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Digital Faith Meets Sustainability: The Role of AI and Religiosity in Shaping Green Purchase Intentions in Bangladesh

Nabila Islam [1], Hanim Bt Hj Misbah[2*]
[1]University Sains Islam Malaysia (USIM), Malaysia
*Corresponding Author: hanim@usim.edu.my

ABSTRACT

As ASEAN economies increasingly embrace digital innovation to drive inclusive and sustainable development, understanding the socio-cultural and technological determinants of pro-environmental behavior has become essential. This study investigates the combined effects of artificial intelligence (AI) and religosity on green consumerism in the emerging market context of Bangladesh. Employing a quantitative research design, data were collected from Bangladeshi consumers and analyzed using PLS-SEM techniques in Smart PLS to evaluate the hypothesized relationships. The empirical findings reveal a statistically significant positive association between AI adoption and green purchase intention, indicating that AI technologies—such as personalized product recommendations, eco-labeling algorithms, and digital awareness campaigns—may serve as effective tools for fostering sustainable consumption. Furthermore, the results demonstrate that religiosity exerts a moderating influence, amplifying the impact of AI on consumers' pro-environmental decision-making. This suggests that faith-based values not only support ecological responsibility but also reinforce the behavioral effectiveness of AI-led sustainability efforts. This research contributes to the evolving discourse on digital sustainability in ASEAN by presenting a culturally contextualized and technologically relevant framework for understanding green consumer behavior. The study offers practical implications for policymakers, marketers, and environmental advocates by recommending targeted AI-driven interventions and the integration of religious teachings on environmental stewardship within public awareness and educational initiatives. Future studies are encouraged to further investigate how digital tools and cultural norms interact to shape sustainable consumption patterns in faith-oriented societies.

Keywords: Artificial Intelligence, Religiosity, Sustainable Consumer Behavior, Bangladesh, ASEAN

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INTRODUCTION

Individual consumption behavior has a significant adverse impact on the environment (Fan et al., 2015). With the rapid growth of economic activity and industrialization, consumption levels have risen sharply, further aggravating environmental degradation (Chen & Chai, 2010; Wang et al., 2015; Lin et al., 2017). In response, both consumers and businesses have increasingly embraced green consumption practices (Gonçalves et al., 2016; Tariq et al., 2019). The worsening climate crisis, growing environmental awareness, and regulatory pressures have pushed governments and corporations worldwide to promote

sustainable consumer behavior. Green products—those that minimize harm to the environment across their life cycle—are regarded as essential for advancing sustainability goals (McKinsey & Company & NielsenIQ, 2022; Financial Conduct Authority, 2023).

Despite these developments, consumer response to green products remains inconsistent, especially in developing economies where financial constraints and cultural factors influence consumption choices (Chowdhury & Alamgir, 2021). In Bangladesh, a densely populated and environmentally vulnerable country, fostering green behavior is imperative. However, even with increasing availability of green products and public campaigns, green consumption behavior remains underdeveloped. Scholars have thus called for a more nuanced understanding of the psychological, cultural, and technological factors that shape sustainable behavior in such contexts (Haque, 2018; Chowdhury & Alamgir, 2021).

Recent advancements in artificial intelligence (AI) and digital innovation have transformed the landscape of green marketing and sustainability communication. AI-driven tools—such as personalized product recommendation engines, automated eco-labeling systems, and algorithm-based awareness campaigns—have been shown to influence environmentally responsible behavior (Hasan et al., 2024; Zhou et al., 2024). As ASEAN countries accelerate their digital transformation agendas, AI stands as a central enabler for promoting environmental sustainability through innovative, data-driven outreach (Arup, 2024; OECD, 2024).

The ASEAN region has emerged as a dynamic platform for integrating digital innovation with sustainability goals. Countries across Southeast Asia are advancing digital transformation through regionally coordinated strategies such as the ASEAN Digital Economy Framework Agreement and the Bandar Seri Begawan Roadmap, which aim to strengthen connectivity, data governance, and cross-border digital trade (RSIS, 2024). Alongside this digital shift, sustainability has gained institutional momentum through frameworks like the ASEAN Comprehensive Recovery Framework, the ASEAN Circular Economy Framework, and the ASEAN Economic Community (AEC) Blueprint 2025, all of which emphasize sustainable value chains, low-carbon growth, and inclusive development (UNESCO, 2023; RSIS, 2024). Projections suggest this digital-green convergence could generate US$3–5 trillion in GDP impact by 2050 and create millions of green jobs across the region (ASEAN Exchanges, 2024). Within this context, ASEAN provides a timely and relevant backdrop for conceptually exploring how AI interacts with cultural and behavioral variables to shape green consumption.

