahlan, 2022). Parallel evidence from online waqf applications reaffirms the importance of PU and PEOU, with ease directly shaping usefulness and information clarity emerging as a vital enabler of adoption (Faturohman, Hassandi, & Yulianti, 2020). Collectively, these findings underscore that while TAM retains explanatory power, careful adaptation is required to capture religious sensitivities.

Religious tourism has also been a productive domain for TAM and related models such as UTAUT. Studies in Pakistan show that coping theory variables combined with UTAUT constructs effectively predict mobile payment adoption among pilgrims, with age moderating confidence in regular use (Hassaan & Yaseen, 2025). Research on religious travel applications further reveals that privacy concerns can weaken the relationship between attitudes and behavioral intention, stressing the role of digital trust in tourism adoption (Chandel, Rai, Chaubey, & Mishra, 2024). These outcomes align with broader hospitality literature, where meta-analyses validate the consistency of PU and PEOU as predictors while acknowledging contextual variations (Li et al., 2024).

Across these applications, factors such as religiosity, trust, digital self-efficacy, and educational compatibility have been shown to refine TAM's predictive strength (Usman et al.,

2022; Subiyakto et al., 2022; Faturohman et al., 2020; Abubakari et al., 2024; Hassaan & Yaseen, 2025). In halal industries, cultural values and religiosity are central, prompting adaptations of TAM to reflect Islamic norms (Noor, 2024). In Islamic banking, Sharia compliance has been introduced as a pivotal construct, where confidence in compliance directly shapes the adoption of e-banking services (Usman, Projo, Chairy, & Haque, 2022).

At the same time, critics caution against over-reliance on TAM in rapidly evolving environments. Cross-cultural research shows that cultural orientations may diminish or even reverse the influence of ease and usefulness (McCoy, Galletta, & King, 2007). The advent of generative artificial intelligence has raised further questions about TAM's ability to account for complex, multi-layered ecosystems (Mogaji, Viglia, Srivastava, & Dwivedi, 2024). Recent evidence also suggests that religiosity and social influence operate differently: religiosity strongly shapes intention, while social influence predicts actual usage, particularly in Islamic Paytech contexts (Albort-Morant, Irimia-Diéguez, Yasin, & Liebana-Cabanillas, 2025).

Collectively, the literature affirms that PU and PEOU remain foundational in explaining digital adoption within religious contexts. However, meaningful extensions are required to accommodate determinants such as religiosity, trust, Sharia compliance, privacy, and cultural specificity. Across education, philanthropy, tourism, and finance, TAM continues to provide a versatile and context-sensitive framework, enabling scholars and practitioners to explore how spiritual values and technological affordances intersect. These refinements position TAM not as a static model but as an evolving, culturally responsive lens for guiding digital adoption in Islamic and religious domains.

Table 1
TAM Constructs and Extensions in Religious/Islamic Contexts

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
Perceived Usefulness (PU)	General TAM: education, e-da'wah, waqf, fintech, tourism	Strong predictor of intention to adopt technology	IV	Core determinant of intention to adopt mosque/Islamic digital systems	Li et al. (2024); Prabowo et al. (2024); Faturohman et al. (2020)
Perceived Ease of Use (PEOU)	Same as above	Shapes PU and intention; easier systems are more widely adopted	IV	Crucial for adoption across elderly and digitally inexperienced users	Li et al. (2024); Abubakari et al. (2024)
Behavioral Intention (BI)	General TAM	Intention consistently predicts actual usage	MV	Explains how PU/PEOU and extensions translate into adoption	Davis (1989, TAM); applied in cited studies
Actual Use (AU)	General TAM	Usage behavior after	DV	Reflects the real adoption of mosque and tourism systems	Davis (1989, TAM)

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
		intention formed			
Perceived Educational Compatibility (PIC)	Islamic education (Brunei)	Compatibility boosted intention to adopt	IV	Ensures tech aligns with Muslim learning and worship	Abubakari et al. (2024)
Digital Self-Efficacy (DSE)	Islamic education	Confidence enhanced ease of use and intention	IV	Explains readiness gaps in mosque/tourism contexts	Abubakari et al. (2024)
Trust	Philanthropy, waqf, e-resources	Trust improved PU, PEOU, and BI	IV	Builds credibility of mosque donation and resource platforms	Usman et al. (2022); Subiyakto et al. (2022)
Religiosity	Fintech, halal, Paytech	Direct effect on BI; strengthens PU & PEOU	IV	Captures faith values in motivating technology use	Usman et al. (2022); Albort-Morant et al. (2025); Noor (2024)
Sharia Compliance	Islamic banking	Confidence in compliance drove adoption	IV	Essential for mosque/tourism financial acceptance	Usman et al. (2022)
Perceived Validity / Image	E-resources, fintech	Enhanced credibility and adoption intention	IV	Ensures authenticity of mosque/tourism platforms	Subiyakto et al. (2022); Usman et al. (2022)
Social Influence	Tourism & Paytech	Shaped BI and actual use	IV	Captures community/peer influence in Islamic settings	Chandel et al. (2024); Albort-Morant et al. (2025)
Privacy Concerns	Travel apps (tourism)	Weakened Attitude → BI	IV	Key to mobile systems where data protection is critical	Chandel et al. (2024)
Age / Demographics	Mobile payment (tourism)	Older users are less confident in frequent use	IV	Highlights generational differences in adoption	Hassaan & Yaseen (2025)
Cultural Orientation	Cross-cultural	Some cultures weakened PU/PEOU effects	IV	Ensures TAM adapts to the Islamic cultural context	McCoy et al. (2007)
Emerging Tech / AI	Generative AI	TAM questioned in AI adoption	IV	Position future mosque/tourism adoption in the AI era	Mogaji et al. (2024)

The Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT extends TAM by incorporating additional constructs—Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC) to provide a more comprehensive explanation of intention and actual usage. These constructs capture both the functional value of technology and the social and infrastructural dynamics that shape adoption. For example, Li (2020) and Gangwar, Date, and Raoot (2014) highlight how organizational readiness and social pressures operate as critical mediators of adoption, particularly in contexts where individual perceptions alone are insufficient to explain user behavior.

Religious and Islamic settings highlight these dynamics with greater intensity, as religiosity and cultural legitimacy have been shown to moderate the effects of UTAUT's core constructs, shaping both intention and the collective acceptance of technology (Al-Gahtani, Hubona, & Wang, 2007; Baazeem, 2018). Recent work in religious tourism further demonstrates the model's explanatory power: Hassaan and Yaseen (2025) show that PE, SI, and coping theory factors jointly predict the use of mobile payment systems among pilgrims, with age differences significantly moderating confidence in frequent use. Similarly, UTAUT has been applied to examine Muslim consumer behavior in digital halal marketplaces, confirming the decisive roles of PE and SI in driving intention (Sari, Dwitawati, & Khairunnisak, 2023).

Applied to mosques, UTAUT highlights that acceptance of QR-based technologies or e-donation platforms cannot be reduced to perceptions of usefulness alone. Instead, adoption depends on broader communal trust, leadership endorsement from imams or mosque councils, and the presence of supportive infrastructures such as reliable connectivity and visible system cues. These social and infrastructural conditions represent the operationalization of SI and FC within faith-based environments, showing how communal legitimacy and institutional readiness underpin technology acceptance. By capturing these social and organizational layers, UTAUT complements TAM's individual-level focus, providing a richer explanation of how digital systems are integrated into religious life.

