

Environmental Beliefs Override Knowledge: Psychological Mediation Mechanisms in Green Purchase Behavior

Arry Widodo*, Nurafni Rubiyanti and Putu Nina Madiawati

Master of Business Administration, Telkom University, Bandung, West Java, Indonesia

Abstract: *Purpose:* The study evaluates the intervening roles of environmental belief systems and environmental knowledge in the nexus between environmental concern and consumer intentions to purchase sustainable products among Indonesia's consumer population.

Design/methodology/approach: This study applied a quantitative research approach, employing structural equation modelling as the analytical method. The research sample consisted of 324 consumers sourced from five primary metropolitan regions in Indonesia.

Findings: The findings reveal that environmental concern exerts a positive influence on both environmental beliefs and environmental knowledge. Nevertheless, among these variables, only environmental beliefs demonstrate a statistically significant positive relationship with green purchase intention. The research establishes that environmental beliefs and knowledge serve as mediating mechanisms in the association between environmental concern and green purchase intention. Significantly, the study indicates that neither environmental concern nor environmental knowledge establishes a direct relationship with green purchase intention, suggesting complete mediation through belief systems.

Practical implications: The study results reveal that subjective consumer attitudes toward environmental challenges constitute stronger mediating variables compared to objective environmental understanding in the transformation of ecological awareness into buying intentions. This finding implies that practitioners in marketing and sustainability promotion should concentrate on developing positive environmental mindsets and fostering value alignment rather than exclusively pursuing knowledge expansion or educational outreach to effectively encourage environmentally responsible consumption patterns that enhance individual wellbeing and collective planetary health.

Originality/value: The present study enhances the body of sustainability research by providing empirical support for a holistic model that incorporates psychological drivers of eco-responsible purchasing behavior in emerging economic environments. By demonstrating that environmental beliefs serve as the primary psychological pathway to sustainable consumption, this research illuminates how aligning consumer behavior with deeply held values contributes to individual psychological wellbeing while simultaneously advancing societal and planetary health outcomes.

Keywords: Environmental concern, Green purchase intention, Environmental belief, Environmental knowledge, Holistic wellbeing, Sustainable consumption.

1. INTRODUCTION

The deterioration of environmental conditions has emerged as a paramount global concern, leading to heightened focus on sustainable consumption behaviors worldwide (Al Mamun, Rahman, *et al.*, 2023). This environmental crisis extends beyond ecological implications, fundamentally affecting multiple dimensions of human wellbeing including physical health, psychological satisfaction, and social cohesion. Indonesia, as a major economic force within Southeast Asia characterized by a growing middle-class demographic, confronts substantial environmental pressures arising from shifting consumer consumption patterns. Understanding how consumers translate environmental awareness into sustainable purchasing decisions represents not merely an environmental imperative but a critical pathway toward enhancing holistic wellbeing at individual, societal, and planetary levels.

While environmental consciousness among Indonesian consumers demonstrates an upward trajectory, a pronounced disparity persists between consumers' acknowledgment of environmentally conscious purchasing decisions and their actual buying behaviors (Faisal *et al.*, 2023a). Examining the determinants that shape green purchasing intentions represents a fundamental requirement for advancing sustainable consumption practices within emerging market economies, particularly Indonesia (Faisal *et al.*, 2023b; Simanjuntak *et al.*, 2023). Existing literature has established environmental concern as a primary determinant of pro-environmental conduct; nevertheless, the psychological pathways through which such environmental concern manifests into behavioral intentions remain inadequately explored, especially within Indonesia's unique market context (Borusiak *et al.*, 2021). This research gap demands an in-depth examination of the fundamental psychological processes that connect environmental awareness with tangible green consumption behaviors, processes that simultaneously influence individual psychological wellbeing through value congruence and moral satisfaction.

*Address correspondence to this author at the Master of Business Administration, Telkom University, Bandung, West Java, Indonesia; E-mail: arrywie@telkomuniversity.ac.id

Understanding the complex interplay of factors that shape consumer intentions toward environmentally sustainable product purchases represents a critical imperative for advancing ecological consumption patterns within Indonesia's market landscape. The adoption of pro-environmental behaviors is intrinsically linked to eudaimonic wellbeing, as individuals derive psychological satisfaction and sense of purpose from aligning their actions with deeply held environmental values and moral convictions. Although environmental consciousness has grown among Indonesian consumers, a pronounced discrepancy persists between articulated environmental values and observable purchasing conduct (Al Mamun, Naznen, *et al.*, 2023; Simanjuntak *et al.*, 2023). This disparity underscores the essential requirement to explore the psychological pathways through which environmental awareness potentially converts into concrete purchasing decisions that enhance both personal fulfillment and collective environmental stewardship.