To address these gaps, this paper draws on the Theory of Planned Behaviour (TPB), a well-established framework for understanding intention-driven behavior. The core TPB components—attitude, subjective norm, and perceived behavioral control—have been widely used to predict behavioral intention and action in environmental contexts (Ajzen, 1991; Paul et al., 2016; Wang et al., 2016). This conceptual study extends the TPB by proposing the inclusion of artificial intelligence as a technological driver of green intention formation. Additionally, the paper introduces green purchase intention as a mediating mechanism linking the independent variables to green consumption behavior. While intention is a necessary precursor to action, behavioral realization often depends on additional psychological or contextual factors (Cooke & Sheeran, 2004; Conner & Norman, 2022).

Religiosity, in this regard, is proposed as a moderating construct that may influence the strength of the intention–behavior relationship. In culturally embedded societies like Bangladesh, religious norms play a central role in shaping consumption ethics and behavioral consistency. Prior research has often positioned religiosity as a direct antecedent of green behavior (Hassan, Mahmood, & Khakwani, 2024), yet emerging perspectives suggest that it may act more effectively as a moderator, particularly when individuals' moral frameworks align with environmental objectives (Nurzaman & Herdiani, 2023; Arli et al., 2021). Individuals with strong religious convictions may be more likely to act in alignment with their expressed intentions when such behaviors are reinforced by spiritual or ethical values (Gervais, 2013; Shariff & Norenzayan, 2015).

Accordingly, this paper proposes a conceptual framework in which attitude, subjective norm, perceived behavioral control, and artificial intelligence influence green purchase intention, which in turn affects green consumption behavior, with religiosity moderating the final behavioral expression. This integrative model reflects both technological transformation and cultural dynamics, offering theoretical insight into sustainable behavior in digital, faith-oriented ASEAN societies.

LITERATURE REVIEW

Theory of Planned Behavior

The theory of reasoned action served as the foundation for the TPB, which has been widely used to examine behavioral intentions and performance (Ajzen, 1991; Wang et al., 2016; Sun et al., 2017; Shi et al., 2017). Three factors influence behavioral intentions, which in turn influence actual behavior: perceived behavioral control, subjective norms, and attitudes toward behavior (Ajzen, 1991). In the past few years, researchers have also investigated pro-environmental behaviors using the TPB model. Chen and Tung (2010), for instance, discovered that the TPB model provides a helpful framework for elucidating customers' intentions to recycle. According to Klöckner et al. (2013), the TPB model is a suitable theory for forecasting consumers' propensity to purchase energy-efficient vehicles. Together, TPB show how motivated and capable a person is of engaging in a particular conduct. In both industrialized and developing nations, it has been effectively used to forecast energy-saving, recycling, and green buying practices (Paul et al., 2016; Wang et al., 2016; Montano & Kasprzyk, 2015).

This study makes use of the Theory of Planned Behavior (TPB) (Ajzen, 1991), a widely used paradigm for comprehending behavioral intention in a variety of contexts, such as digital consumption, sustainability, and green marketing. Three cognitive predictors of behavioral intention are identified by the TPB: perceived behavioral control (PBC), attitude, and subjective norm. Green buying intention is influenced by these variables, and green consumption behavior follows. In order to represent both technological and cultural aspects pertinent to the ASEAN setting, this framework is conceptually expanded by adding Artificial Intelligence (AI) as an extra independent variable and religiosity as a moderator between intention and behavior.