Table 2
UTAUT Constructs and Extensions in Religious/Islamic Contexts

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
Performance Expectancy (PE)	General UTAUT; halal product adoption	Strongest predictor of BI; users adopt when tech enhances religious or consumption tasks	IV	Explains why mosque apps and QR codes must be seen as beneficial	Sari et al. (2023); Al-Gahtani et al. (2007)
Effort Expectancy (EE)	Education, tourism	Ease of use improves intention, especially for elderly/digital novices	IV	Highlights the importance of simple interfaces in mosque/tourism apps	Göğüş et al. (2012); Li & Kishore (2006)

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
Social Influence (SI)	Islamic Fintech, Saudi privacy, religious tourism	Peer/community norms and religious leaders strongly shape BI and AU	IV	Captures imam/council endorsement and peer adoption in mosque settings	Prasetio & Suryanegara (2021); Baazeem (2018a; 2018b); Hassaan & Yaseen (2025)
Facilitating Conditions (FC)	Islamic banking, tourism	Infrastructure (internet, signage, support) is critical for adoption	IV	Explains the role of mosque resources and connectivity in adoption	Johar & Suhartanto (2019); Li (2020); Gangwar et al. (2014)
Behavioral Intention (BI)	Core UTAUT construct	Consistently predicts AU across settings	MV	Translates expectations, effort, and SI into actual adoption	Venkatesh et al. (2003, UTAUT)
Actual Use (AU)	General UTAUT; religious tourism	Usage behavior after intention formed	DV	Reflects real engagement with mosque/Islamic tourism systems	Venkatesh et al. (2003); Hassaan & Yaseen (2025)
Religiosity	Saudi IT, Islamic fintech	Religious beliefs strengthen BI, moderate privacy concerns	IV	Captures Islamic values as drivers of mosque/tourism adoption	Baazeem (2018a; 2018b); Prasetio & Suryanegara (2021)
Culture / National Context	Turkey, Saudi Arabia	Cultural orientation shapes PE/EE/SI effects	IV	Ensures cultural legitimacy in mosque digital systems	Göğüş et al. (2012); Al-Gahtani et al. (2007)
Age / Demographics	Religious tourism (mobile payment)	Older users are less confident in frequent use	IV	Highlights generational gaps in mosque/tourism tech use	Hassaan & Yaseen (2025)

The Technology–Organization–Environment (TOE)

The Technology–Organization–Environment (TOE) framework, first introduced by Tornatzky and Fleischer (1990), provides a robust analytical lens for examining the interplay of technological, organizational, and environmental contexts in shaping adoption outcomes. Unlike individual-focused models such as TAM and UTAUT, TOE situates adoption within a broader ecosystem, accounting for infrastructural readiness, institutional support, and policy environments that often determine the sustainability of innovation. TOE is particularly

relevant to religious and cultural settings, where technological decisions reflect individual perceptions alongside communal, regulatory, and socio-religious considerations.

In the technological dimension, TOE highlights the importance of relative advantage, compatibility, security, and ease of use in driving acceptance. Studies in Islamic contexts reinforce this emphasis, as seen in Islamic Mobile Banking (IMB) adoption, where factors such as innovation, perceived risk, and Sharia compliance strongly influenced acceptance (Abdurrahman, 2024). Similar findings appear in the deployment of RFID technologies during Hajj, which reduced complexity in pilgrim management while enhancing efficiency and safety (Al-Hashedi et al., 2011). Beyond finance and logistics, usability studies of the Eatmarna application for Umrah further demonstrate how well-designed digital platforms improve ritual facilitation and spiritual engagement (Hassan, Salem, & Refaat, 2022). Collectively, these cases underscore that technology in religious domains must balance efficiency with ethical legitimacy and user trust.

From the organizational perspective, TOE stresses leadership endorsement, managerial readiness, and resource availability as critical preconditions. In the religious sector, these factors are evident in mosque councils, Hajj authorities, and Islamic education institutions, where digital adoption depends on whether leaders actively endorse and allocate resources for technology. For instance, the adoption of halal certification among Indonesian MSMEs has been shown to hinge on both technological feasibility and organizational commitment, together with alignment to Islamic values (Ichsan et al., 2024). Similarly, digital transformation in Islamic education demonstrates how managerial readiness and faculty involvement create enabling conditions for embedding ICT into pedagogy (Abubakari, 2025). These findings reaffirm that without organizational will and capacity, even highly beneficial technologies risk underutilization.

The environmental dimension of TOE is particularly salient in religious and cultural ecosystems. Governmental endorsement, policy mandates, competitive pressures, and inter-organizational collaboration create an external environment that either accelerates or impedes technology adoption. Evidence from Hajj organizations highlights that government support and cross-partner collaboration were significant in RFID implementation (Al-Hashedi et al., 2011). Broader studies of SMEs and tourism industries also demonstrate that regulatory clarity, customer expectations, and external legitimacy pressures shape adoption pathways (Kechik et al., 2023; Firman et al., 2025). In religious tourism, applications like Eatmarna are widely accepted due to strong government backing and integration into national pilgrimage policy (Hassan et al., 2022). Thus, environmental conditions function as both constraints and enablers of digital transformation in Islamic contexts.

The TOE framework offers a comprehensive lens for understanding digital adoption in Islam, mosques, and religious tourism. By synthesizing technological utility with organizational capacity and environmental pressures, TOE helps explain why some innovations, such as IMB, halal certification systems, or pilgrimage applications, achieve institutional legitimacy while others face resistance. Its integrative nature also accommodates ethical and cultural considerations, which are indispensable in faith-based settings where technology adoption is inseparable from communal trust, religious authority, and policy alignment (Setiawan et al., 2024; Madaki et al., 2023). These qualities position TOE as both a descriptive framework and

a prescriptive guide for designing digital innovations that respect religious values while advancing efficiency and inclusivity.

Table 3
TOE Constructs and Extensions in Religious/Islamic Contexts

Construct / Extension	Context of Application in Prior Studies	Key Findings	Position in Model	Relevance to Current Study	Source
Relative Advantage, Compatibility, Perceived Risk, Sharia Compliance	Islamic Mobile Banking (Indonesia)	IMB adoption is shaped by usefulness, innovation, reputation, and Sharia compliance	IV → DV (Adoption Intention)	Highlights how mosque e-donation/QR adoption hinges on Sharia-compliant perceptions of usefulness	Abdurrahman (2024)
Usability, System Information, App Usefulness	Eatmarna App (Umrah permit, Saudi Arabia)	Usability and information improved performance expectancy, ritual facilitation, and spirituality	IV → DV (Performance Expectancy, Spiritual Outcomes)	Demonstrates usability and government legitimation in mosque-based applications	Hassan et al. (2022)
Relative Advantage, Complexity, IT Infrastructure, Collaboration	RFID in Hajj	Adoption intention is influenced by compatibility, readiness, and collaboration	IV → DV (Adoption Intention)	Parallels mosque adoption, where infrastructure and readiness are critical	Al-Hashedi et al. (2011)
Organizational Readiness, Leadership Support	Islamic Education Institutions	Managerial readiness and leadership support enabled digital adoption	IV → DV (Digital Adoption)	Underscores the role of the imam/mosque council leadership in technology uptake	Abubakari (2025)
Religiosity	Islamic SMEs ICT Adoption	Religiosity integrated with TOE–TAM predicted adoption	Mediator	Positions religiosity as a mediator in mosque-based digital platforms	Setiawan et al. (2024)
Halal Legitimacy & Sharia Alignment	Halal Certification (Indonesia MSMEs)	Sharia legitimacy critical for adoption	Moderator	Ensures mosque technologies align with Sharia principles	Ichsan et al. (2024)
Government Support, Policy Endorsement	RFID (Hajj) & Eatmarna App	Governmental backing decisive for scaling adoption	IV → DV (Adoption/Use)	Mosque and state apps require explicit governmental legitimation	Al-Hashedi et al. (2011); Hassan et al. (2022)

Construct / Extension	Context of Application in Prior Studies	Key Findings	Position in Model	Relevance to Current Study	Source
Competitive Pressure, Customer Demand	SMEs & Metaverse Tourism	External legitimacy and demand drive adoption	IV → DV (Adoption)	Demonstrates how community demand and legitimacy pressures drive mosque digitalization	Kechik et al. (2023); Firman et al. (2025)
ICT Barriers (Funding, Infrastructure)	Public sector, HEIs	Resource and infrastructure barriers constrained adoption	IV (Barrier) → DV (Adoption Limitation)	Underscores how funding and infrastructure limitations constrain mosque digitalization	Madaki et al. (2023); Ergado et al. (2021)

