

Determinants of sustainable purchase decisions: Environmental awareness, halal considerations, and consumer behaviour in an emerging economy

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ABSTRACT

This research explores various factors that affect decision-making regarding sustainable purchases of environmentally conscious and halal-certified personal care products in Indonesia, specifically focusing on cosmetics, skin and body care products. The study aims to comprehend the cognitive, normative, and behavioral factors that influence purchasing intention and actual purchasing behavior. The variables included in this study were environmental and halal awareness, which also incorporated the Theory of Planned Behavior (TPB), such as attitudes, subjective standards, and perceived behavioral control. A cross-sectional study was used to collect data from 369 respondents from eight different cities in Indonesia. The data was analyzed using PLS-SEM (Partial Least Squares Structural Equation Modelling) to determine the variable's direct and indirect impacts. The results demonstrate that both environmental and halal awareness are cognitive factors that substantially affect purchasing intention, which in turn has a moderate direct effect on purchase behavior. The moral, social, and Islamic religious framework are areas that need to be further researched to fully understand the potential impact of their role on purchase behaviour. Conducting the study in a Muslim-majority country contextualizes the significance of variables and emphasizes the importance of integrating religious and cultural factors to address sustainable consumer behavior, as well as providing a foundation for future research. These aspects offer a more precise evaluation of the field of study and yield insights into the policy alternatives and marketing tactics to be executed within this framework.

Keywords: sustainable consumption, halal awareness, environmental awareness, theory of planned behaviour, purchase intention and behaviour

INTRODUCTION

As the world faces rapid environmental deterioration, finite resources, and increasing ethical concerns in the marketplace, the need for sustainable consumption has grown (Guimarães et al., 2023). Sustainable purchasing decisions have consequently attracted increasing attention in both research and practice, encompassing environmental, ethical, and social dimensions. This shift reflects a transition from conventional consumption patterns—primarily driven by price and functionality—toward more value-oriented and sustainability-driven consumer behaviour (Li et al., 2020; Tomşa et al., 2021).

Emerging economies such as Indonesia present a particularly important context for examining sustainable consumption. Rapid urbanisation, increasing market complexity, and strong sociocultural influences create both

opportunities and challenges for promoting sustainability-oriented behaviour (Tseng et al., 2016). In such contexts, consumer decision-making is not solely shaped by environmental or economic considerations, but also by culturally embedded values, including religious and ethical orientations. However, existing sustainability models often prioritise environmental and economic dimensions, while cultural and value-based determinants remain underexplored, particularly in emerging market settings.

Despite the growing body of literature on sustainable consumption, prior studies have largely examined environmental awareness, economic considerations, and behavioural factors in isolation (Ahmad & Thyagaraj, 2015; Kautish et al., 2019). This fragmented approach limits a comprehensive understanding of how these determinants interact in shaping actual purchasing behaviour. More importantly, limited attention has been given to the integration of culturally embedded constructs, such as halal

awareness, within sustainable consumption frameworks (Nart et al., 2023; Rafiki et al., 2024). This represents a critical gap in the literature, particularly in Muslim-majority markets where religiously grounded values play a significant role in shaping consumer behaviour.

To address this gap, this study introduces an integrated perspective that brings together environmental awareness, culturally embedded values, and behavioural mechanisms within a unified analytical framework. In doing so, it provides a more holistic explanation of sustainable consumption behaviour that extends beyond conventional environmental and economic predictors.

The Theory of Planned Behavior (TPB) provides a robust theoretical foundation for analysing such behavioural processes. TPB explains how attitudes, subjective norms, and perceived behavioural control influence behavioural intentions and actual behaviour (Ajzen, 2005; Bosnjak et al., 2020). It has been widely applied in sustainability research to understand pro-environmental and ethical consumption decisions (Nurzaman & Herdiani, 2023; Shalihin et al., 2025). However, prior applications of TPB in sustainable consumption contexts have predominantly focused on environmental or economic predictors, with limited integration of religious or culturally grounded constructs within the same analytical framework.

In this regard, halal awareness should not be viewed solely as a religious obligation, but as a multidimensional construct encompassing ethical, safety, quality, and transparency considerations (Ali et al., 2017; Bashir, 2019). These attributes are inherently aligned with sustainability principles, suggesting that halal awareness may function as a value-based driver of responsible consumption behaviour. Empirical evidence also indicates that halal-related factors influence not only religious compliance but broader consumer evaluations of product integrity and ethical standards (Astuti & Asih, 2021; Divianjella et al., 2020). This suggests that halal awareness may indirectly influence actual purchase decisions through behavioural intention.

Thus, halal awareness can be analytically treated as a consumer value construct rather than purely a religious variable, making it appropriate for scientific investigation within behavioural research frameworks. This perspective enables the integration of halal awareness into established behavioural models as a legitimate explanatory factor of consumer decision-making.

Nevertheless, the integration of halal awareness with environmental determinants in explaining sustainable purchase decisions remains limited, particularly within emerging economy contexts. This limitation highlights the need for a more comprehensive model that captures both value-based and environmental drivers within a single analytical framework.

Therefore, this study aims to address this gap by developing an integrated behavioural model that combines environmental awareness, halal awareness, and TPB constructs to explain both purchase intention and actual purchase decision. By linking intention to behaviour, this study also responds to a well-documented limitation in sustainability research, where many studies focus on intention

without adequately examining its translation into actual purchasing behaviour (Mamun et al., 2020; Shalihin et al., 2025). In addition, purchase intention is positioned as a mediating mechanism linking cognitive, normative, and value-based determinants to actual purchase decision.

This integration advances the current state of the art by offering a more comprehensive and context-sensitive understanding of sustainable consumer behaviour. It incorporates environmental, cognitive, normative, and culturally embedded value dimensions within a single framework, thereby providing a more realistic representation of how consumers make sustainability-oriented decisions.

Specifically, the objectives of this study are as follows: (1) to examine the influence of environmental awareness on sustainable purchase intention; (2) to analyse the role of halal awareness as a culturally embedded determinant of consumer behaviour; (3) to investigate the effects of attitude, subjective norms, and perceived behavioural control on purchase intention; and (4) to evaluate the relationship between purchase intention and actual purchase decision within an integrated TPB-based model.

This study contributes to literature in several important ways. First, it extends sustainable consumption research by explicitly incorporating halal awareness as a value-based and culturally grounded determinant of consumer behaviour. Second, it offers a more comprehensive analytical framework by integrating environmental, cognitive, normative, and ethical dimensions within a single model. Third, by linking purchase intention to actual purchase decision, it provides a more realistic representation of consumer behaviour, addressing the intention-behaviour gap frequently identified in prior studies. Finally, by focusing on an emerging economy context, this study generates context-sensitive insights that enhance the applicability and generalisability of sustainability and consumer behaviour theories.

In practical terms, the findings are expected to provide valuable insights for policymakers and marketers in designing strategies that align environmental sustainability with culturally relevant values, such as halal compliance. This integrated approach may enhance the effectiveness of interventions aimed at promoting sustainable consumption by simultaneously addressing cognitive, normative, and value-based drivers of consumer behaviour.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

A sustainable purchasing decision is an ethical choice made by the customer to acquire a product that supports environmental preservation, adheres to ethical practices, and benefits society as a whole. A purchase decision is thus expanded beyond price, quality, and functional attributes to encompass concerns about the environment, ethics, and society, thus exhibiting value-based behavior that balances personal interests with moral obligations to society (Tomşa et al., 2021).

In the context of emerging economies, the factors that determine sustainable purchase decisions include structural or

cultural factors such as rapid urbanisation, environmental deterioration, and incomplete regulation, as well as increasing levels of consumer awareness and ethics. Consumers in emerging economies combine sustainability with cultural values, ethics, and belief systems; hence, their behaviour cannot be contrasted with that of developed economies that benefit from institutional support (Tseng et al., 2016).

In Muslim-dominated areas, sustainable consumption is closely linked to halal principles that encompass attributes of cleanliness, safety, and integrity. Hence, purchasing decisions are a function of an assessment of sustainability, ethics, and religion, as opposed to a focus purely on sustainability. The dimension of halal consciousness emerges as a relevant value-oriented factor for sustainability-focused consumption (Ali et al., 2017; Joshi & Garg, 2022).

From a Behavioural perspective, it seems that sustainable purchase decisions are not subject to impulse responses but involve a cognitive decision-making process. This is further corroborated by TPB that conceives behaviours to be a function of intentions due to the decision-making processes (Arqam et al., 2024; Dhir et al., 2021).