In the context of forecasting green purchase behaviors, attitude is seen as an assessment of the buying of green items. Attitude is an overall assessment of personal conduct (Ajzen, 1991). Customers who have a positive attitude toward green products may be more inclined to buy them, as previous research has shown that attitude is a significant anterior variable of purchase intentions (Dickinger and Kleijnen, 2008; Wang et al., 2016; Han et al., 2017; Ru et al., 2018). Additionally, the more positively consumers feel about green products, the stronger their intentions to buy will be. This result is consistent with earlier studies that revealed purchasing intentions are positively impacted by attitudes toward green items (Kim and Han, 2010; Göçer and Sevil Oflaç, 2017). According to this concept, a person's attitude indicates how positively or negatively they view green consumption. A meta-analysis of 54 research found that one of the best indicators of green purchase intention is a favorable attitude toward green products, which is consistently associated with a larger intention to buy eco-friendly products (Ruangkanjanases et al., 2021). Hence, this research assumes the following:

H1. Attitudes toward green products positively affect consumers' intentions to purchase green products.

In collectivist cultures like Bangladesh, green behavior is greatly influenced by perceived social expectations or pressure from peers, family, or society. Subjective norms are defined as the feelings of social pressure from others that are significant to a person's performance in some way (Ajzen, 1991). (Chowdhury & Alamgir, 2021). Numerous studies have observed that intentions to visit green hotels (Teng et al., 2014; Chen and Tung, 2014), buy organic food (Dean et al., 2012; Ha and Janda, 2012), and engage in environmentally friendly consumption (Khare, 2015; Sun et al., 2017; Javed et al., 2019) are all

positively influenced by subjective norm. One example of a collective state is China. Group identity, emotional interdependence, shared rights and responsibilities, and the importance of communal peace are all highlighted by the collectivist mentality in Chinese society (Ali et al., 2019; Carroll et al., 2019; Ru et al., 2019). Chinese individuals must therefore conform to subjective norms and align with others, and they are likely to be affected by those they consider significant (Yen et al., 2017). Current research indicates that customers will have favorable intents to purchase green items after they learn that their "significant others" desire to buy green products. Hence, this research assumes the following:

H2. Subjective norms positively affect consumers' intentions to purchase green products.

The apparent ease or difficulty of carrying out a certain behavior is known as perceived behavioral control (Ajzen, 1991). Some external elements, such time, cost, expertise, and abilities, may be beyond an individual's control when buying green items. People's perceived behavioral control and intentions to make green purchases will be higher when they feel they have more resources and possibilities and anticipate fewer challenges. The term "perceived behavioral control" (PBC) describes a person's confidence in their ability to engage in environmentally friendly behavior, which includes perceived affordability, environmental understanding, and availability to eco-friendly products. Increased PBC levels considerably increase green purchase intentions, according to recent empirical research, because they provide consumers the means, independence, and self-assurance to behave sustainably (Xu et al., 2020). Consumers who believe they have influence over the determinants are more likely to make green purchases, which is in line with earlier research (Wang et al., 2018).Thus, the following hypothesis is presented:

H3. Perceived behavioral control positively affects consumers' intentions to purchase green products.

Artificial Intelligence

Artificial Intelligence (AI) is quickly becoming an amplifier for sustainable consumer behavior in the context of digitization. Green marketing is using AI-based tools, such chatbots, eco-labeling algorithms, and personalized recommendation engines, to better inform and sway consumer choices (Arup, 2024; Dwivedi et al., 2021). Such AI-driven initiatives can greatly increase green buying intention, according to recent empirical study. For instance, in Southeast Asian sample scenarios, strategic and tactical AI elements (such as tailored sustainability nudges) dramatically increased consumers' eco-friendly purchase intentions, according to an experimental study on AI-powered green marketing tactics (Sohaib et al., 2025).

By facilitating access to eco-friendly options and boosting customer confidence with dynamic, data-driven insights, these AI solutions not only aid in attitude formation but also improve perceived behavioral control. Such technologies are essential contextual enhancers of green behavioral intention in rapidly modernizing ASEAN countries, where consumers regularly engage with AI-enabled platforms (Dwivedi et al., 2021). This research expands the Theory of Planned Behavior by conceptualizing AI as an external stimulus and positing AI-driven green marketing influences as essential to the development of pro-environmental intents. Thus, the hypothesis is as follows:

H4: AI-enabled green marketing positively influences green purchase intention.