Digital Religion (DR) and Peace Communication (PC) in Islamic and Religious Tourism

Digital religion suggests how faith practices, authority, and community life are reshaped by technological mediation across online and offline spaces. Concepts such as networked religion and third spaces demonstrate that religious rituals and authority are no longer confined to mosques or sacred sites but extend into digital platforms, mobile apps, livestreams, and social media (Campbell & Cheong, 2022; Helland, 2016; Campbell, 2023). These dynamics are visible in Islam, where digital daʿwa conducted by Tuan Gurus is effective, accessible, and aligned with religious duty while simultaneously offering socio-economic benefits (Zaenuri, 2025). Similarly, shifts in Islamic education reveal how affordability and accessibility of digital platforms foster lifelong learning cultures and competitiveness in faith-based contexts (Pabbajah et al., 2021; Abubakari, 2025). Among youth, interactive preaching through social media has become essential to sustain religious engagement (Zafri, Opir, & Binti Yahaya, 2023). At a systemic level, the rise of "Islamic algorithms" embedded within platform curation has redefined exposure, legitimacy, and religious authority online (Bunt, 2024).

Digital religion also transforms the architecture of mosque life and pilgrimage practices. Online worship, cyber-prayers, and virtual gatherings enable participation across boundaries while raising questions of authenticity and legitimacy (Højsgaard & Warburg, 2005; Sheldon & Campbell, 2021). For Islamic religious tourism, AR/VR pilgrimage tools enhance spiritual experiences but introduce ethical concerns such as surveillance and commodification (Berry, 2025). Technology also promotes sustainability in religious destinations, helping manage visitor flows and encourage responsible practices (Muruganantham & Patro, 2025). The mediation of pilgrimage ties across diasporic communities highlights how connectivity fosters enduring spiritual engagement beyond physical travel (George, 2025). Together, these transformations reveal that Islamic tourism is no longer a purely physical encounter but a hybrid digital–spiritual experience.

In parallel, peace communication provides a lens for understanding how technology can facilitate dialogue, inclusivity, and coexistence. Defined as the communicative process of reducing hostility and building trust, peace communication highlights how digital narratives and platforms may either exacerbate interfaith tensions or enable reconciliation

(Karamehmedović, 2024). Initiatives such as the Kartarpur Corridor prove how pilgrimage sites function as religious destinations and as instruments of cross-border dialogue and diplomacy (Azam, 2025; Taneja, 2023). In Malaysia, mosques are increasingly reframed as civic and social hubs, extending their role beyond worship into education, humanitarianism, and intercultural dialogue (Ramli et al., 2023; Said, Omar, & Hamid, 2023). This aligns with the prophetic tradition of mosques as mediating institutions that promote community cohesion and reconciliation. Within digital ecosystems, peace communication strategies must adapt to online spaces where authority, legitimacy, and interfaith solidarity are increasingly contested (Guriţă & Scortescu, 2023). These approaches echo Islamic ethical principles of justice and compassion as tools for delegitimizing extremism and reaffirming dialogue (Zia-Ul-Haq, 2014; Michaelides, 2009).

Digital religion and peace communication form a critical theoretical lens for analyzing Islamic religious tourism and mosque-based technologies. They capture how digital platforms extend rituals and authority into hybrid spaces and how these technologies can be reframed as enablers of sustainability, inclusivity, and interfaith dialogue. For this study, these perspectives are integrated to examine how smart religious tourism platforms and mosque technologies mediate spiritual experience while advancing social harmony in Malaysia's plural context.

Table 4
DR and PC Constructs in Islamic and Religious Tourism Contexts

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
Digital daʿwa affordances (reach, accessibility, convenience)	Islamic preaching (Tuan Gurus)	Digital daʿwa is effective, accessible, aligned with religious duty, and provides socio-economic benefits	IV	Predicts engagement with mosque digital platforms and content	Zaenuri (2025)
Interactive preaching via social media	Youth outreach in Islamic contexts	Interactive preaching strategies enhance youth engagement with Islamic teachings	IV	Design driver for mosque apps and youth-centered outreach	Zafri, Opir, & Binti Yahaya (2023)
Networked religion / third spaces	Online–offline religious life	Digital media creates hybrid spaces, extending rituals into everyday contexts	MV	Mediates the link between tech adoption and sustained participation	Campbell & Cheong (2022); Helland (2016); Campbell (2023)
Online worship / cyber prayer	Mosque communities	Migration of worship online raises authority/authenticity debates; fosters new forms of community	DV	Outcome variable for livestream and remote ritual adoption	Højsgaard & Warburg (2005); Sheldon & Campbell (2021)
Digital pilgrimage tools (AR/VR, apps)	Islamic religious tourism	AR/VR enhances experiences but raises surveillance and commodification concerns	IV	Predictors of pilgrims' intention and experience quality	Berry (2025)

Construct / Extension	Context of Application in Prior Study	Key Findings	Position in Model	Relevance to Current Study	Source
Technology for sustainable tourism	Pilgrimage sites	Digital tools promote responsible visitor behaviors and manage flows	DV	Outcome for evaluating responsible pilgrimage practices	Muruganantham & Patro (2025)
Digital diaspora mediation	Pilgrimage and diaspora	Technology mediates ties among sacred sites, pilgrims, and diasporas	MV	Explains repeat visits and online engagement	George (2025)
Social media influencers reimagining authority	Muslim millennials	Influencers renegotiate religious authority and shape practices	MV	Social pathway affecting tech–intention/use relationships	Zaid et al. (2022)
"Islamic algorithms" / platform curation	Muslim metaverse/platform logic	Algorithms shape exposure, legitimacy, and trust in Islamic content	MV	Mediator/moderator of adoption and credibility	Bunt (2024)
Digitalization of Islamic education	Islamic institutions	Online education fosters affordability, accessibility, and competitiveness	DV	Adoption/engagement outcome; proxy for digital readiness	Pabbajah et al. (2021); Abubakari (2025)
Devotional music & multimedia	Online rituals/communities	Multimedia deepens experiential engagement and bridges the online – offline practices	MV	Mediator sustaining platform usage and ritual engagement	Ingalls (2019)
Peace communication	Interfaith dialogue, conflict mediation	Peace narratives reduce hostility and foster trust across faiths	IV	Frames mosque technologies as dialogue enablers	Karamehmedović (2024); Abu-Nimer (2018); Cilliers (2020)
Interfaith and intra-faith dialogue	Religious tourism and mosque contexts	Technology enables shared sacredness, inclusivity, and justice	DV	Technology outcomes as tools for peacebuilding	Azam (2025); Taneja (2023); Said et al. (2023)
Ethical and cultural legitimacy	Shariah compliance and cultural norms	Ensures technology adoption aligns with Islamic principles and community values	MV	Mediator between innovation and community acceptance	Setiawan et al. (2024); Abdurrahman (2024); Rahim (2023)

Development of the Conceptual Framework

The development of the conceptual framework for this study draws on four established theoretical perspectives—TAM, UTAUT, TOE, and Digital Religion & Peace Communication—to capture the multi-dimensional drivers of technology adoption in religious contexts. TAM and UTAUT provide the individual-level foundation, focusing on perceptions of usefulness and ease of use as primary determinants of behavioural intention and actual usage. However, since UTAUT offers a more comprehensive formulation, its construct of Performance Expectancy is adopted as the key independent variable (IV). This decision avoids redundancy with TAM's Perceived Usefulness while retaining explanatory strength.

TOE extends the analysis to organizational and environmental factors, particularly issues of legitimacy, readiness, and policy alignment. While these are important in large-scale institutional transformations, their scope is beyond the present study, which focuses on user-level adoption. Instead, TOE's contribution is integrated into a broader mediating construct of Peace Communication. Together with insights from Digital Religion, Peace Communication provides the novelty of this framework, embedding cultural, ethical, and interfaith dimensions into the adoption process. It is therefore positioned as the mediating variable (MV), explaining how technological expectations are translated into sustainable, legitimate, and harmonious usage within plural religious settings.