TPB asserts that human activities are directed by intentions influenced by attitudes, subjective norms, and perceived behavioral control. This approach has been extensively utilized in sustainability research, as environmentally conscious consumption that seeks to foster ethical conduct requires contemplation, moral evaluation, and contextual assessment, rendering such behavior intention-based (Tomşa et al., 2021). Emerging economies are characterized by external constraints that make perceived behavioral control and subjective norms important determinants of intentions (Tseng et al., 2016).

Environmental awareness is a fundamental cognitive and ethical criterion that involves recognition of environmental issues and care for environmental preservation. Environmental awareness proves to be a catalyst, which alters cognitive frameworks, establishing sustainability as a morally acceptable option (Li et al., 2020). In developing economies, media saturation, coupled with overt symptoms of environmental degradation, influences and raises awareness regarding the environment, thereby encouraging consumers to adapt to sustainability, despite structural challenges (Kautish et al., 2019).

Halal awareness is a complementary value-based construct for environmental awareness. It is a demonstration of knowledge and sensitivity to halal product permissibility, production process, and certification credibility. Aside from religious observance, it is also consistent with values associated with ethical consumerism, such as hygiene, safety, transparency, and societal responsibility. Strong halal awareness creates a sense among consumers that influences moral and ethical judgments about certain products, which go beyond product functionality (Ali et al., 2017; Joshi & Garg, 2022).

One other significant factor in the mechanism of TPB is the attitude toward ethical and sustainable consumption. Attitudes, which result from key beliefs that the consumption of ethical or halal products would lead to positive outcomes, shape the motivational readiness for action. Positive attitudes

to ethical or halal consumption may encourage a customer to engage in sustainable consumption behaviors despite the limitations (Hamza & Shirazi, 2025).

Social influences are similarly encouraged by subjective norms. The latter refers to perceived social pressure from significant groups of people. Central to collectivist cultures that are common in emerging economies are consumption and their social relational aspects. Sustainable and halal consumption evoke cultural values of moral conformity and social approbation that inspire consumers to adopt the expectations promoted by their families, peers, and communities (Hamza & Shirazi, 2025).

Behavioural control is the perceived view of the consumers about the ways in which a specific behaviour can be performed, such as the affordability of the behaviour, the accessibility of products, the clarity of certification schemes, and the competence needed to identify products with sustainable attributes. Behavioural control in emerging economies adds significance to the structural limitations; hence, when perceived as manageable, the ethical behaviour of the consumers transforms into action (Dhir et al., 2021).

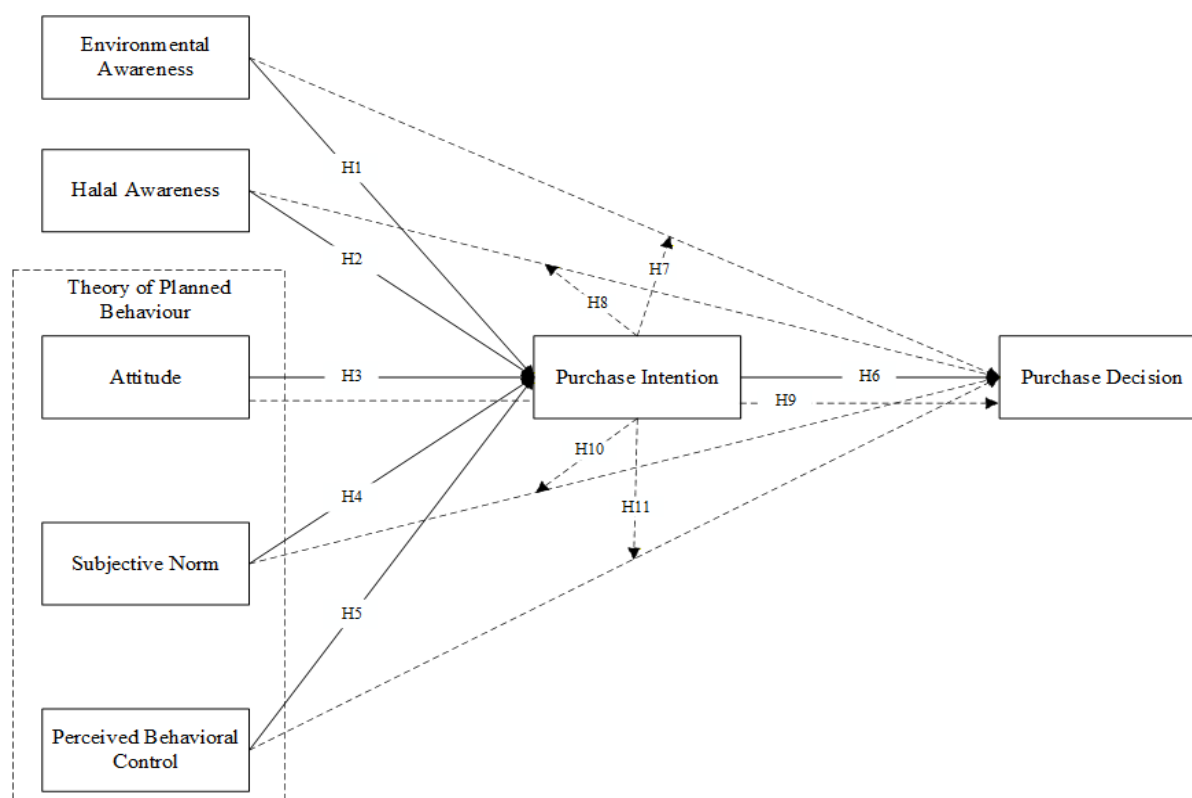
In this process, purchase intention emerges as a key behavioural factor, centered on intention as a calculated plan of action. Intention plays a mediating role between intellectual, attitudinal, social, and personal controllable factors that guide behaviour, especially within emerging economies, where values are translated into action through overcoming economic, information, and context-related constraints (Tseng et al., 2016).

In a similar vein, the awareness pertaining to the environment and halal is the cognitive building block for EC or SC. Further, the attitudes, norms, and controls comprise the psychological processes in the TPB model. Finally, the purchase intentions mediate the influence of these factors on SC decisions. A synthesized scheme like the above ensures a coherent and context-tailored explanation for SC in emerging economies, incorporating the cognitive, normative, and control-related antecedents to the behaviors as proposed in the above-referenced research works (Ali et al., 2017; Dhir et al., 2021; Tomşa et al., 2021).

Environmental Awareness

Environmental awareness involves customers' comprehension of ecological issues and their consequences, which profoundly affect their buying intentions. Studies indicate that increased environmental knowledge is positively associated with the intention to buy eco-friendly products. Rahardja & Anisah (2020) discovered that while gender disparities exist in attitudes towards eco-friendly items, the overall impact of environmental awareness and knowledge is substantial in shaping purchase intentions. According to Zulfa's (2023) study, increased environmental awareness and product knowledge directly increase the potential of customers choosing eco-friendly products, thereby supporting the hypothesis that knowledgeable consumers are more likely to make sustainable decisions.

H1: Environmental Awareness has a significant effect on Purchase Intention.



Details:

Direct Relationships —————>

Indirect Effects - - - - ->

Figure 1. Conceptual model (Source: Authors' own elaboration)

Halal Awareness

Halal awareness refers to customers' perceptions of the availability and use of halal goods on the market. It depicts a scenario in which people consciously choose to purchase halal products despite the numerous alternatives available. According to Astuti et al. (2021), knowing about halal regulations influences one's intention to purchase halal food. A thorough examination of research on the desire to purchase halal products consistently emphasizes the importance of halal awareness (Bashir, 2020; Zakaria et al., 2018).

H2: Halal Awareness has a significant effect on Purchase Intention

Theory of Planned Behavior

TPB, developed by Ajzen in 1991, provides a framework for comprehending how people decide to engage in specific acts (Bosnjak et al., 2020).

Research shows that attitudes influence customer purchasing of halal cosmetics (Divianjella et al., 2020; Rahman, 2015) and halal-certified pharmaceuticals (Mukhtar & Butt, 2012). These studies show how attitudes influence the purchase of halal-certified cosmetics, food, and medications.

Subjective norms are individuals' normative beliefs that are impacted by external sources such as family and peers. These standards can influence purchase decisions, especially within the halal market (Fuadi et al., 2022). Subjective norms also influence customers' intentions to purchase halal food, particularly among students (Suleman et al., 2021).