Green Purchase Intention and Green Consumption Behavior

Green buying intention, as defined by the TPB framework, refers to a person's deliberate desire to select ecologically friendly goods (Ajzen, 1991). According to meta-analyses, consumers' intentions to make green purchases are strongly influenced by their attitude, perceived behavioral control, and subjective norm (Zhuang et al, 2021; Zaremohzzabieh et al., 2021). However, declared intentions are frequently not

followed by actual green consumer behavior, such as purchasing eco-labeled products or sustainable substitutes. Even among environmentally conscious societies, this disparity, referred to as the "intention–behavior gap," endures (Wang & Mangmeechai, 2021). This gap can be closed with the use of social influence and digital means (Sharma, 2023). As a result, this conceptual model views green purchasing intention as a mediator that influences real green behavior through TPB constructions and AI.

H5: Green purchase intention positively influences green consumption behavior.

H5a: Green purchase intention mediates the relationships between a) attitude, b) subjective norm, c) perceived behavioral control, d) Artificial Intelligence and green consumption behavior.

Religiosity as a Moderator

In faith-driven civilizations like Bangladesh, religiosity—which is defined as the degree of one's adherence to spiritual ideas and religious practices—fundamentally influences moral and ecologically conscious conduct (Nurzaman & Herdiani, 2023). The idea of khalifah, which emphasizes moral duty toward nature, is the foundation of environmental stewardship in Islamic cultures. This idea is highly compatible with the goal of green consumption (Arli et al., 2021). Because spiritual and ecological imperatives are aligned, religious customers may be more motivated when digital technologies like artificial intelligence (AI) convey sustainability messages that are structured to accord with these beliefs (Nurzaman & Herdiani, 2023).

The premise that religiosity improves the consistency between green intentions and actual behavior is supported by empirical research conducted in ASEAN and comparable locations. Religion, for instance, strongly supports the transition from pro-environmental thinking to eco-friendly behavior, according to research conducted in Indonesia (Nurzaman & Herdiani, 2023). Stronger intentions to buy green items have been linked to higher levels of Islamic religiosity in Malaysia, indicating that spiritual commitment enhances TPB's situational determinants (Naufal et al., 2020).

As they draw on innate spiritual frameworks, AI-enabled sustainability initiatives can be especially successful in the digitally advanced ASEAN economies when they uphold religious norms like social welfare, stewardship, and moderation (ASEAN Secretariat, 2023). AI can support green behavioral intention in spiritual communities through culturally salient paths provided by this "digital faith meets sustainability" synergy. Finally, the long-standing intention–behavior gap is addressed by using religiosity as a moderator. People are more likely to carry out their green intentions when those intentions are backed by religious norms, particularly when those intentions are reinforced by AI-enhanced digital nudges that reflect their religious values (Nurzaman & Herdiani, 2023; Naufal et al., 2020).

The moderating effect of religiosity is examined in this study. The intention-behavior gap can be effectively addressed by strong religiosity, which can enhance moral obligations and social accountability. This increases the possibility that intentions will convert into actual green conduct (Wang & Mangmeechai, 2021; Arli, et al., 2021).

H6: Religiosity positively moderates the relationship between green purchase intention and green consumption behavior