This research aims to illuminate the complexities inherent in consumer behavior toward environmentally responsible products by conducting a systematic examination of the intricate connections between environmental concerns, beliefs, knowledge, and green purchasing intentions within Indonesia's unique market environment (Borusiak *et al.*, 2021; Faisal *et al.*, 2023a; Han, 2015; Simanjuntak *et al.*, 2023). By investigating how environmental beliefs and knowledge mediate the relationship between concern and intention, this study contributes to understanding how sustainable consumption patterns can be fostered in ways that simultaneously promote individual psychological wellbeing, societal cohesion through shared environmental values, and planetary health through reduced ecological footprints.

This study advances the proposition that developing a more sophisticated comprehension of the mechanisms that govern these behavioral dynamics is fundamental to cultivating sustainable consumption practices within emerging market economies (Bulut *et al.*, 2021). The investigation specifically focuses on elucidating the mediating function of environmental beliefs—characterized as individual convictions concerning the interconnection between human society and the natural environment—alongside environmental knowledge, which encompasses both awareness and comprehension of ecological challenges and their corresponding solutions (Majeed *et al.*, 2023a). Understanding these mechanisms provides insight into how value-based interventions may be more effective than purely informational approaches in fostering sustainable behaviors that contribute to holistic wellbeing across individual, social, and environmental domains.

This study integrates the Planned Behaviour Theory-SDG framework (Huang, 2023) with the Stimulus-Organism-Response theoretical model to construct a robust analytical framework for investigating factors that influence green purchase intention (Osorio *et al.*, 2023). Within the SOR theoretical structure, environmental concern serves as an external stimulus that activates individual cognitive mechanisms, specifically knowledge acquisition, and triggers affective responses, particularly belief formation, which collectively determine behavioral outcomes in the form of intentions toward environmentally sustainable product purchases (Asif *et al.*, 2022; Joo & Hwang, 2023). The theoretical framework posits that environmental concern acts as a catalyst, activating both cognitive pathways through knowledge development and emotional pathways through belief systems, thereby influencing consumer behavioral intentions toward environmentally conscious purchasing decisions that enhance personal wellbeing through value alignment (Fawehinmi *et al.*, 2020; Ng, 2023).

The combined application of the Theory of Planned Behaviour and Stimulus-Organism-Response models delivers a nuanced perspective on the psychological drivers underlying eco-conscious consumer behaviour (Kumar *et al.*, 2023; Saputra *et al.*, 2021). This study elucidates the intermediary mechanisms whereby environmental consciousness shapes green purchasing intentions, thus contributing to our theoretical understanding of sustainable consumption dynamics as they relate to holistic wellbeing outcomes. The investigation endeavours to explicate these relational structures to generate meaningful insights for scholars and practitioners dedicated to advancing environmentally responsible consumer behaviour that simultaneously enhances individual psychological satisfaction, strengthens societal values around environmental stewardship, and contributes to planetary sustainability.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theoretical Foundation

This study adopts an integrated theoretical approach, combining Ajzen's Theory of Planned Behaviour (Machaka-Mare *et al.*, 2023a) with the Stimulus-Organism-Response framework to systematically examine the factors influencing green purchasing intentions (Saputro *et al.*, 2025). Ajzen's theoretical model establishes that individual behavioural intentions emerge from three core components: personal attitudes toward specific behaviours, perceived social expectations, and the

degree of perceived control over behavioural execution (X. Li *et al.*, 2023). Within this framework, attitude represents an individual's favorable or unfavorable evaluation of performing a particular behavior, serving as a broad evaluative construct that integrates cognitive, affective, and behavioral components.

Environmental beliefs, as conceptualized in this study, represent a more specific construct that captures deeply held convictions about the relationship between human actions and environmental outcomes, grounded in value systems and moral foundations. While attitude in the Theory of Planned Behaviour encompasses general evaluations that may be influenced by various factors including social norms and perceived consequences, environmental beliefs reflect internalized value orientations specifically related to environmental stewardship and the moral imperative of protecting nature. This distinction is theoretically significant, as environmental beliefs operate as affective mechanisms rooted in the organism phase of the Stimulus-Organism-Response model, representing emotional and value-based responses to environmental stimuli that are more stable and deeply rooted than situational attitudes. Thus, environmental beliefs can be understood as a foundational component that informs and strengthens environmental attitudes, serving as a proximal psychological mechanism through which environmental concern translates into behavioral intentions.

In examining environmentally conscious purchasing decisions, consumer environmental awareness emerges as a fundamental attitudinal component that significantly shapes individuals' likelihood to pursue sustainable consumption practices (Fu *et al.*, 2020; Kumar *et al.*, 2023; Saputra *et al.*, 2021). The framework established by the Sustainable Development Goals underscores intention's crucial function as a mediating construct (Asif *et al.*, 2022), bridging the relationship between consumer attitudes and additional influential variables with observable purchasing behaviours, thus demonstrating its essential role in comprehending consumer drive toward sustainable product choices that enhance wellbeing across multiple dimensions (Qin & Song, 2022).