Perceived Behavioral Control refers to an individual's trust in their ability to carry out a specific action. Individual competencies and external influences, such as social support and access to resources, shape this perception of control. Consumers who have confidence in their ability to act are more likely to carry out their plans. Individuals who face less hurdles when purchasing halal products are more likely to complete their transactions (Damit et al., 2019). Consumers who are having difficulty getting halal products might delay their purchases. Based on these previous studies, the hypotheses are set as follows:

H3: Attitude has a significant effect on Purchase Intention

H4: Subjective Norm has a significant effect on Purchase Intention

H5: Perceived Behavioral Control has a significant effect on Purchase Intention

Purchase Intention

The impact of buying intention on the decision to purchase halal items is an important research subject, particularly for understanding consumer behavior in connection to Islamic principles. Purchase intention is an important mediator in the decision-making process, influencing consumers' attitudes towards halal goods.

Studies show that purchase intention is positively related to actual purchasing behavior. Awan et al. (2015) demonstrated that factors influencing halal purchase

intention had a significant impact on decision-making in the halal food sector, with beliefs standing out as a main motivator of consumer behavior. Jannah et al. (2022) back this up by proving that Islamic business ethics positively influence purchasing decisions through consumers' purchase intents, emphasizing the importance of ethical considerations in the acquisition of halal products. Puspitasari et al. (2018) also found a positive relationship between online customer purchase intentions and actual purchase decisions, emphasizing the importance of intention as a precursor to behavior. Based on these prior studies, the hypotheses are set as follows:

H6: Purchase Intention has a significant effect on Purchase Decision

H7: Purchase Intention mediates the relationship between Environmental Awareness and Purchase

Decision

H8: Purchase Intention mediates the relationship between Halal Awareness and Purchase Decision

H9: Purchase Intention mediates the relationship between Attitude and Purchase Decision

H10: Purchase Intention mediates the relationship between Subjective Norm and Purchase Decision

H11: Purchase Intention mediates the relationship between Perceived Behavioral Control and Purchase Decision

MATERIALS AND METHODS

Research Design

This study employed a quantitative cross-sectional methodology to investigate the determinants affecting buying decisions for sustainability in Indonesia, focusing on environmental awareness, halal awareness, and consumer behavioral aspects. This is because cross-sectional designs enable all variables to be measured simultaneously, which is useful for testing presumed links as well as a mediator role for purchase intentions on decisions to purchase.

The method of SEM, specifically PLS-SEM approach, were utilizing to simultaneously examine the direct and indirect relationships among the structures. PLS-SEM is ideally suited for exploratory research characterized by intricate mediation interactions and non-normally distributed data, particularly with low or moderate sample sizes.

Study Area and Period

Data for this study was collected in Indonesia from October 2025 to December 2025. Eight cities, which are representative for this research, are selected based on Government Regulation, which divides cities according to population size. East Jakarta and Makassar are chosen as metropolitan cities, while Denpasar and Malang are selected as large cities, followed by Kupang, Banjar Baru, as medium cities, and finally Sabang and Tual as small cities for this study. These cities represented different levels of urbanization, accessibility to markets, exposure to information on sustainability issues, as

well as awareness of halal and environmental-friendly certifications.

Sampling and Respondents

The study had set inclusion/exclusion criteria to ensure that the information collected is relevant and of good quality. The inclusion criteria specified that respondents should be aged 18 years and above, should be actively purchasing environmentally friendly and halal personal care products, and should be residing in one of the selected cities. The respondents were excluded if they did not have any purchasing experience in the past six months or were unable to answer the survey in Bahasa. Purposive sampling was used to collect the data. This technique was employed because it allows researchers to select respondents based on specific criteria relevant to the research objectives (Douglas, 2022). The criteria applied to people who use halal and environmentally friendly products.

The sample size was determined using a formula for an indeterminate population, developed by Lwanga, Lemeshow, et al. (1991):

$$n = \frac{Z^2 \times P \times (1-P)}{e^2} = \frac{1,96^2 \times 0,69 \times (1-0,69)}{0,05^2} = 329$$

where n = sample size; Z = the value of the standard normal distribution based on the confidence level; P = proportion; e = margin of error; and where Z is 1.96 (95% confidence level), P is 0.69 (percentage of Indonesian consumers attentive to halal and eco-friendly products), and e is 0.05 (margin of error). A total of 369 valid responses were obtained, surpassing the minimum requisite sample size.

Demographic Profile

The demographic characteristics of the respondents indicated that a diverse array of socio-economic and geo-demographic sectors was represented in this study. A greater proportion of female respondents constituted 72% of the total, with the majority (64%) aged between 21 and 30 years. Concerning levels of education, it was observed that 57% of the respondents had an undergraduate diploma level of education, while different levels of occupation, entrepreneurship, and being a student were represented, with a broad spectrum of income levels from below IDR 1,000,000 to above IDR 10,000,000 in monthly earnings.

Data Collection

The core data was gathered using an online survey utilizing Google Forms. Apart from collecting sociodemographic data, such as age group, gender, educational level, occupation type, income level, and city of residence, the research measured various constructs. These constructs include purchase intention, purchase decision, TPB, halal and environmental awareness. Each of these constructs was measured using multiple items. Participants were requested to indicate their level of agreement with the provided statements on a five-point Likert scale, where 1 signifies strong disagreement and 5 represents strong agreement. Each construct was adopted from existing research studies to make them relevant and reliable for the Indonesian halal and sustainability context. **Table 1** represents the measurement instruments.

Table 1. Measurement instruments

Variable	Definition	Indicators / Items	Source
Environmental Awareness (EA)	Knowledge and concern about environmental impacts	EA1: Awareness of environmental issues influencing purchase EA2: Choosing recyclable packaging EA3: Reducing single-use products EA4: Effort to minimize environmental impact	Islam et al. (2024), Rafiki et al. (2024), Fiandari et al. (2024), Rafiki et al. (2024), Aditya (2023), Pratama et al. (2023), Aditya (2023), Iranmanesh et al. (2020)
Halal Awareness (HA)	Knowledge and sensitivity to halal principles and certification credibility	HA1: Concern for halal ingredients HA2: Using only halal-certified products HA3: Willingness to pay more for halal	
Attitude (ATT)	Positive evaluation of sustainable and halal consumption	ATT1: Important to use eco-friendly halal products ATT2: Supports sustainability ATT3: Product is safe and high quality ATT4: Product choice aligns with personal values	
Subjective Norm (SN)	Perceived social influence	SN1: Family recommendation SN2: Confidence when family approves SN3: Peer recommendation SN4: Friend/work peer recommendation SN5: Influence of advertisements SN6: Influence of celebrities/influencers	
Perceived Behavioural Control (PBC)	Self-efficacy and resources to purchase	PBC1: Voluntarily use products PBC2: Choice freedom PBC3: Financial capacity PBC4: Willingness to allocate funds PBC5: Time availability PBC6: Ability to search for quality products	
Purchase Intention (PI)	Willingness to engage in eco-friendly halal purchases	PI1: Likelihood to buy PI2: Recommend to others PI3: Interest in packaging PI4: Following product updates PI5: Searching info from others PI6: Searching info online	
Purchase Decision (PD)	Actual purchase behaviour	PD1: Choosing eco-friendly halal products PD2: Purchase satisfies halal/sharia PD3: Purchase satisfies hygiene PD4: Purchase meets quality standards PD5: Purchase is eco-friendly PD6: Satisfaction with use PD7: Recommend to others	

Data Screening and Reliability

Prior hypothesis testing, the dataset was thoroughly checked to assure validity and reliability. Corrected item-total correlations varied from 0.758 to 0.837 ($p < 0.001$), confirming item validity. Cronbach's alpha values between 0.728 and 0.908 exceeded the 0.70 criterion, indicating internal consistency.

Structural Equation Modelling (PLS-SEM)

SEM was conducted utilizing SmartPLS version 4.1.1.6 to evaluate the measurement and structural models. Convergent validity for the measurement model was confirmed with outer loadings surpassing 0.70 and AVE exceeding 0.50. Discriminant validity was established by HTMT (< 0.90), the Fornell-Larcker criterion, and cross-loadings. Construct reliability was strong, with composite reliability (ρ_c) ranging from 0.849 to 0.927, and multicollinearity was within acceptable limits ($VIF = 1.000-1.783$). The structural model evaluation indicated that the model explained 61.2% of the variance in purchase intention ($R^2 = 0.612$) and 18.4% of the variance in purchase decision ($R^2 = 0.184$). Effect sizes (f^2) for direct pathways to purchase intention varied between 0.038 and 0.086, however the pathway from buy intention to

purchase decision exhibited a moderate effect ($f^2 = 0.225$). Predictive relevance was strong for purchase intention ($Q^2 = 0.598$) and moderate for purchase decision ($Q^2 = 0.103$). Bootstrapping with 5,000 resamples validated that all direct and indirect pathways were significant at $p < 0.05$. PLS-SEM was considered appropriate for this investigation because of its efficacy in managing exploratory mediation models involving many domains, non-normally distributed data, and a moderate sample size. Bias-corrected confidence intervals were employed to ensure accurate assessment of path significance (Hair et al., 2017).