The dependent variable (DV) is defined as the Adoption of Smart Religious Tourism and Mosque Technologies. While adoption has been conventionally measured in terms of behavioral intention and actual usage, the current study extends this outcome to include dimensions of sustained engagement and responsible usage. This ensures that adoption is concerned with technological uptake as well as continuity, inclusivity, and harmony, outcomes that are especially salient in religious tourism and mosque-based platforms.

To operationalize these constructs, dimensions were identified through the synthesis of overlapping theoretical contributions. Performance Expectancy is refined into three dimensions: functional value (efficiency and convenience), religious/spiritual value (Shariah compliance and ritual support), and trust/credibility (accuracy and security). Peace Communication encompasses trust and inclusivity, ethical and cultural legitimacy, and interfaith/community dialogue, reflecting the communicative and normative processes that sustain adoption. Adoption is represented by behavioral intention leading to actual use, sustained engagement, and responsible usage. Table 5 summarizes this synthesis of constructs, dimensions, and their theoretical origins, which collectively underpin the proposed conceptual framework. In practice, QR codes represent a cost-effective entry point for mosque digitalization, enabling seamless access to information, guided tours, and e-donation platforms. Their integration within SMIS illustrates how simple, scalable technologies can operationalize the broader constructs of performance expectancy and peace communication.

Table 5
Synthesized Constructs, Dimensions, and Theoretical Origins for the Proposed Framework

Construct (Position)	Dimensions	Dimension	Justification
IV: Performance Expectancy	1. Functional Value	TAM (Perceived Usefulness), UTAUT (Performance Expectancy) (Davis, 1989; Venkatesh et al., 2003; Faturohman et al., 2020; Prabowo et al., 2024).	Functional utility is the core adoption driver; refined here to stress efficiency and convenience in religious tourism.
	2. Religious/ Spiritual Value	TOE (Shariah compliance, legitimacy), TAM extensions (Religiosity) (Usman et al. 2022; Ichsan et al. 2024; Noor, 2024).	Adoption in Islamic settings requires alignment with spiritual and Shariah values; ensures cultural legitimacy.
	3. Trust & Credibility	TAM extensions (Trust, Perceived Validity), TOE (Ethical legitimacy) (Subiyakto et al. 2022; Usman et al. 2022; Hassan et al. 2022).	Trust is repeatedly shown as central in e-donation, fintech, and waqf studies; critical for mosque/tourism apps.
MV: Peace Communication (Digital Religion & Peace Communication)	1. Trust & Inclusivity	Digital Religion (Zaenuri, 2025; Ramli et al., 2023)	Peace communication fosters communal trust and inclusive engagement.
	2. Ethical & Cultural Legitimacy	TOE (Shariah legitimacy), Peace Comm. (Rahim, 2023)	Legitimacy mediates between innovation and community acceptance.
	3. Interfaith/ Community Dialogue	Peace Communication (Azam, 2025; Taneja, 2023)	Digital platforms enable harmony and tolerance, extending mosque roles beyond ritual.
DV: Adoption (Smart Religious Tourism & Mosque Technology)	1. Behavioral Intention → Actual Use	TAM (Davis, 1989), UTAUT (Venkatesh et al., 2003)	Classical adoption pathway: intention is a prerequisite to actual adoption.
	2. Sustained Engagement	Digital Religion (Networked Religion, Campbell, 2022; George, 2025)	Engagement extends beyond initial adoption; users stay connected through hybrid religious spaces.
	3. Responsible & Harmonious Usage	Religious Tourism sustainability (Muruganantham & Patro, 2025)	Adoption in plural settings is meaningful only when it fosters sustainability and harmony.

The synthesis presented in Table 5 highlights how constructs from TAM, UTAUT, TOE, and DR and PC were refined into a coherent set of independent, mediating, and dependent variables, each supported by contextually relevant dimensions. This integrative process demonstrates that while adoption studies often privilege functional and technological factors, in religious contexts, these drivers must be understood concerning spiritual legitimacy, communal trust, and peace-oriented values. In order to develop the conceptual parsimony, the final

framework is presented at the construct level only, with dimensions retained for operationalization in subsequent methodological stages (e.g., survey measurement items and interview themes). This approach ensures that the framework remains analytically clear and visually accessible, while also signaling the theoretical depth captured through the underlying dimensions. Accordingly, Figure 1 illustrates the proposed conceptual framework of the study, positioning Performance Expectancy as the independent variable, Peace Communication as the mediating mechanism, and Adoption of Smart Religious Tourism and Mosque Technologies as the dependent outcome.

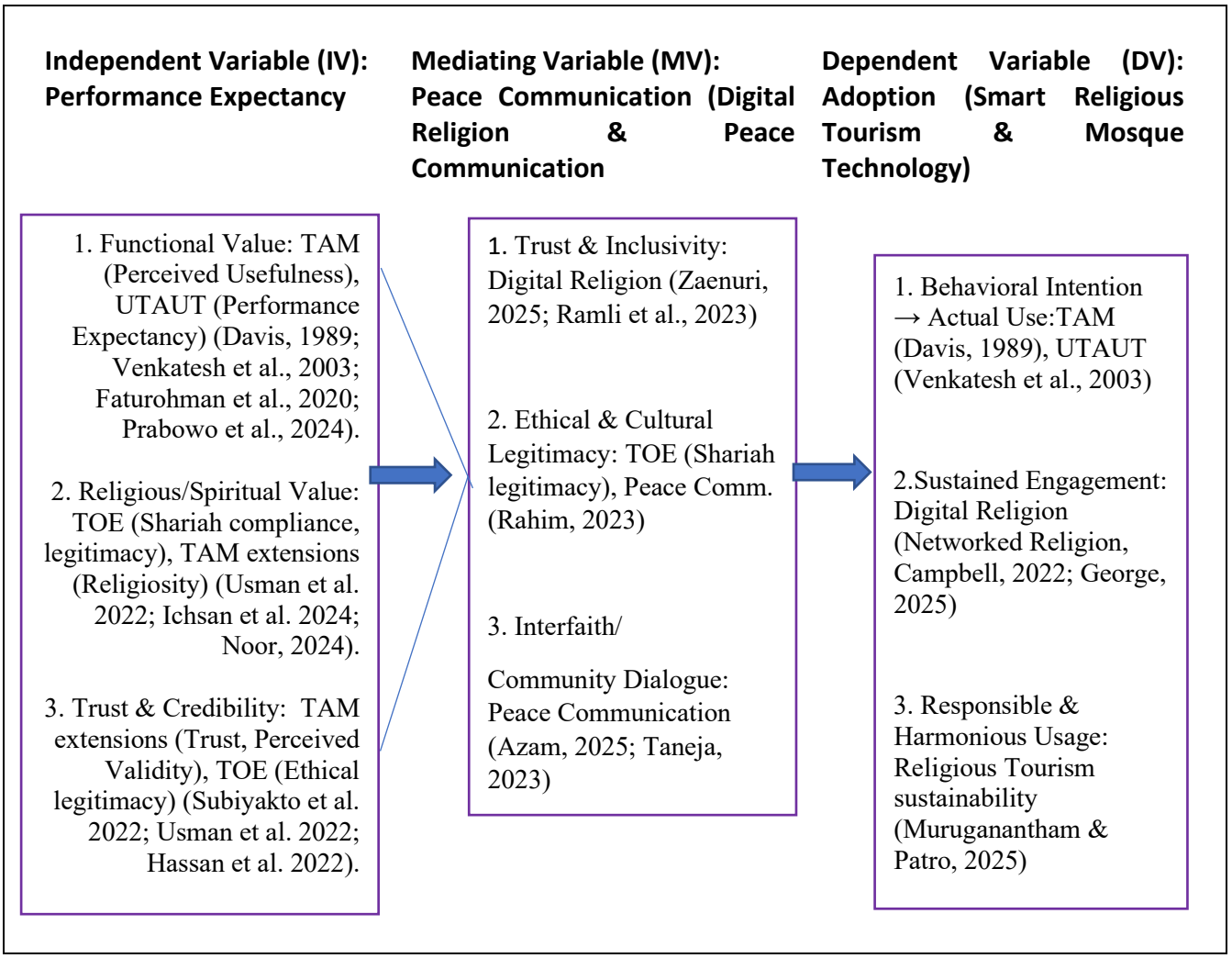

Figure 1. Proposed Conceptual Framework of the Study

Methodological Approach

Research Design

This paper employs a conceptual research design based on an integrative literature review (Snyder, 2019; Torraco, 2005). Unlike empirical or bibliometric studies, which rely on statistical analysis or performance mapping, a conceptual approach emphasizes the synthesis of theoretical insights across domains to propose a parsimonious and contextually grounded model. This approach is particularly relevant in Malaysian and broader Islamic contexts, where the adoption of smart technologies in mosques and religious tourism is fragmented across disciplines such as information systems, Islamic studies, communication, and tourism management. By consolidating insights from established adoption theories (TAM, UTAUT,