The integration of the Stimulus-Organism-Response framework with Sustainable Development Goals offers a robust theoretical foundation for understanding the underlying mechanisms that drive environmental concern among consumers and how these mechanisms relate to holistic wellbeing outcomes (Choi & Johnson, 2019; Saputra *et al.*, 2025). Within this conceptual framework, environmental stimuli undergo processing through dual pathways encompassing both cognitive and affective

psychological systems, which subsequently shape consumers' green purchasing intentions (Al Mamun, Naznen, *et al.*, 2023; Y.-S. Chen *et al.*, 2020). The affective pathway, operating through environmental beliefs, is particularly relevant to understanding how sustainable consumption contributes to individual psychological wellbeing through value congruence and moral satisfaction.

This theoretical structure distinguishes between two fundamental psychological components that mediate environmental responses. Environmental beliefs function as the affective dimension (Ng, 2023), capturing the emotional responses, value orientations, and evaluative judgments that individuals form regarding environmental concerns. These beliefs are intrinsically linked to eudaimonic wellbeing, as alignment between personal values and actions produces psychological satisfaction and sense of purpose. Conversely, environmental knowledge operates as the cognitive dimension, reflecting consumers' factual understanding, awareness levels, and comprehension of environmental challenges alongside their potential solutions (Joo & Hwang, 2023). The theoretical significance of the SOR model lies in its explanation of how these cognitive and affective elements interact dynamically during the organism phase, where internal psychological processes transform external environmental stimuli into behavioural outcomes that affect wellbeing at individual, societal, and planetary levels.

The integration of the Theory of Planned Behaviour with the Stimulus-Organism-Response framework establishes a sophisticated theoretical foundation for comprehending the psychological processes that drive green purchasing intentions and their relationship to holistic wellbeing. Through the Theory of Planned Behaviour, researchers can examine how attitudes, subjective norms, and perceived behavioural controls systematically influence the formation of consumer intentions (Rukhsar *et al.*, 2025). Simultaneously, the Stimulus-Organism-Response model demonstrates how individuals cognitively and emotionally process environmental stimuli, subsequently generating particular behavioural outcomes that contribute to individual psychological satisfaction through value alignment, societal cohesion through shared environmental responsibility, and planetary health through sustainable consumption patterns (Vafaei-Zadeh *et al.*, 2025). The synthesis of these theoretical perspectives creates a robust analytical structure for investigating how environmental concern shapes consumer behaviour patterns, recognising the complex interaction between deliberate cognitive evaluation and emotional factors that influence

environmentally conscious purchasing decisions while simultaneously enhancing multidimensional wellbeing (Saputro *et al.*, 2025; Zhang *et al.*, 2019).

2.2. Environmental Concern and Green Purchase Intention

Environmental concern constitutes a complex, multidimensional construct characterised by individuals' recognition of environmental challenges and their support for remedial actions, fundamentally grounded in overarching attitudes and values related to environmental protection and stewardship (Bulut *et al.*, 2021). This construct demonstrates distinctive features through heightened ecological awareness and an active orientation towards environmental problem-solving, thereby exerting considerable influence on consumer behavioural patterns and decision-making frameworks that affect both individual wellbeing and collective environmental outcomes (Donnan *et al.*, 2023a; Rokka & Uusitalo, 2008b).

Environmentally conscious consumers exhibit distinct preferences for products and services that demonstrate favourable ecological attributes (Rokka & Uusitalo, 2008a), manifesting through deliberate decisions to limit consumption of finite resource-based goods, implement energy conservation practices, and select minimally packaged alternatives (Barrera-Verdugo, 2023). These consumption choices reflect not merely environmental concern but also contribute to individual psychological wellbeing through the satisfaction derived from acting in accordance with one's values and contributing to collective environmental stewardship. The progressive intensification of environmental awareness among Indonesian consumers has generated heightened sensitivity regarding the ecological ramifications of purchasing behaviours (Tavitiyaman *et al.*, 2024). This elevated consciousness motivates consumers to systematically assess the environmental footprint of their consumption choices, subsequently shaping their procurement decisions and market preferences in ways that align with their values and enhance their sense of moral purpose (Choi & Johnson, 2019; Saputra *et al.*, 2021). Drawing upon both contemporary findings and established empirical foundations, the research team advances the subsequent hypotheses:

H1: Environmental concern positively influences environmental belief.

H2: Environmental concern positively influences environmental knowledge.

H3: Environmental concern positively influences green purchase intention.