RESULTS

Sample Characteristics and Descriptive Statistics

This research relies on primary data acquired using an online survey conducted using Google Forms, resulting in 369 valid and usable responses. The electronic nature of the study also helped to elicit responses from a diverse set of populations, which is a characteristic of research with a sustainability perspective. To contextualize the study, the characteristics of the respondents were delineated according

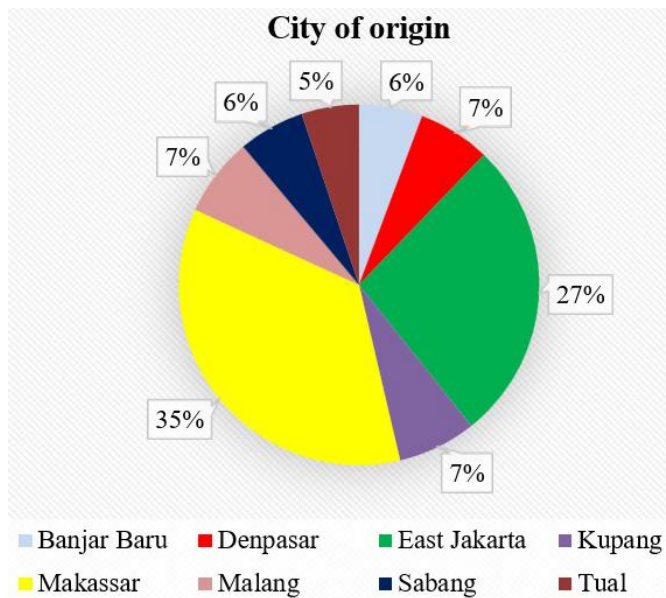


Figure 2. Respondents' city of origin (Source: Authors' own elaboration)

to demographic variables like city of residence, gender, age, educational attainment, occupation, and income level, framed within the developing market perspective of sustainability.

Geographically, the respondents are distributed across eight Indonesian cities: Banjar Baru, Denpasar, East Jakarta, Kupang, Makassar, Malang, Sabang, and Tual. As illustrated in **Figure 2**, Makassar (35%) and Jakarta Timur (27%) constitute the largest shares of the sample, followed by Denpasar, Kupang, and Malang (each approximately 7%), Banjar Baru and Sabang (around 6%), and Tual (5%). This distribution indicates a strong representation of urban and semi-urban consumption environments, where market access, exposure to sustainability-related information, and familiarity with certification schemes are generally more pronounced. The prominence of urban respondents is consistent with the literature on sustainable consumption, which identifies cities as critical spaces for the diffusion and normalisation of environmentally responsible purchasing practices.

The data reveal significant gender disparities, with females representing 72% of the sample group and males accounting for 28%, as illustrated in **Figure 3(a)**. The relevance of this distinction is subject to contextual interpretation considering that the nature of the product under study pertains to items used for personal care and domestic necessities that are commonly procured by females. Significantly too, from a sustainability point of view, this distinction between gender may largely be acknowledged from a position of advantage from past research that indicates higher levels of environmental concern, health awareness, and ethical understanding among females.

The analytical relevance of the sample is further reinforced by its age structure. As shown in **Figure 3(b)**, there is a clear predominance of the productive age groups, particularly 21–25 years (23%) and 26–30 years (41%), followed by the 31–40 years age group (20%). The younger respondents aged between 13 and 20 years and older respondents aged over 41 years are each approximately 8% of the sample. This suggests that the findings reflect the attitudes and behaviour of consumers who fall into economically active age groups, possessing both purchasing power and exposure to contemporary discourses on sustainability. Younger adult consumers are often highlighted as early adopters of so-called 'green' products, and thus this demographic structure is particularly relevant to the study of purchase intention and choice processes.

Educational background among respondents is illustrated in **Figure 4**. More than half of the sample has completed post-secondary education, with undergraduate degree holders (36%) and diploma graduates (21%) constituting the largest groups. Respondents with senior secondary education account for 30%, whilst those holding postgraduate qualifications (master's and doctoral degrees) represent a smaller yet notable proportion of the sample. Only a limited share of respondents report junior secondary education. This educational profile indicates that respondents are, in general, well equipped to comprehend abstract and multidimensional concepts such as environmental sustainability, ethical production, and certification standards. Higher educational attainment has been widely associated with increased environmental awareness and pro-sustainability attitudes, thereby

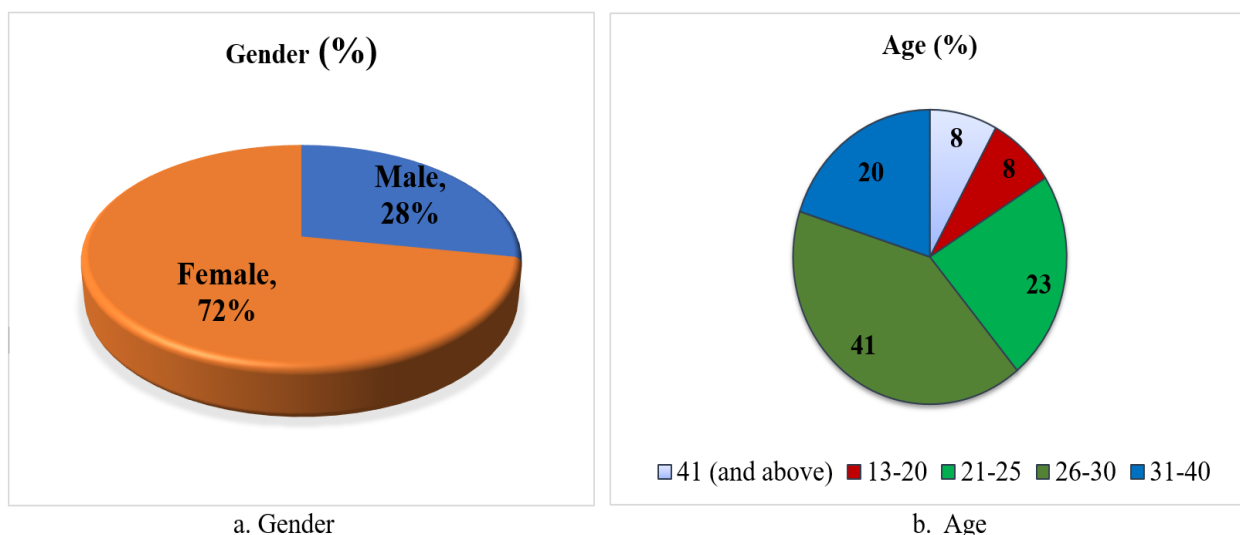


Figure 3. Respondent gender and age (Source: Authors' own elaboration)

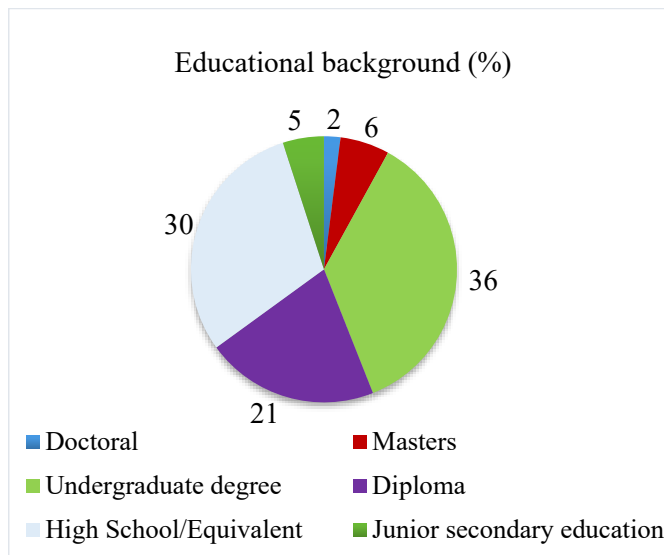


Figure 4. Respondent's educational background (Source: Authors' own elaboration)

supporting the suitability of the sample for testing behavioural models related to sustainable consumption.