TOE) with emerging perspectives in DR and PC, the study advances a novel framework that is theoretically rigorous and contextually meaningful.

Data Sources and Scope

The literature reviewed was primarily drawn from Scopus-indexed journals and book chapters published between 2010 and 2025, supplemented with regional and international studies directly addressing technology adoption in religious, Islamic finance, and tourism contexts. Key domains included Islamic financial technologies (e.g., Usman, Mulia, Chairy, & Widowati, 2022), e-daʿwah and mosque technologies (Prabowo, Che Hanapi, & Ahmad, 2024; Ramli, Omar, & Hamid, 2023), religious tourism (Hassaan & Yaseen, 2025; Berry, 2025), and digital religion studies (Campbell & Cheong, 2022; Zaenuri, 2025). Keywords employed in the search strategy included TAM, UTAUT, TOE, DR, and PC, combined with terms such as Islamic tourism, mosque technology, Shariah compliance, and religiosity. The inclusion of both global and Malaysian perspectives ensures that the framework remains locally grounded while engaging with international scholarly debates.

Analytical Procedure

The analytical procedure proceeded in four stages. First, constructs were extracted from the four theoretical lenses. For example, TAM (PU) and UTAUT (PE) were identified as equivalent, while TOE contributed factors such as Shariah legitimacy and organizational readiness. Second, overlapping constructs were compared and consolidated to avoid redundancy, privileging the more comprehensive or widely validated constructs (e.g., UTAUT's PE retained instead of TAM's PU). Third, constructs were refined into dimensions to enhance contextual depth. For instance, Performance Expectancy was elaborated into three dimensions: functional value (efficiency and convenience), religious/spiritual value (Shariah compliance, ritual legitimacy), and trust and credibility (accuracy, security). Similarly, PC was framed into dimensions of trust and inclusivity, ethical and cultural legitimacy, and interfaith/community dialogue. The adoption outcome was extended to include behavioral intention, actual use, sustained engagement, and responsible usage. Finally, these refined constructs were synthesized into a parsimonious framework comprising one independent variable (Performance Expectancy), one mediating variable (PC), and one dependent variable (Adoption of Smart Religious Tourism and Mosque Technologies).

Rationale and Quality Considerations

This integrative approach is justified for two reasons. First, research on smart mosques and religious tourism technologies remains scattered across disciplines, often limited to isolated applications of TAM, UTAUT, or TOE without cultural adaptation. An integrative review allows these strands to be connected into a coherent framework, while embedding unique socio-religious mediators such as PC (Azam, 2025; Taneja, 2023). Second, by focusing on peer-reviewed, Scopus-indexed sources, the study ensures both scholarly rigor and credibility of evidence. The synthesis process emphasized theoretical robustness (e.g., retaining empirically validated constructs such as UTAUT's PE) while also highlighting cultural specificity (e.g., Shariah compliance, religiosity, ethical legitimacy). This dual emphasis ensures that the resulting framework is analytically parsimonious and culturally responsive to Malaysia's plural religious environment. Future empirical research can operationalize the proposed dimensions through surveys or qualitative interviews, thereby testing and extending the framework beyond its conceptual foundations.

Practical and Policy Implications for Smart Religious Tourism in Malaysia

The integration of digital ecosystems, smart systems, and institutional policies into religious tourism creates multi-dimensional implications for Malaysia. These implications span practical innovation, policy alignment, ethical considerations, and socio-economic development, highlighting the need for a balanced strategy that combines technological efficiency with spiritual authenticity.

Enhancing Visitor Experience and Heritage Preservation

Smart technologies such as mobile applications, AR/VR platforms, and AI-driven systems improve visitor management, accessibility, and personalization of religious tourism experiences. In line with TAM and UTAUT, perceived usefulness and performance expectancy drive the willingness of pilgrims and tourists to adopt these systems. Globally, VR mosque tours and immersive AR reconstructions are increasingly used to attract younger visitors in Europe and the Middle East (Mishra et al., 2025), while in Malaysia, adoption remains nascent and requires stronger institutional facilitation. At the same time, digital documentation and virtual reconstructions safeguard fragile Islamic heritage, ensuring both wider access and cultural continuity (Alazzam & Haron, 2025; Jarrar, 2024).

Institutional Alignment and Governance

Policy frameworks are decisive in embedding smart religious tourism within national digital transformation agendas. From a TOE perspective, organizational readiness and regulatory legitimacy determine how innovations diffuse. In Malaysia, the Majlis Agama Islam Negeri Sembilan (MAINS) illustrates institutional leadership in piloting mosque digital systems, while the MyDIGITAL Blueprint and Smart State NS 2027 provide enabling governance infrastructures. Comparative evidence from China and the UK shows that digital economy adoption enhances resilience and policy-driven innovation in religious tourism (Tang, 2023, 2024; Kalbaska et al., 2017). This contrast highlights both the opportunities and urgency for Malaysia to scale its digital religious tourism ecosystem through policy alignment.

Ethical and Cultural Implications: Balancing Authenticity with Innovation

Digital adoption is not without risks. Concerns over surveillance, commodification of sacred spaces, and unequal access highlight the ethical tensions of innovation. From the lens of Digital Religion, authority and authenticity are constantly negotiated when religious practices migrate online (Helland, 2016). The growing influence of social media influencers and algorithmic curation in shaping perceptions of sacredness reflects this dynamic. While global debates often focus on digital divides in Africa and South Asia, in Malaysia, the pressing issue lies in maintaining Shariah compliance and safeguarding religious legitimacy while embracing technological innovation (Berry, 2025; George, 2025).

Peacebuilding, Cultural Diplomacy, and Development

Religious tourism also functions as a socio-economic and diplomatic resource. Digital ecosystems can promote peacebuilding by facilitating inclusive participation and intercultural dialogue (Azam, 2025; Senbeto, 2022). This aligns with UTAUT's emphasis on social influence, where collective endorsement can accelerate technology adoption in communal settings. Economically, online platforms increase destination visibility and generate new revenue streams for heritage conservation, supporting Malaysia's ambition to become a regional smart tourism hub. While global literature emphasizes Europe's heritage VR projects and

China's scale-driven smart tourism platforms, Malaysia's contribution lies in coupling religious governance with digital transformation, offering a hybrid model of cultural authenticity and innovation.

These implications demonstrate that smart religious tourism in Malaysia involves the adoption of advanced technologies while simultaneously embedding them within a broader socio-cultural and policy ecosystem. Practical outcomes are driven by perceived usefulness and performance expectancy (TAM/UTAUT), institutional readiness and regulatory legitimacy underpin policy frameworks (TOE), and questions of authenticity and religious authority are foregrounded through DR and PC. By bridging these theoretical lenses with Malaysian practice, this study positions Malaysia as a potential exemplar of how smart religious tourism can harmonize technological efficiency, policy governance, and cultural authenticity.