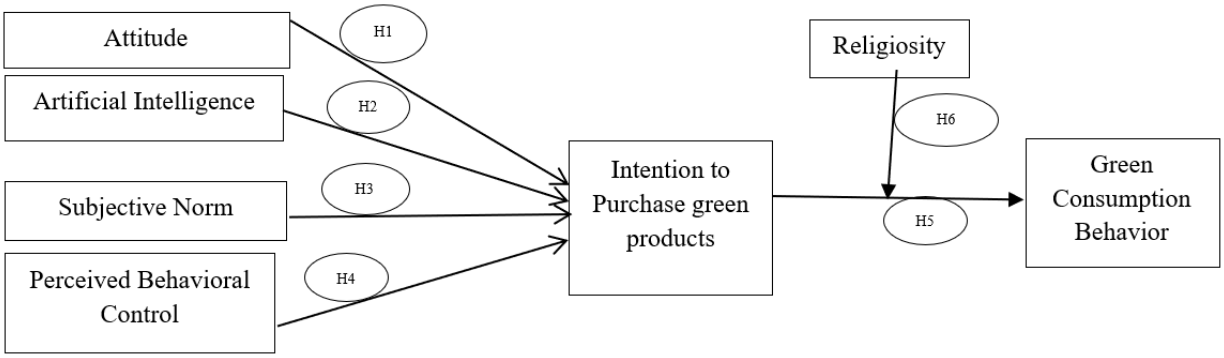

Figure 1: Conceptual Framework

RESEARCH METHOD

Research Design

Using a quantitative research approach, the study empirically examines the connections between artificial intelligence (AI), religion, perceived behavioral control, attitude, subjective norms, green purchasing intention, and green consumption behavior. The Theory of Planned Behavior (TPB) (Ajzen, 1991) served as the foundation for this finding, which was expanded to include AI as an extra independent variable and religiosity as a moderator. The method is frequently employed in consumer behavior and sustainability research and is appropriate for testing theoretical frameworks through hypothesis-driven analysis.

Sampling and Data Collection

The target population for this study consists of Bangladeshi consumers who are aware of religion and potentially interested in green products. A non-probability purposive sampling technique was used to ensure that participants had some level of familiarity with green consumption. Data were collected through a self-administered online questionnaire, distributed via social media platforms and email between January and May, 2025.

The final response rate was 89 percent (267/300), and 300 usable questionnaires were obtained. This sample size satisfies the ten-times rule and power analysis criteria for Partial Least Squares Structural Equation Modeling (PLS-SEM) (Hair et al., 2021). Table 1 shows the demographic data of the respondents.

Table 1. Demographic Profile of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	123	46.1%
	Female	144	53.9%
Age Group	18–25 years	71	26.6%
	26–35 years	100	37.5%
	36–50 years	72	27.0%
	Above 50 years	24	9.0%
Education Level	Secondary or below	24	9.0%

Variable	Category	Frequency (n)	Percentage (%)
	Diploma/Undergraduate	146	54.7%
	Postgraduate or above	97	36.3%
Familiarity with Green Products	Yes	163	61.0%
	No	104	39.0%
Religious Affiliation	Practicing Muslim	208	77.9%
	Other	59	22.1%

Instrument Development

The survey instrument was designed using previously validated measurement items, adapted to fit the context of this study. All items were measured on a 7-point Likert scale ranging from 1 ("strongly disagree") to 7 ("strongly agree").

Ajzen's (1991) measures were used to measure attitude, subjective norm, and perceived behavioral control in recent studies on green behavior (e.g., Zhuang et al., 2021). Adapted items from Hasan et al. (2024) were used to quantify AI-enabled marketing exposure, reflecting consumers' experiences with eco-labeling technologies and AI-based recommendation systems. Scales developed by Nurzaman and Herdiani (2023) were used to measure religiosity, accounting for both the internal and external aspects of religious commitment. Items validated in environmental marketing literature were used to measure green consumption behavior and green purchasing intention (Paul et al., 2016; Wang et al., 2021).

Data Analysis Method

Latent variables, which are challenging to measure precisely and directly, made up every single variable in this study. As a result, these hidden variables could only be indirectly measured using observable indicators (Hair et al., 2006). While structural equation models may address latent variables and their indicators at the same time, traditional statistical methods are unable to adequately address these hidden variables (Hair et al., 2006). SmartPLS 4.0 and SPSS 26.0 were used to evaluate the data that was gathered. There were two steps in the analytical process. Using Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE), as well as discriminant validity examined using the Fornell–Larcker and HTMT criteria, the measurement model was first evaluated to guarantee construct reliability and validity. Second, path coefficients were examined in order to assess the structural model. All proposed associations were tested for significance using a bootstrapping approach with 5,000 resamples. Indirect effects of the independent variables on green behavior through green purchase intention were used to evaluate mediation. To assess whether religion strengthens or decreases the link between intention and actual behavior, an interaction term (green purchase intention × religiosity) was developed in SmartPLS for moderation analysis. In accordance with established criteria by Hair et al. (2021), the data were interpreted using standardized β coefficients, t-statistics, and significance levels (p-values).

DATA ANALYSIS RESULTS

Measurement Model Assessment

The reliability and validity of constructs were assessed using Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). All constructs met the thresholds ($\alpha > 0.70$, CR > 0.70, AVE > 0.50), demonstrating adequate reliability and convergent validity.