The occupational distribution of respondents further reflects considerable diversity, as shown in **Figure 5(a)**. Private-sector employees constitute the largest group (32%), followed by students (18%), civil servants (17%), employees of state-owned enterprises (12%), entrepreneurs or self-employed individuals (11%), and educators (10%). This variance encompasses a wide range of social positions, employment stability, and lifestyle attributes, essential for examining behavioral determinants such as subjective standards and perceived behavioral control. From a sustainable development standpoint, such occupational heterogeneity enhances the robustness of the analysis by allowing the model to account for differences in access to

information, financial resources, and consumption opportunities.

Income levels, summarised in **Figure 5(b)**, reveal further socioeconomic heterogeneity. The predominant percentage of respondents earns between IDR 1,000,000 and IDR 5,000,000 monthly (44%), succeeded by those earning IDR 5,000,000 to IDR 10,000,000 (33%). Respondents with incomes below IDR 1,000,000 account for 12%, whilst those earning above IDR 10,000,000 represent 11% of the sample. This income distribution indicates the inclusion of both lower- and higher-income consumers, which is particularly important in an emerging-market context where affordability and price sensitivity may constrain sustainable purchasing behaviour. By incorporating respondents across multiple income brackets, The study improves the generalizability of its findings and offers a more sophisticated comprehension of the interaction between economic circumstances and sustainability-oriented intentions.

Taken together, the demographic characteristics of the respondents demonstrate a well-balanced and contextually appropriate sample for the investigation of environmentally friendly and ethically certified consumption behaviour. The combination of urban representation, dominance of productive-age consumers, relatively high educational attainment, occupational diversity, and heterogeneous income levels provides a strong empirical foundation for analysing the determinants of purchase intention and purchase decision. These traits strongly correspond with the aims of sustainable development research, especially in clarifying how individual behavioral aspects facilitate the overall shift towards sustainable consumption in emerging nations.

Measurement Model Assessment

Before assessing the structural correlations, the measuring model was evaluated to confirm sufficient construct validity and reliability. Given the behavioural and perceptual nature of

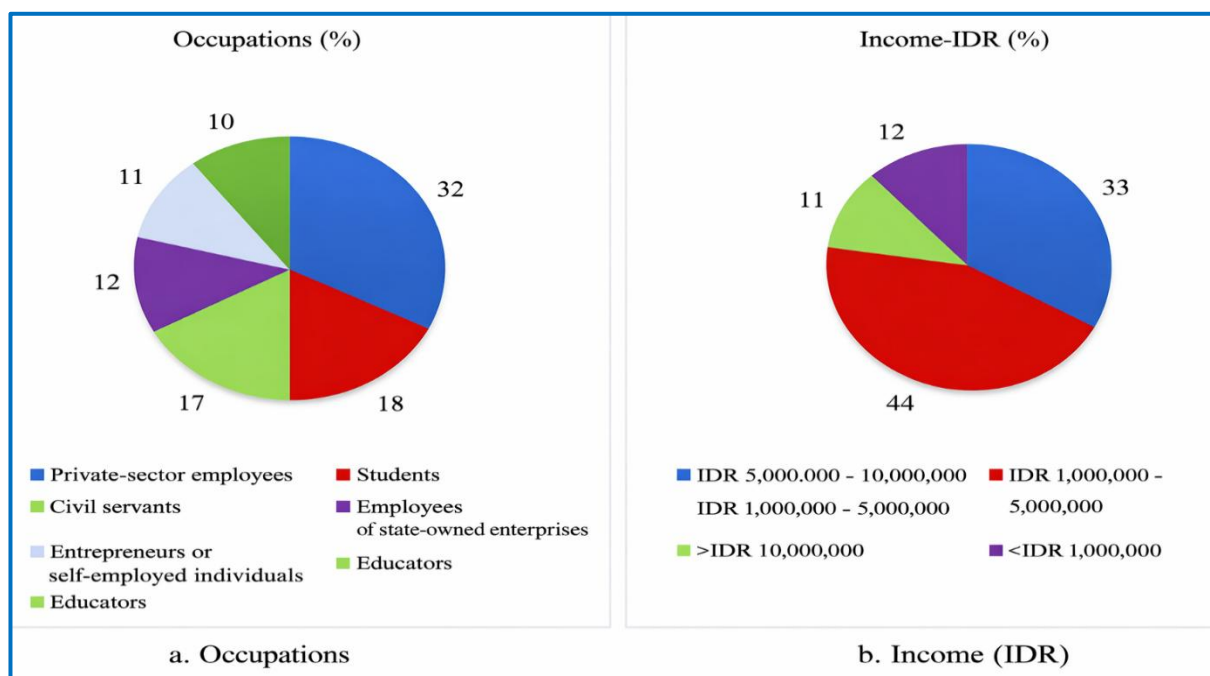


Figure 5. Respondents' occupations and income (Source: Authors' own elaboration)

the latent constructs examined in this study, establishing sound measurement properties was necessary to support the robustness of subsequent structural inferences.

As a preliminary step, the measurement instrument was tested on their validity and internal consistency. Item validity was evaluated using corrected item–total correlations. The findings demonstrate that all indicators show robust correlations with their corresponding constructs, with coefficients between 0.758 and 0.837, significantly beyond the essential threshold ($r = 0.102$, $\alpha = 0.05$), and all items are statistically significant ($p < 0.001$). These findings confirm that each indicator contributes meaningfully to its underlying construct.

The reliability of internal consistency was evaluated with Cronbach's alpha coefficients. The findings indicate that all constructs exhibit adequate reliability, with Cronbach's alpha values between 0.728 and 0.908, surpassing the widely accepted benchmark of 0.70. This indicates a high degree of internal coherence among the measurement items. Based on this preliminary screening, no indicators were excluded. The item validity and reliability tests results are reported in **Appendix Table A1** and **Table A2**.

Subsequent to the initial assessment, the measurement model was rigorously assessed utilizing PLS-SEM with SmartPLS version 4.1.1.6. The assessment adhered to accepted PLS-SEM protocols, concentrating on construct reliability, convergent and discriminant validity.

Measurement model evaluation using PLS-SEM

The measurement model was further evaluated using SmartPLS version 4.1.1.6, employing the PLS-SEM approach. This approach is especially appropriate for exploratory and predictive research that entails intricate models and non-normative data distributions. The evaluation adhered to recognized protocols, including tests of construct reliability, convergent and discriminant validity.

Convergent validity was evaluated by indicator (outer) loadings and Average Variance Extracted (AVE). Indicator loadings signify the strength of the relationship between each observed indicator and its corresponding latent construct.

Table 2 demonstrates that all indicators have outer loading values over the acceptable threshold of 0.70, signifying robust relationships between the indicators and their corresponding constructs. No indicator demonstrated a loading below the acceptable cut-off, and therefore, no item removal or model respecification was required at this stage.

Moreover, convergent validity was additionally substantiated by AVE. **Table 3** demonstrates that all constructs possess AVE values over the minimum recommended criterion of 0.50, demonstrating that each concept accounts for more than fifty percent of the variance in its indicators. The results collectively affirm that the measuring items sufficiently capture the conceptual domain of their corresponding latent entities.

The Heterotrait–Monotrait Ratio (HTMT) primarily assessed discriminant validity, which is esteemed as the most dependable standard for identifying discriminant validity concerns in PLS-SEM. **Table 4** demonstrates that all HTMT values are well below the cautious threshold of 0.90, signifying

Table 2. Outer loading results for convergent validity assessment

Construct	Indicator (Item Code)	Corrected Item–Total Correlation
Environmental Awareness (EA)	EA1	0.831
	EA2	0.786
	EA3	0.758
	EA4	0.780
Halal Awareness (HA)	HA1	0.819
	HA2	0.817
	HA3	0.783
Attitude (ATT)	ATT1	0.828
	ATT2	0.814
	ATT3	0.795
	ATT4	0.776
Subjective Norm (SN)	SN1	0.837
	SN2	0.836
	SN3	0.814
	SN4	0.809
	SN5	0.823
	SN6	0.819
Perceived Behavioural Control (PBC)	PBC1	0.830
	PBC2	0.826
	PBC3	0.808
	PBC4	0.809
	PBC5	0.803
	PBC6	0.805
Purchase Intention (PI)	PI1	0.797
	PI2	0.787
	PI3	0.790
	PI4	0.784
	PI5	0.770
	PI6	0.778
Purchase Decision (PD)	PD1	0.813
	PD2	0.806
	PD3	0.805
	PD4	0.793
	PD5	0.793
	PD6	0.794
	PD7	0.811

Table 3. AVE for each construct

Construct	AVE
Purchase Decision (PD)	0.643
Halal Awareness (HA)	0.652
Environmental Awareness (EA)	0.623
Perceived Behavioural Control (PBC)	0.662
Purchase Intention (PI)	0.615
Subjective Norm (SN)	0.677
Attitude (ATT)	0.646

that each construct is empirically different and that no serious overlap occurs among the latent variables.