Conclusion

This study introduces the SMIS as a culturally grounded and forward-looking framework that reconceptualizes mosques as digital, inclusive, and peace-oriented institutions. By integrating TAM, UTAUT, TOE, and DC and PC, the framework advances beyond conventional adoption models, embedding spiritual legitimacy, communal trust, and intercultural dialogue as central forces driving sustainable technology adoption. In doing so, it extends theoretical boundaries in both smart tourism and digital religion, positioning mosques as spaces of devotion and as socio-cultural and technological nodes within a rapidly evolving digital ecosystem. The implications resonate strongly with Malaysia's ambition to align digital transformation with heritage preservation and community cohesion. For policymakers, the framework provides a low-cost, scalable blueprint to embed mosque digitalization within the Smart State agenda. For religious authorities and community leaders, it offers a model to harmonize technological efficiency with authenticity and Shariah legitimacy. For scholars, it demonstrates how adoption theories can be reinterpreted in faith-based contexts to incorporate peace communication and inclusivity. Beyond Malaysia, the framework contributes to global debates on cultural preservation, ethical innovation, and peacebuilding by showing how faith-based institutions can embrace digital ecosystems while safeguarding authenticity and reinforcing interfaith understanding. In addressing the two concerns raised at the outset, the lack of theoretical contextualization of adoption models in mosque settings and the absence of structured, policy-oriented blueprints, this study shows how the SMIS framework bridges both gaps. Theoretically, it extends existing adoption models by embedding peace communication as a mediating mechanism. Practically, it provides policymakers and mosque councils with a culturally grounded roadmap for digital transformation, aligned with Malaysia's digital agendas. A distinctive contribution of this study lies in foregrounding Peace Communication as a mediating mechanism. Unlike conventional adoption models that privilege efficiency and ease, PC emphasizes trust, inclusivity, and intercultural dialogue as essential processes for legitimizing mosque technologies. This ensures that adoption is not just transactional but also peace-oriented, aligning digital innovation with Malaysia's plural society. At the same time, this contribution must be situated within the limits of a conceptual design. While the framework consolidates insights across multiple theoretical traditions, its validity and explanatory depth depend on future empirical testing. Comparative studies across countries, large-scale surveys of mosque users and religious tourists, and ethnographic research into interfaith dynamics will be essential to verify, refine, and extend the framework. Such inquiries can reveal how cultural nuance, institutional capacity, and community diversity

mediate digital adoption, ensuring the model's adaptability across different religious ecosystems. By acknowledging these boundaries, the study does not weaken its contribution but situates it as an opening for scholarly continuity and policy innovation. The SMIS framework demonstrates that digital religion and smart tourism, when fused with peace communication, can create pathways toward sustainable, inclusive, and harmonious digital futures. It signals that those mosques and religious destinations, once perceived as resistant to innovation, can evolve into models of ethical digitalization that balance faith, technology, and social responsibility. In this way, the study lays the groundwork for a new research agenda that positions religious institutions as central actors in shaping equitable and culturally resonant digital transformation.

References

Abdurrahman, A. (2024). Investigating the impact of digital business ecosystem in enhancing Islamic mobile banking adoption through the TOE framework. *Digital Business, 4*(2), 100096. https://doi.org/10.1016/j.digbus.2024.100096

Abubakari, M. S. (2025). Digital technologies adoption in Islamic education for fostering lifelong learning culture: Pilot survey preliminary insights. In *Multi-Industry Digitalization and Technological Governance in the AI Era* (pp. 103–125). IGI Global. https://doi.org/10.4018/979-8-3373-1681-9.ch005

Abubakari, M. S., Zakaria, G. A. N., & Musa, J. (2024). Perceived compatibility and students' intention to adopt digital technologies in Islamic education institutions. *Cogent Education*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85209944581

Al-Hashedi, A. H., Arshad, M. R. M., Hj Mohamed, H., & Suhaimi Baharuddin, A. (2011). Identifying the determinants of RFID adoption intention in Hajj organizations. In *2011 International Conference on Research and Innovation in Information Systems (ICRIIS)* (pp. 1–6). IEEE. https://doi.org/10.1109/ICRIIS.2011.6125714

Aljunied, K. (2018). "Not just a house to honour God": Mosques in the Malay world as cosmopolitan spaces. *Global Journal Al-Thaqafah, 8*(1), 43–55. https://doi.org/10.7187/GJAT072018-4

Al-Khalifa, H. E., & Ghasrah, K. (2025). Phenomenology and bodily experiences in mosque architecture. *Civil Engineering and Architecture, 13*(4), 3052–3071. https://doi.org/10.13189/cea.2025.130416

Alshattnawi, S. (2012). Effective use of QR codes in religious tourism. In *2012 International Conference on Advanced Computer Science Applications and Technologies (ACSAT)* (pp. 497–501). IEEE. https://doi.org/10.1109/ACSAT.2012.43

Avci, E., & Kayar, G. (2020). The technological power of mysticism: A new approach to management of religious destinations. In *Global Development of Religious Tourism* (pp. 65–82). IGI Global. https://doi.org/10.4018/978-1-7998-5792-1.ch005

Baazeem, R. M. (2018a). The role of religiosity in technology acceptance: The case of privacy in Saudi Arabia. In *Psychological and Behavioral Examinations in Cyber Security* (pp. 172–193). IGI Global. https://doi.org/10.4018/978-1-5225-4053-3.ch010

Baazeem, R. M. (2018b). The role of religiosity in technology acceptance: The case of privacy in Saudi Arabia. In *Censorship, Surveillance, and Privacy: Concepts, Methodologies,*

Tools, and Applications (pp. 1787–1808). IGI Global. https://doi.org/10.4018/978-1-5225-7113-1.ch089

Baiocco, S., Monda, A., Paniccia, P. M. A., & Botti, A. (2024). Smart tourism for smart city: An exploratory analysis of tourism digital start-ups: The case of Italy. In *ICT, the Business Sector and Smart Cities* (pp. 160–176). CRC Press. https://doi.org/10.1201/9781003450610-12

Batchelor, D., Schnabel, M. A., & Dudding, M. (2021). Smart heritage: Defining the discourse. *Heritage, 4*(2), 1005–1015. https://doi.org/10.3390/heritage4020055

Berry, K. (2025). Digital pilgrimage: Navigating the intersection of technology and sacred journeys. In *Technology and Religious Tourism: Emerging Trends, Cases and Futuristic Perspectives* (pp. 77–87). Emerald Publishing. https://doi.org/10.1108/978-1-83662-260-420251006

Brusaporci, S., & Maiezza, P. (2021). Smart architectural and urban heritage: An applied reflection. *Heritage, 4*(3), 2044–2053. https://doi.org/10.3390/HERITAGE4030116

Bunt, G. R. (2024). *Islamic algorithms: Online influence in the Muslim Metaverse*. Routledge.