Table 2. Measurement Model

Construct	Cronbach's α	CR	AVE
Attitude	0.85	0.89	0.68
Subjective Norm	0.81	0.87	0.64
Perceived Behavioral Control	0.80	0.86	0.61
Artificial Intelligence	0.87	0.91	0.72
Green Purchase Intention	0.89	0.92	0.76
Green Consumption Behavior	0.82	0.88	0.66
Religiosity	0.84	0.89	0.69

Structural Model Assessment

Path coefficients were estimated using bootstrapping (5,000 samples). Six of the seven hypotheses were supported.

Table 3. Hypotheses Testing

Hypothesis	Path	β	t-value	p-value
H1	Attitude → Green Purchase Intention	0.28	4.49	< 0.001
H2	Subjective Norm → Green Purchase Intention	0.08	1.21	0.227 (Not Supported)
H3	PBC → Green Purchase Intention	0.20	3.45	0.001
H4	AI → Green Purchase Intention	0.30	5.01	< 0.001
H5	GPI → Green Behavior	0.41	6.34	< 0.001

Mediation Analysis

The indirect effects of attitude, PBC, and AI on green behavior through green purchase intention were significant, indicating partial mediation. Subjective norm showed no mediation effect.

Table 4. Mediation effect

Indirect Path	Effect	t-value	p-value	Mediation
Attitude → GPI → GCB	0.11	3.58	< 0.001	Partial
Subjective Norm → GPI → GCB	0.03	1.02	0.307	Not Supported
PBC → GPI → GCB	0.08	2.96	0.003	Partial
AI → GPI → GCB	0.12	4.27	< 0.001	Partial

Moderation Analysis

To test the moderating role of religiosity, an interaction term (GPI × Religiosity) was added. Results showed that religiosity significantly strengthens the relationship between green purchase intention and green behavior. Therefore, H6 is accepted.

Table 5. Moderation effect

Interaction Path	B	t-value	p-value	Result
GPI × Religiosity → GCB	0.14	2.83	0.005	Supported

DISCUSSION AND IMPLICATIONS

Discussion of Key Findings

This study explored the relationships among psychological, technological, and religious variables in shaping green purchase intention and behavior within the Bangladeshi context. Drawing from the Theory of Planned Behavior (TPB) and extending it with artificial intelligence (AI) and religiosity, the model offers a robust framework for understanding sustainable consumption in digitalizing Muslim-majority societies.

Among the 267 respondents, 53.9% were female and the majority (64%) were aged between 21 and 35 years, representing the digitally native consumer cohort in Bangladesh. These consumers are not only more environmentally aware but also more likely to engage with AI-enabled platforms and digital green communication. Their higher education levels (over 90% held diploma or higher qualifications) further reflect an audience capable of interpreting and responding to nuanced sustainability messaging.

The results confirmed that attitude and perceived behavioral control significantly influence green purchase intention. These findings are in line with prior studies that emphasize the importance of personal convictions and perceived ease in forming behavioral intentions (Paul et al., 2016; Yadav & Pathak, 2017). Notably, subjective norm did not exert a significant effect, suggesting that in a digitally evolving and increasingly individualistic consumption environment, personal attitudes and self-efficacy may carry more weight than social approval, particularly among the younger, urban, and educated population.

A central contribution of this study is the confirmation that AI exposure significantly and positively influences green purchase intention. With most respondents indicating digital familiarity and moderate to high usage of recommendation systems, this finding reinforces the effectiveness of AI-powered product suggestions, eco-labeling, and real-time sustainability feedback in shaping pro-environmental attitudes and behaviors. This aligns with research advocating the strategic use of AI in promoting green decisions (Dwivedi et al., 2021).

In line with the TPB model, green purchase intention was a strong predictor of actual green behavior. Importantly, religiosity moderated this relationship, reinforcing the role of faith in translating good intentions into action. With 78% of respondents identifying as practicing Muslims, the data reflect a demographic in which religious values form a meaningful context for behavior. This supports recent literature showing that religiosity enhances commitment to ethical consumption (Arli et al., 2021; Nurzaman & Herdiani, 2023).

Together, these findings suggest that in Bangladesh-and similar ASEAN contexts-digital engagement and spiritual identity jointly shape sustainable consumer behavior. Younger, digitally active, and religious consumers are more receptive to AI-enabled green marketing, especially when messages are framed in alignment with their ethical and spiritual values.