The results strongly demonstrate discriminant validity and affirm that the constructs represent conceptually separate phenomena within the proposed paradigm. Discriminant validity was additionally assessed by the Fornell–Larcker criterion and cross-loading analysis to ensure thoroughness. The square roots of the AVE for all structures varied from 0.784 to 0.823, consistently exceeding their corresponding inter-construct correlations. In addition, all indicators exhibited their highest loadings on the intended constructs, with outer

Table 4. Discriminant validity assessment using HTMT

Construct	PD	HA	EA	PBC	PI	SN	ATT
Purchase Decision (PD)	—						
Halal Awareness (HA)	0.366	—					
Environmental Awareness (EA)	0.288	0.600	—				
Perceived Behavioural Control (PBC)	0.296	0.563	0.527	—			
Purchase Intention (PI)	0.478	0.754	0.718	0.680	—		
Subjective Norm (SN)	0.230	0.631	0.592	0.558	0.677	—	
Attitude (ATT)	0.278	0.678	0.609	0.604	0.712	0.618	—

Table 5. Construct reliability assessment

Construct	Composite Reliability (ρ_c)
Purchase Decision (PD)	0.927
Halal Awareness (HA)	0.849
Environmental Awareness (EA)	0.868
Perceived Behavioural Control (PBC)	0.921
Purchase Intention (PI)	0.906
Subjective Norm (SN)	0.926
Attitude (ATT)	0.879

Table 6. Multicollinearity assessment using variance inflation factor

Structural Path	Variance Inflation Factor (VIF)
Halal Awareness → Purchase Intention	1.627
Environmental Awareness → Purchase Intention	1.571
Perceived Behavioural Control → Purchase Intention	1.602
Purchase Intention → Purchase Decision	1.000
Subjective Norm → Purchase Intention	1.759
Attitude → Purchase Intention	1.783

loadings generally exceeding 0.75 and remaining substantially higher than cross-loadings on other constructs. Detailed results are reported in **Appendix Table A3** and **Table A4**. The convergence of evidence across these supplementary criteria further reinforces the robustness of the measurement model.

Construct reliability was evaluated by composite reliability (ρ_c), which is considered more appropriate than Cronbach's alpha in PLS-SEM contexts. **Table 5** indicates that composite dependability values vary from 0.849 to 0.927. These values exceed the recommended minimum of 0.70 and largely fall within the optimal range of 0.70–0.90, indicating satisfactory to high reliability. Although several constructs approach values above 0.90, they remain below levels typically associated with indicator redundancy, suggesting that the constructs retain conceptual breadth whilst maintaining internal consistency.

The measurement model assessment results indicate that all constructs display robust psychometric features. Indicators show adequate convergent and discriminant validity, and constructs display high levels of reliability across both preliminary (SPSS) and advanced (PLS-SEM) analytical stages. The findings confirm that the measuring model is resilient and distinctly articulated, so providing a solid empirical foundation for the subsequent evaluation of the structural model and hypothesis testing.

Structural Model Evaluation

The assessment of the structural model was performed to evaluate multicollinearity, explanatory power, effect sizes, predictive relevance, and the statistical significance of the

proposed correlations. The analysis utilized PLS-SEM with SmartPLS version 4.1.1.6.

Multicollinearity assessment

The Variance Inflation Factor (VIF) was utilized to assess multicollinearity among the predictor variables. **Table 6** demonstrates that the VIF values span from 1.000 to 1.783, much beneath the recommended threshold of 5. The results demonstrate that multicollinearity is not an issue and that the calculated path coefficients are unbiased, even in the presence of substantial correlations among the exogenous factors.

Coefficient of determination (R^2)

The coefficient of determination (R^2) was utilized to evaluate the model's explanatory power. **Table 7** illustrates that environmental awareness, halal awareness, attitude, subjective norm, and perceived behavioral control collectively explain 61% of the variance in purchase intention ($R^2 = 0.612$), signifying moderate explanatory efficacy.

Conversely, purchasing intention constitutes 18% of the variance in purchase choice ($R^2 = 0.184$), which is classified as weak explanatory power. This suggests that, while purchase intention contributes meaningfully to explaining purchase decision, a substantial proportion of behavioural variance remains influenced by factors beyond the current model.

Effect size (f^2)

An effect size analysis was conducted to assess the relative influence of each exogenous construct at the structural level. **Table 8** indicates that environmental awareness, halal awareness, attitude, subjective norm, and perceived

Table 7. R² test results

Structural Path	R ²
Purchase Decision	0.184
Purchase Intention	0.612

Table 8. Effect size (f^2) of direct and indirect relationships

Relationship	Effect Type	Effect Size	Interpretation
EA → PI (H1)	Direct	0.086	Small
HA → PI (H2)	Direct	0.076	Small
ATT → PI (H3)	Direct	0.038	Small
SN → PI (H4)	Direct	0.044	Small
PBC → PI (H5)	Direct	0.086	Small
PI → PD (H6)	Direct	0.225	Moderate
EA → PI → PD (H7)	Indirect	0.009	Small
HA → PI → PD (H8)	Indirect	0.009	Small
ATT → PI → PD (H9)	Indirect	0.004	Small
SN → PI → PD (H10)	Indirect	0.005	Small
PBC → PI → PD (H11)	Indirect	0.009	Small

Table 9. Predictive relevance (Q^2) test results

Structural Path	Q ²
Purchase Intention	0.598
Purchase Decision	0.103

behavioral control each demonstrate minimal effect sizes ($f^2 < 0.15$) on purchase intention. Conversely, purchasing intention exhibits a moderate effect size on purchase decision ($f^2 = 0.225$).

These results indicate that, although multiple antecedents significantly contribute to purchase intention, their individual explanatory contributions are relatively modest, whereas purchase intention plays a more substantial role in shaping actual purchase decision.

Effect size (f^2) and mediation strength

For the analysis of effect sizes, the objective was to assess both the relative importance of exogenous constructs at the structural level and the indirect effect sizes via the mediating variable. The findings displayed in **Table 8** demonstrate that the factors in the research, including environmental awareness, halal awareness, attitude, subjective norm, and perceived behavioral control, exhibited relatively low direct effect sizes on purchase intention (f^2 values ranging from 0.038 to 0.086 for direct effects). Furthermore, purchase intention demonstrated a moderate effect size in influencing purchase decision, with an f^2 value of 0.225.

In addition, the indirect effect sizes are considerably smaller, ranging from 0.004 to 0.009, indicating minimal mediation strength across all indirect relationships. Consequently, while assessing the mediating function of the independent factors on the mediating variable, effect sizes based on the ν statistic also showed relatively minor indirect effect sizes for the model (all ν effect sizes < 0.01 , consistent with the observed indirect f^2 values).

Predictive relevance (Q^2)

Furthermore, the predictive significance was assessed utilizing the Stone-Geisser Q^2 criterion, which evaluates the out-of-sample predictive capacity of the constructed structural models. As shown in **Table 9**, the predictive

relevance of purchase intention is strong ($Q^2 = 0.598$), while that of purchase decision is low ($Q^2 = 0.103$). However, all Q^2 values are positive, which implies that this structural model has acceptable predictive relevance.

Hypothesis testing

Hypothesis testing was performed via bootstrapping methods at a significance level of 5%. **Table 10** indicates that all direct and indirect hypotheses are statistically validated, as t-statistics above the key threshold of 1.966 and p-values remain below 0.05.

Environmental awareness, halal awareness, attitude, subjective norm, and perceived behavioral control each exerts a statistically significant favorable impact on purchasing intention. Purchase intention exhibits a notable beneficial influence on the purchase decision. Furthermore, all indirect effects through purchase intention are statistically significant, confirming the mediating role of purchase intention within the structural model.