Caber, M., Drori, N., Albayrak, T., & Simonetti, B. (2024). Determinants of religious tourists' social media usage behaviour. *Current Issues in Tourism, 27*(23), 4276–4292. https://doi.org/10.1080/13683500.2023.2278747

Cameron, F. (2007). The politics of heritage authorship: The case of digital heritage collections. In Y. Kalay, T. Kvan, & J. Affleck (Eds.), *New heritage: New media and cultural heritage* (pp. 170–184). Routledge. https://doi.org/10.4324/9780203937884

Campbell, H. A. (2023). The dynamic future of digital religion studies. In *Dynamics in the History of Religions* (Vol. 13, pp. 217–236). Brill. https://doi.org/10.1163/9789004549319_009

Campbell, H. A., & Cheong, P. H. (2022). *The Oxford handbook of digital religion*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197549803.001.0001

Chandel, S., Rai, N., Chaubey, S., & Mishra, K. (2024). Exploring the intention of religious tourists to use travel apps: The moderating role of digital privacy. *International Journal of Religious Tourism and Pilgrimage*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85219292759

Cuesta-Valiño, P., Bolifa, F., & Núñez-Barriopedro, E. (2020). Sustainable, smart and Muslim-friendly tourist destinations. *Sustainability, 12*(5), 1778. https://doi.org/10.3390/su12051778

El Archi, Y., & Benbba, B. (2023). The applications of technology acceptance models in tourism and hospitality research: A systematic literature review. *Journal of Environmental Management and Tourism, 14*(2), 379–391. https://doi.org/10.14505/jemt.v14.2(66).08

Ergado, A. A., Desta, A., & Mehta, H. (2021). Determining the barriers contributing to ICT implementation by using technology-organization-environment framework in Ethiopian higher educational institutions. *Education and Information Technologies, 26*(3), 3115–3133. https://doi.org/10.1007/s10639-020-10397-9

Es, M. (2016). Turkish–Dutch mosques and the formation of moral subjects. *Social and Cultural Geography, 17*(7), 825–848. https://doi.org/10.1080/14649365.2015.1129433

Faturohman, T., Hassandi, I., & Yulianti. (2020). User acceptance of online waqf applications: Evidence from Indonesia. *Journal of Islamic Monetary Economics and Finance*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85099941637

Firman, A., Chau, K. Y., Walawalkar, A. M., & Moslehpour, M. (2025). Navigating the future: Envisioning Metaverse adoption in Indonesian tourism through the Technological–Organizational–Environmental (TOE) framework. *Journal of Theoretical and Applied Electronic Commerce Research, 20*(2), 118. https://doi.org/10.3390/jtaer20020118

Geng, S., Chau, H.-W., Jamei, E., & Vrcelj, Z. (2025). Exploring the use of open access data in smart heritage – Using Chinatown Melbourne as a case study. In *Lecture Notes in Civil Engineering* (Vol. 591, pp. 842–848). Springer. https://doi.org/10.1007/978-981-96-4051-5_81

George, R. (2025). Faith in the digital age: Exploring the changing diaspora of religious tourism. In *Technology and Religious Tourism: Emerging Trends, Cases and Futuristic Perspectives* (pp. 119–137). Emerald Publishing. https://doi.org/10.1108/978-1-83662-260-420251009

Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: Foundations and developments. *Electronic Markets, 25*(3), 179–188. https://doi.org/10.1007/s12525-015-0196-8

Göğüş, A., Nistor, N., & Lerche, T. (2012). Educational technology acceptance across cultures: A validation of the unified theory of acceptance and use of technology in the context of Turkish national culture. *Turkish Online Journal of Educational Technology, 11*(4), 394–408.

Hassan, A. (2015). Electronic word-of-mouth: An industry tailored application for tourism promotion. In *Capturing, Analyzing, and Managing Word-of-Mouth in the Digital Marketplace* (pp. 61–75). IGI Global. https://doi.org/10.4018/978-1-4666-9449-1.ch004

Hassan, T. H., Salem, A. E., & Refaat, S. A. (2022). The impact of Eatmarna application usability on improving performance expectancy, facilitating the practice of rituals and improving spirituality feelings during Umrah amid the COVID-19 outbreak. *Religions, 13*(3), 268. https://doi.org/10.3390/rel13030268

Hassaan, M., & Yaseen, A. (2025). Spiritual spending: Understanding mobile payment adoption in religious tourism through the lens of UTAUT and Coping Theory. *International Journal of Human-Computer Interaction*. https://doi.org/10.1080/10447318.2025.2517356

Helland, C. (2016). Digital religion. In D. Yamane (Ed.), *Handbooks of Sociology and Social Research* (pp. 177–196). Springer. https://doi.org/10.1007/978-3-319-31395-5_10

He, Y., Ma, Y. H., & Zhang, X. R. (2017). Digital heritage: Theory and innovative practice. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, 42*(2W5), 335–342. https://doi.org/10.5194/isprs-archives-XLII-2-W5-335-2017

Højsgaard, M. T., & Warburg, M. (2005). *Religion and cyberspace*. Routledge. https://doi.org/10.4324/9780203003572

Ijaz, A. (2020). Types of religious tourism. In E. F. Okumus & A. A. Hassan (Eds.), *Global Development of Religious Tourism* (pp. 297–309). IGI Global. https://doi.org/10.4018/978-1-7998-5792-1.ch018

Ichsan, R. N., Siregar, B. A., Nasution, L., & Karim, A. (2024). Halal product development and adoption of halal certification among underprivileged MSMEs in Indonesia: A Technology–Organisation–Environment framework analysis. *International Journal of eBusiness and eGovernment Studies, 16*(4), 1–18. https://doi.org/10.34109/ijebeg.202416401

Ingalls, M. M. (2019). Digital devotion: Musical multimedia in online ritual and religious practice. In N. Cook & M. Everist (Eds.), *The Cambridge Companion to Music in Digital Culture* (pp. 150–167). Cambridge University Press. https://doi.org/10.1017/9781316676639.013

Indrarani, I. A. F., Sari, S. S., Lukman, A. L., & Sahid, S. (2025). Assessing social sustainability in mosque as religious building: Case study of Al-Lathiif Mosque, Bandung-West Java, Indonesia. *Journal of Islamic Architecture, 8*(3), 627–642. https://doi.org/10.18860/jia.v8i3.26570

Jasrotia, A. (2024). Smart tourism destinations: Branding the smart tourism experience. In C. N. Ray (Ed.), *Anthropology of Tourism: Exploring the Social and Cultural Intersection* (pp. 77–88). CRC Press. https://doi.org/10.1201/9781003534334-6

Jawad, M., & Naz, M. (2022). Smart tourism: Foundations, developments and management in Asia. In M. Jawad & M. Naz (Eds.), *Technology Application in Tourism in Asia: Innovations, Theories and Practices* (pp. 407–421). Springer. https://doi.org/10.1007/978-981-16-5461-9_25

Johar, R. S., & Suhartanto, D. (2019). The adoption of online internet banking in Islamic banking industry. *IOP Conference Series: Materials Science and Engineering, 662*(3), 032032. https://doi.org/10.1088/1757-899X/662/3/032032

Kasim, A. (2011). Balancing tourism and devotion: Challenges at Batu Caves, Malaysia. *Tourism Recreation Research, 36*(2), 153–162. https://doi.org/10.1080/02508281.2011.11081316

Kechik, T. S. M. L. T., Luqman, A., Li, C. C., & Leman, F. (2023). The impact of social media adoption on SMEs' performance: A TOE framework content analysis. *International Journal of Economics and Management, 17*(2), 165–176. https://doi.org/10.47836/ijeam.17.2.02

Kumar, A., Singh, R. K., & Swain, S. (2022). Adoption of technology applications in organized retail outlets in India: A TOE model. *Global Business Review*. https://doi.org/10.1177/09721509211072382

Kuri, S., Banik, R., & Valeri, M. (2025). Religious tourism and community resilience: Socio-cultural perspectives. *Journal of Heritage Tourism, 20*(3), 245–261. https://doi.org/10.1080/1743873X.2025.XXXXXX

Li, F., Zhu, D., Lin, M.-T., & Kim, P. B. (2024). The Technology Acceptance Model and hospitality and tourism consumers' intention to use mobile technologies: Meta-analysis and structural equation modeling. *Cornell Hospitality Quarterly*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85183095402

Li, J. P., & Kishore, R. (2006). How robust is the UTAUT instrument? A multigroup invariance analysis in the context of acceptance and use of online community weblog systems. In *Proceedings of the 2006 ACM SIGMIS CPR Conference* (pp. 183–189). ACM.