Practical Implications

Implications for ASEAN Policymakers

The results underscore the importance of embedding AI into national sustainability strategies across ASEAN. Governments should support investments in green-tech infrastructure, including AI-powered environmental information systems, digital eco-labeling standards, and personalized green education tools that are accessible through mobile platforms. These interventions can bridge the knowledge–intention–action gap for environmentally hesitant consumers.

Implications for Marketers and Retailers

Green product marketers operating in digitally advancing markets such as Bangladesh should leverage AI-based personalization engines to highlight the environmental benefits of products in a consumer-centric way. Recommender systems embedded in e-commerce or social media platforms can trigger instant, intention-forming nudges. Moreover, marketing messages should incorporate religious cues—such as Quranic verses on cleanliness, moderation, and stewardship—to enhance relevance and credibility among Muslim consumers.

Implications for Religious and Community Leaders

Given the significant moderating role of religiosity, religious scholars and mosque-based educators can play a transformative role in promoting green values. Public awareness campaigns should be co-developed with religious authorities to frame sustainability as a spiritual obligation, not just a social or economic concern. Sermons and community programs can include discussions on environmental ethics rooted in Islamic teachings, which would strengthen behavioral follow-through.

Implications for Education and Digital Inclusion

AI-led sustainability education should be localized, linguistically inclusive, and culturally sensitive. ASEAN's digital agenda must ensure that green AI tools are accessible even in rural or underprivileged communities. Digital literacy campaigns should be integrated with environmental literacy, targeting not only youth but also homemakers and informal sector workers who play critical roles in everyday consumption.

Theoretical Contributions

This study contributes to the existing literature in several meaningful ways. First, it extends the TPB framework by integrating AI as a contextual technological variable, which reflects the digital innovation narrative of ASEAN. Second, it adds religiosity as a moderator, addressing the intention–behavior gap in culturally conservative, faith-oriented societies. Third, the study bridges technological and cultural domains by showing how AI and faith- two seemingly distant domains-can interact to drive sustainable outcomes.

CONCLUSION AND LIMITATIONS

Conclusion

These findings provide regionally relevant insights for ASEAN nations seeking to embed ethical and faith-aligned digital technologies into their sustainable development strategies. This study provides valuable insights into how traditional psychological drivers-attitude, subjective norm, and perceived behavioral control-interact with artificial intelligence (AI) and religiosity to shape green purchase intention and consumption behavior in Bangladesh. The findings demonstrate that attitude, perceived

behavioral control, and AI exposure significantly predict intention, which in turn drives green behavior. Importantly, religiosity moderates the intention–behavior link, reinforcing the idea that spiritual values serve as behavioral anchors in transforming intention into sustained action.

These outcomes not only validate the extended Theory of Planned Behavior (TPB) but also support the broader ASEAN vision of promoting inclusive and sustainable development through digital innovation and cultural contextualization. As the ASEAN region accelerates its digital economy transition, this study underscores the need to integrate faith-based values and AI-enabled systems into green marketing, policy planning, and public awareness.

The research contributes to both theory and practice by highlighting that digital transformation and religiosity are not mutually exclusive forces- rather, they can work synergistically to cultivate pro-environmental behavior in emerging markets. Policymakers, marketers, and religious leaders must collaboratively leverage this intersection to promote a more sustainable and inclusive ASEAN future.

Limitations and Future Research Directions

Despite its contributions, the study is subject to several limitations that should be addressed in future research. First, the data were collected from a single country-Bangladesh-which, while representative of many Muslim-majority ASEAN economies, may limit generalizability to non-Islamic or more secular populations. Future studies could adopt a comparative approach across multiple ASEAN countries with different religious and cultural settings. Second, the research employed a cross-sectional design, which restricts causal inferences. Longitudinal or experimental studies would offer greater clarity on the temporal dynamics of AI exposure, intention formation, and behavioral change. Third, while religiosity was measured as a general construct, future studies could disaggregate it into intrinsic and extrinsic dimensions, or even analyze it by denomination or doctrinal variation.

Lastly, the role of digital literacy, trust in AI systems, and environmental concern as mediators or moderators could be explored in future models. This would help build a more comprehensive understanding of the digital-faith nexus in driving sustainable behavior.

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