DISCUSSION

This study performs a thorough examination of the factors influencing sustainable purchasing decisions for green personal care products and halal-certified goods, employing TPB as its theoretical framework. The study findings offered proof of the GAD model's contribution to the purchase intention of consumers to green products, as these factors positively affect purchase decisions. These findings add to the emerging literatures on the multiple factors contributing to sustainable consumption behavior in emerging economies with a unique contribution to sustainable development theory, application, and policy (Aditya et al., 2023; Tomşa et al., 2021). Importantly, this study extends prior research by empirically demonstrating an integrated model that simultaneously

Table 10. Hypothesis testing results

	Structural Relationship	Path Coefficient (β)	t-value	p-value	Result
H1	Environmental Awareness $\rightarrow$ Purchase Intention	0.229	5.14	< 0.001	Supported
H2	Halal Awareness $\rightarrow$ Purchase Intention	0.219	5.18	< 0.001	Supported
H3	Attitude $\rightarrow$ Purchase Intention	0.162	2.95	0.003	Supported
H4	Subjective Norm $\rightarrow$ Purchase Intention	0.173	3.86	< 0.001	Supported
H5	Perceived Behavioural Control $\rightarrow$ Purchase Intention	0.231	5.02	< 0.001	Supported
H6	Purchase Intention $\rightarrow$ Purchase Decision	0.429	9.00	< 0.001	Supported
H7	Environmental Awareness $\rightarrow$ Purchase Intention $\rightarrow$ Purchase Decision	0.098	4.38	< 0.001	Supported
H8	Halal Awareness $\rightarrow$ Purchase Intention $\rightarrow$ Purchase Decision	0.094	4.312	< 0.001	Supported
H9	Attitude $\rightarrow$ Purchase Intention $\rightarrow$ Purchase Decision	0.069	2.73	0.006	Supported
H10	Subjective Norm $\rightarrow$ Purchase Intention $\rightarrow$ Purchase Decision	0.074	3.73	< 0.001	Supported
H11	Perceived Behavioural Control $\rightarrow$ Purchase Intention $\rightarrow$ Purchase Decision	0.099	4.39	< 0.001	Supported

incorporates environmental awareness, halal awareness, and TPB constructs while validating the mediating role of purchase intention in linking these determinants to actual purchase decisions.

The positive and significant effect of environmental awareness on purchase intention aligns with prior studies emphasizing ecological knowledge and concern as critical motivators of sustainable behaviour (Ahmad & Thyagaraj, 2015; Kautish et al., 2019; Li et al., 2020). In Indonesia, rapid urbanisation and visible environmental degradation appear to heighten consumers' sensitivity to ecological issues, prompting alignment of purchasing behaviour with sustainability values (Oetomo & Santoso, 2025; Rizkalla et al., 2022).

Importantly, this study contributes to these findings by exploring halal awareness; that is, consumers' value-based awareness grounded in ethical and culturally embedded principles also interacts with environmental concerns. The independent variable of halal awareness was significantly capable of predicting purchase intention. This means that consumers who are aware of environmental concerns through integrated ethical and value-based considerations are fundamental to sustainability in emerging economies dominated by Muslims (Ali et al., 2017; Joshi & Garg, 2022; Sari & Susanti, 2025). The inclusion of both variables encompasses all aspects of sustainability-oriented decision-making. This work significantly contributes to sustainable development theory and practice by including both environmental and halal concerns (Divianjella et al., 2020; Rafiki et al., 2024).

Similarly, attitude, subjective norm, and perceived behavioral control—three fundamental elements of TPB—have been shown to strongly affect purchasing intention. The attitude demonstrated a robust positive evaluation of environmentally and ethically responsible products, thus showcasing that moral as well as utilitarian aspects are considered when it comes to an individual's motivation, as suggested by Ajzen (2005) and further demonstrated in Bosnjak et al. (2020). Subjective norm, on the other hand, signifies social pressure exerted by family, peers, and even influencers, thus showing the collectivist perspective of society as observed in Indonesia, where conforming with social norms plays a significant role, as demonstrated through Hamza and Shirazi (2025) and Hasan et al. (2024).

Perceived behavioural control, with regard to finances, accessibility, and self-efficacy, highlights the significance of situational factors that influence behavioural intent to become an action in the market where prices are sensitive and product availability is an issue (Auliandri et al., 2018; Tseng et al., 2016). Thereby, these studies offer an empirical validation of TPB in an emerging economy setting and document the effectiveness of cognitive, normative, and control influences on sustainable consumption behaviour (Kim, 2023; Yadav & Pathak, 2016).

The mediating effect of purchase intention in connecting predictors to final purchase decisions was supported through significant indirect effects. This finding reinforces the theoretical positioning of purchase intention as a central mediating mechanism linking cognitive, normative, and value-based determinants to actual behaviour within the integrated TPB framework. Though individual predictors were found to directly influence purchase intention to a small degree, the transformation to final behavior via intention produced a moderate effect. This aligns with TPB's premise that intention serves as a crucial mediator connecting psychological predictors to future behavior (Ajzen, 2005).

Moreover, it bridges the gap in sustainability research that many studies measure intention without taking behavioral effects into account, which overestimates the impact of cognitive and normative effects due to the lack of behavioral effects measurement in previous studies (Nurzaman & Herdiani, 2023; Shalihin et al., 2025). Moreover, the current study can bridge the gap between theory and modeling of sustainable consumer behavior with a more realistic framework of consumer behavior by incorporating both purchase intention and decision with the science of sustainability research (Guimarães et al., 2023; Mamun et al., 2020).

This study has considered sustainable consumption with reference to Indonesia, a developing nation with strong religious and cultural values. The study has shown that not only does halal awareness function as a value-based evaluative filter through which consumers assess product integrity, ethical standards, and sustainability attributes, but it has also acted as a values-based filter through which environmental and ethical considerations can be assessed (Astuti & Asih, 2021; Bashir, 2019). It can thus be seen that any sustainable consumption strategies devised must ensure that they incorporate recourse to cultural values related to ecology and

ethics, thus maximizing effectiveness. For example, it has been seen that advertisements that seek to ensure that personal care items are made halal can serve as a dual trigger for ecological and ethical values (Marzuki & Kadir, 2025; Pratama et al., 2023).

The structural and economic factors associated with emerging markets, like the availability of products, the price elasticity of demand, and the informational environment, also affect the intention-to-action process in the way that individuals decide to purchase the product or not. The low R^2 value in the case of the actual purchase (0.184) highlights the limitations that suggest the sustainable development approach should not concentrate merely on raising awareness, rather it should extend to the entire gamut of infrastructure, financial, and informational issues, as argued by various recent researchers like Tseng et al. (2016), Popović et al. (2019), and Maulidah et al. (2024).

Theoretically speaking, the integration of EA, HA, and the SDGs construct can enhance sustainability development theory itself by supporting the relevance of integrating cognitive, normative, and culturally driven factors (Ali et al., 2017; Li et al., 2020; Tomşa et al., 2021). The present study confirms that for sustainable consumption in developing countries to be fully understood from a conventional environmental or economic point of view is impossible. Rather, it requires an integrated behavioural framework that incorporates value-based constructs alongside cognitive and normative determinants. This study enhances the significance of the SDGs by incorporating individual religious principles and delivers a context-sensitive and valid model (Fiandari & Andharini, 2024; Nart et al., 2023).

This research stream seeks to impact sustainable consumption policies and product marketing tactics. Major emphasis should be given to awareness-building activities that take into account the importance of ethical integrity and halal requirements as well, so that additional cognitive and value-related behavioral influences are activated as well (Awan et al., 2015; Aziz & Chok, 2013). Accessibility and affordability of products must be recognized as significant variables of facilitating perceived behavioral control and finally translating intention into action by facilitating the actual purchasing of the product (Dhir et al., 2021; Dieguez et al., 2024). Policy interventions must be intelligently brought upon by making due use of such research implications so that cultural, ethical, and environmental aspects are carefully considered along with the sustainable consumption determinants from the individual as well as the institutional level with an aim to explore some possible solutions for real-time sustainability issues that need to be solved (Bosnjak et al., 2020; Jung & Joo, 2021).

CONCLUSION

This study shows that environmental awareness has a major impact on purchase intention, which in turn influences purchasing decisions. Consumers that use toiletries are often aware of environmental concerns, which raises awareness; therefore, firms are expected to produce things that reflect environmental factors, such as recyclable packaging.

The study's findings show that halal awareness has a significant impact on buying intention, which in turn influences purchasing decisions. This implies that the majority of Indonesians are concerned about the raw ingredients used in personal care products and the presence of halal certification; therefore, firms are expected to investigate the raw materials used in their offers more closely. They must seek halal certification for their products and provide the Halal certification number if they are already certified.