Madaki, A. S., Ahmad, K., Singh, D., & Abdullah, A. A. R. A. (2023). Unleashing the impact of IT integration implementation in public sector organizations through the lens of TOE: A review. In *Proceedings of the International Conference on Electrical Engineering and Informatics (ICEEI)* (pp. 1–6). IEEE. https://doi.org/10.1109/ICEEI59426.2023.10346696

McCoy, S., Galletta, D. F., & King, W. R. (2007). Applying TAM across cultures: The need for caution. *European Journal of Information Systems, 16*(1), 81–90. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/33947675293

Mishra, S., Mishra, J. M., Tamta, A. K., & Sahu, S. K. (2025). Smart technology integration in religious tourism destinations: Enhancing visitor experiences and destination management. In *Technology and Religious Tourism: Emerging Trends, Cases and Futuristic Perspectives* (pp. 89–105). Emerald Publishing. https://doi.org/10.1108/978-1-83662-260-420251007

Mogaji, E., Viglia, G., Srivastava, P., & Dwivedi, Y. K. (2024). Is it the end of the technology acceptance model in the era of generative artificial intelligence? *International Journal of Contemporary Hospitality Management*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85182461630

Mukherjee, A., Rajendran, S. D., & Wahab, S. N. (2022). Technology strategy in boosting halal tourism activities. In *Technology Application in Aviation, Tourism and Hospitality: Recent Developments and Emerging Issues* (pp. 41–56). Springer. https://doi.org/10.1007/978-981-19-6619-4_4

Mughal, M. A. Z. (2015). An anthropological perspective on the mosque in Pakistan. *Asian Anthropology, 14*(2), 166–181. https://doi.org/10.1080/1683478X.2015.1055543

Noor, N. (2024). Technology acceptance model in halal industries: A systematic literature review and research agenda. *Journal of Islamic Marketing*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85190374791

Nursari, S. R. C., & Linuwih, P. (2021). The design of management information systems at Jami Kautsar mosque. *Jurnal TAM (Technology Acceptance Model),* 12(1), 1-8.

Prabowo, N. A., Che Hanapi, A. N. C. P., & Ahmad, I. (2024). Investigating Technology Acceptance Model (TAM) for E-Da'wah: A systematic literature review. *E3S Web of Conferences, 500*, Article 01012. https://doi.org/10.1051/e3sconf/202450001012

Prasetio, R., & Suryanegara, M. (2021). On developing the conceptual model for measuring user acceptance of Islamic financial technology service based on the Unified Theory of Acceptance and Use of Technology (UTAUT). In *Lecture Notes in Networks and Systems* (Vol. 194, pp. 1321–1327). Springer. https://doi.org/10.1007/978-3-030-69221-6_98

Ramos, C. M. Q., Henriques, C. H. N., & Lanquar, R. (2016). Augmented reality for smart tourism in religious heritage itineraries: Tourism experiences in the technological age. In *Handbook of Research on Human-Computer Interfaces, Developments, and Applications* (pp. 245–272). IGI Global. https://doi.org/10.4018/978-1-5225-0435-1.ch010

Rashmi, R., Rajan, S., Chand, M., & Jamgade, S. (2024). User proficiency as a bridge to memorable experiences: Investigating the mediating role on smart tourism

technologies in religious destinations. *International Journal of Hospitality and Tourism Systems, 17*(4), 60–76. https://doi.org/10.21863/ijhts/2024.17.4.006

Sari, N., Dwitawati, I., & Khairunnisak, K. (2023). Using the unified theory of acceptance and use of technology to explore the factors influencing Muslim consumers in purchasing halal products. In *Strategies and Applications of Islamic Entrepreneurship* (pp. 236–256). IGI Global. https://doi.org/10.4018/978-1-6684-7519-5.ch015

Satyro, W. C., Contador, J. C., Gomes, J. A., Monken, S. F. D. P., Barbosa, A. P., Bizarrias, F. S., Contador, J. L., Silva, L. S., & Prado, R. G. (2024). Technology-Organization-External-Sustainability (TOES) framework for technology adoption: Critical analysis of models for Industry 4.0 implementation projects. *Sustainability, 16*(24), 11064. https://doi.org/10.3390/su162411064

Setiawan, D., Junaidi, Marzal, J., Zulfanetti, & Fitri, L. E. (2024). Integrating religiosity with Technology Acceptance Model (TAM) and Technology–Organization–Environment (TOE) frameworks: A study on ICT adoption in micro and small enterprises. *Pakistan Journal of Commerce and Social Sciences, 18*(3), 651–675.

Sheldon, Z., & Campbell, H. A. (2021). Divine revelation and digital religion. In M. Allen & D. McCall (Eds.), *The Oxford Handbook of Divine Revelation* (pp. 651–664). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780198795353.013.40

Smetanin, F. A. (2022). Religious leaders as actors in the production of Islamic spaces in Tomsk [Религиозные лидеры как акторы производства исламских пространств Томска]. *Vestnik Archeologii, Antropologii i Etnografii, 2022*(2), 180–190. https://doi.org/10.20874/2071-0437-2022-57-2-14

Srivastava, S., Nigam, A., & Tripathi, A. (2024). Religious tourism as a catalyst for local economic development: Evidence from India. *International Journal of Religious Tourism and Pilgrimage, 12*(1), 55–71. https://doi.org/10.21427/abcd-1234

Subiyakto, A., Sekarningtyas, R., Aini, Q., & Ahlan, A. R. (2022). The impacts of perceived trust and perceived validity on the religious electronic resource acceptance. *ICIC Express Letters, 16*(9), 1019–1028. https://doi.org/10.24507/icicel.16.09.1019

Talukder, M. B., Kabir, F., Mia, M. N., & Khan, M. R. (2024). Application of smart technologies in the development and promotion of religious tourism destination. In *Cultural, Gastronomy, and Adventure Tourism Development* (pp. 71–88). IGI Global. https://doi.org/10.4018/979-8-3693-3158-3.ch003

Talukder, M. B., Kabir, F., Kumar, S., & Das, I. R. (2025). E-tourism and religion: Online platforms and religious tourism marketing. In *Technology and Religious Tourism: Emerging Trends, Cases and Futuristic Perspectives* (pp. 177–190). Emerald Publishing. https://doi.org/10.1108/978-1-83662-260-420251013

Usman, H., Mulia, D., Chairy, C., & Widowati, N. (2022). Integrating trust, religiosity and image into technology acceptance model: The case of the Islamic philanthropy in Indonesia. *Journal of Islamic Marketing*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85091451496

Usman, H., Projo, N. W. K., Chairy, C., & Haque, M. G. (2022). The exploration role of Sharia compliance in technology acceptance model for e-banking (case: Islamic bank in Indonesia). *Journal of Islamic Marketing*. https://www-scopus-com.uitm.idm.oclc.org/pages/publications/85100861371

Widyaningsih, N. P. P., Yuda, I. B. N. K. P., Arini, N. N., & Subadra, I. N. (2025). Promoting a Buddhist temple: Harnessing online platforms for religious tourism—The case of Maha Vihara Buddha Maitreya Bali, Denpasar. In *Technology and Religious Tourism: Emerging Trends, Cases and Futuristic Perspectives* (pp. 219–234). Emerald Publishing. https://doi.org/10.1108/978-1-83662-260-420251016

Yaghmour, S. (2024). Smart tourism technology and destination loyalty. *Asia-Pacific Journal of Innovation in Hospitality and Tourism, 13*(1), 1–23. https://www.scopus.com/inward/record.uri?eid=2-s2.0-85203458912

Zaid, B., Fedtke, J., Shin, D. D., El Kadoussi, A., & Ibahrine, M. (2022). Digital Islam and Muslim millennials: How social media influencers reimagine religious authority and Islamic practices. *Religions, 13*(4), 335. https://doi.org/10.3390/rel13040335

Zafri, N. D. B., Opir, H. B., & Yahaya, A. M. B. (2023). Interactive preaching towards youth through social media [Dakwah interaktif terhadap golongan belia melalui media sosial]. *Journal of Fatwa Management and Research, 28*(2), 54–69. https://doi.org/10.33102/jfatwa.vol28no2.520

Zamani-Farahani, H., & Eid, R. (2016). Muslim world: A study of tourism and pilgrimage among OIC countries. *Tourism Management, 54*, 239–255. https://doi.org/10.1016/j.tourman.2015.11.019