This study indicates that the Theory of Planned Behavior (TPB) has a significant impact on purchasing intention, which in turn influences purchase decisions. This means that buyers learn about products they want to use through endorsements from commercials or influencers, encouraging them to analyze whether the products adhere to sustainable principles or have halal certification. Companies could use sales strategies such as commercials or influencers to highlight that their products adhere to sustainable standards and prominently display the Halal logo with certificate number on their products.

Implications

The current research has a number of important implications both for theory, policy, and practice. This research enhances the comprehension of sustainable consumer behavior by integrating cognitive, social-normative, and culturally rooted effects within TPB framework. From a policy point of view, the current research provides insights for policymakers in order to focus policies that best combine the issue of environmental sustainability with ethical/cultural considerations through design techniques that address the issue of raised awareness with regard to both environmental and halal integrity, product accessibility issues, and behavioral perceptions of control.

The research findings yield significant consequences from a practical and management perspective for engaging consumers or buyers and influencing their behavior by using sustainability-related information alongside other culturally relevant indicators such as halal. Ensuring that products are of good quality, affordable, and identifiable as ethically sourced will help move the intention to action. Another important implication is that communication tactics should tap into social influences by using leaders from society or popular people to influence subjective norms and share credible information, especially in collectivist cultures. All these propositions offer a holistic set of solutions for advocating sustainable behavior among consumers in multicultural and emerging markets.

Limitations and Future Research

This study possesses considerable limitations. The cross-sectional design constrains the capacity to identify or monitor changes in consumer behavior over time, and a non-probabilistic sample may reduce the generalizability of the results to larger groups. Furthermore, the influence of exogenous factors like social media trends, promotional activities, or government regulations that might affect the consumers' intentions and behaviour change processes is not explored in detail. This paper should be followed in the future by designs with longitudinal features to capture temporal dynamics of purchase intention and purchase behaviour,

additional contextual factors such as digital marketing and online social interactions, and expansion to other products as a test of the model's greater applicability. Incorporating qualitative approaches could also generate richer insights into the motivations and perceptions of consumers, particularly around the cultural and ethical dimensions of sustainable consumption.

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AI statement: The authors stated that generative AI tools were only utilized to help with text language editing, and content clarity. The authors further stated that they generated and validated all scientific content, analysis, interpretations, and findings. The final submitted work's originality, correctness, and integrity are entirely the writers' responsibility.

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APPENDIX

Table A1. Item validity assessment

Variable	Indicator (Item Code)	Corrected Item–Total Correlation	r-critical ($\alpha = 0.05$)	Sig. (p-value)	Decision
Environmental Awareness (EA)	EA1	0.831	0.102	< 0.001	Valid
	EA2	0.786	0.102	< 0.001	Valid
	EA3	0.758	0.102	< 0.001	Valid
	EA4	0.780	0.102	< 0.001	Valid
Halal Awareness (HA)	HA1	0.819	0.102	< 0.001	Valid
	HA2	0.817	0.102	< 0.001	Valid
	HA3	0.783	0.102	< 0.001	Valid
Attitude (ATT)	ATT1	0.828	0.102	< 0.001	Valid
	ATT2	0.814	0.102	< 0.001	Valid
	ATT3	0.795	0.102	< 0.001	Valid
	ATT4	0.776	0.102	< 0.001	Valid
Subjective Norm (SN)	SN1	0.837	0.102	< 0.001	Valid
	SN2	0.836	0.102	< 0.001	Valid
	SN3	0.814	0.102	< 0.001	Valid
	SN4	0.809	0.102	< 0.001	Valid
	SN5	0.823	0.102	< 0.001	Valid
	SN6	0.819	0.102	< 0.001	Valid
Perceived Behavioural Control (PBC)	PBC1	0.830	0.102	< 0.001	Valid
	PBC2	0.826	0.102	< 0.001	Valid
	PBC3	0.808	0.102	< 0.001	Valid
	PBC4	0.809	0.102	< 0.001	Valid
	PBC5	0.803	0.102	< 0.001	Valid
	PBC6	0.805	0.102	< 0.001	Valid
Purchase Intention (PI)	PI1	0.797	0.102	< 0.001	Valid
	PI2	0.787	0.102	< 0.001	Valid
	PI3	0.790	0.102	< 0.001	Valid
	PI4	0.784	0.102	< 0.001	Valid
	PI5	0.770	0.102	< 0.001	Valid
	PI6	0.778	0.102	< 0.001	Valid
Purchase Decision (PD)	PD1	0.813	0.102	< 0.001	Valid
	PD2	0.806	0.102	< 0.001	Valid
	PD3	0.805	0.102	< 0.001	Valid
	PD4	0.793	0.102	< 0.001	Valid
	PD5	0.793	0.102	< 0.001	Valid
	PD6	0.794	0.102	< 0.001	Valid
	PD7	0.811	0.102	< 0.001	Valid

Table A2. Reliability assessment (Cronbach's alpha)

Variable	Cronbach's Alpha	Threshold	Reliability Decision
Environmental Awareness (EA)	0.798	≥ 0.70	Reliable
Halal Awareness (HA)	0.728	≥ 0.70	Reliable
Attitude (ATT)	0.817	≥ 0.70	Reliable
Subjective Norm (SN)	0.905	≥ 0.70	Reliable
Perceived Behavioural Control (PBC)	0.898	≥ 0.70	Reliable
Purchase Intention (PI)	0.875	≥ 0.70	Reliable
Purchase Decision (PD)	0.908	≥ 0.70	Reliable

Table A3. Discriminant validity assessment using the Fornell–Larcker criterion

Variable	PD	HA	EA	PBC	PI	SN	ATT
Purchase Decision (PD)	0.802						
Halal Awareness (HA)	0.298	0.808					
Environmental Awareness (EA)	0.246	0.461	0.789				
Perceived Behavioural Control (PBC)	0.270	0.458	0.449	0.814			
Purchase Intention (PI)	0.429	0.604	0.601	0.606	0.784		
Subjective Norm (SN)	0.211	0.513	0.505	0.507	0.605	0.823	
Attitude (ATT)	0.241	0.523	0.496	0.519	0.602	0.533	0.804

Table A4. Discriminant validity assessment using cross loadings

Indicator (Item Label)	EA	HA	ATT	SN	PBC	PI	PD
EA1	0.836	0.455	0.422	0.427	0.381	0.510	0.216
EA2	0.783	0.313	0.331	0.386	0.336	0.452	0.186
EA3	0.747	0.299	0.336	0.375	0.293	0.431	0.162
EA4	0.787	0.375	0.463	0.403	0.397	0.499	0.209
HA1	0.358	0.847	0.436	0.432	0.387	0.524	0.285
HA2	0.406	0.825	0.412	0.370	0.337	0.484	0.213
HA3	0.355	0.748	0.421	0.442	0.386	0.453	0.221
ATT1	0.433	0.447	0.830	0.473	0.400	0.491	0.151
ATT2	0.378	0.408	0.809	0.404	0.413	0.463	0.170
ATT3	0.384	0.442	0.798	0.376	0.427	0.487	0.213
ATT4	0.396	0.384	0.776	0.457	0.429	0.493	0.238
SN1	0.459	0.434	0.435	0.837	0.358	0.494	0.182
SN2	0.398	0.409	0.474	0.834	0.479	0.498	0.170
SN3	0.432	0.435	0.453	0.827	0.466	0.564	0.225
SN4	0.374	0.425	0.394	0.806	0.383	0.469	0.139
PBC1	0.371	0.357	0.424	0.425	0.836	0.522	0.259
PBC2	0.378	0.438	0.477	0.448	0.837	0.557	0.243
PBC3	0.389	0.331	0.421	0.435	0.804	0.458	0.127
PBC4	0.323	0.392	0.409	0.429	0.806	0.478	0.200
PI1	0.509	0.446	0.449	0.459	0.475	0.797	0.323
PI2	0.468	0.500	0.488	0.464	0.444	0.788	0.382
PI3	0.493	0.478	0.463	0.543	0.481	0.789	0.278
PI4	0.463	0.473	0.465	0.496	0.509	0.786	0.353
PD1	0.171	0.242	0.224	0.184	0.255	0.334	0.810
PD2	0.219	0.232	0.207	0.210	0.204	0.335	0.806
PD3	0.176	0.255	0.191	0.148	0.196	0.334	0.803
PD4	0.192	0.280	0.153	0.146	0.215	0.304	0.786