2.3. Environmental Belief as a Mediator and Its Relationship to Wellbeing

Environmental beliefs constitute cognitive frameworks that encompass individuals' comprehension of the intricate relationships between human societies and natural ecosystems, including the consequential impacts of human activities on environmental integrity, thereby forming the cornerstone for understanding pro-environmental behavioral patterns (Yang *et al.*, 2024). These belief systems function as interpretive mechanisms through which individuals evaluate environmental information and subsequently transform their environmental concerns into tangible behavioral intentions and actionable responses that contribute to individual psychological wellbeing through value congruence (Majeed *et al.*, 2023a).

The Value-Belief-Norm Theory establishes that individual value orientations, particularly those emphasizing environmental stewardship, influence consumer behavioral outcomes through intermediary belief structures (Al Falah *et al.*, 2024; Braga Junior *et al.*, 2019). This theoretical framework is particularly relevant to understanding holistic wellbeing, as it illuminates how deeply held environmental beliefs contribute to eudaimonic wellbeing through moral satisfaction and sense of purpose. When individuals act in accordance with their environmental beliefs through sustainable purchasing decisions, they experience psychological benefits associated with value alignment and contribution to collective environmental goals.

The relationship between environmental beliefs and behavioral manifestations demonstrates complexity, operating through intricate interactions between cognitive processing mechanisms and situational determinants (Asif *et al.*, 2022; Braga Junior *et al.*, 2019). Environmental worldviews encompass fundamental beliefs concerning human-nature relationships, whereas environmental concern denotes an individual's overarching predisposition toward environmental challenges and issues (Nkoulou Mvondo *et al.*, 2022). The conviction that individual actions possess meaningful potential for environmental enhancement cultivates moral obligation, which subsequently functions as a compelling driver for pro-environmental behavioral engagement while simultaneously enhancing individual psychological wellbeing through fulfillment of moral norms (Rukhsar *et al.*, 2025).

This framework aligns with the values-belief-norms theoretical model, which demonstrates how biospheric, altruistic, and egocentric value systems shape

individual adoption of New Environmental Paradigm values (Amin & Tarun, 2021; Santirocchi *et al.*, 2023). The alignment between personal environmental beliefs and consumption behavior represents a critical pathway to eudaimonic wellbeing, as individuals derive psychological satisfaction from acting consistently with their values. Furthermore, when environmental beliefs are widely shared within a society, they contribute to collective wellbeing through the establishment of shared norms around environmental responsibility and the creation of social cohesion around sustainability goals. This collective dimension of environmental beliefs extends individual wellbeing benefits to the societal level, fostering communities united by common environmental values and mutual commitment to planetary stewardship. Drawing from these theoretical foundations, researchers propose:

H4: Environmental belief positively influences green purchase intention.

H5: Environmental belief mediates the relationship between environmental concern and green purchase intention.

2.4. Environmental Knowledge as a Mediator

Environmental knowledge encompasses the sophisticated comprehension of ecological issues (Tavitiyaman *et al.*, 2024), including their root causes and viable solutions, and constitutes a critical foundation for developing environmentally conscious attitudes and behaviors (Alam *et al.*, 2024; Choi & Johnson, 2019; Simanjuntak *et al.*, 2023). Within the theoretical framework of Knowledge-Attitude-Behavior, this cognitive understanding functions as a primary determinant that shapes subsequent environmental orientations and actions, establishing that comprehensive awareness of ecological issues is fundamental to fostering positive environmental attitudes and promoting sustainable behavioral practices (Junior *et al.*, 2019; X. Li *et al.*, 2023; Qin & Song, 2022).

While environmental knowledge operates primarily through cognitive mechanisms, its relationship with environmental beliefs warrants careful consideration. Knowledge may serve as an antecedent to belief formation, providing the informational foundation upon which value-based beliefs are constructed. However, the moderate correlation between environmental knowledge and environmental beliefs observed in empirical studies suggests that these constructs, while related, represent distinct psychological mechanisms. Environmental knowledge represents factual understanding and awareness that can be acquired through education and information exposure, whereas environmental beliefs reflect deeper value orientations

and affective responses that are more resistant to change and more closely tied to individual identity and wellbeing.

Individuals possessing elevated levels of environmental consciousness demonstrate increased motivation to actively pursue environmental information, consequently expanding their knowledge foundation and strengthening their understanding of contemporary ecological challenges facing society (Hamzah & Tanwir, 2021; Tavitiyaman *et al.*, 2024). Such enriched understanding empowers consumers to make more informed purchasing choices that reflect environmental values, enabling the identification and selection of products and services that reduce environmental impact while advancing sustainability objectives (Park *et al.*, 2024; S. *et al.*, 2024).

Research findings demonstrate a robust positive correlation between environmental literacy and green purchasing intentions, with studies consistently showing that consumers who possess deeper environmental awareness exhibit heightened propensity toward sustainable product choices (Liguo *et al.*, 2023; Mahmud, 2024; Ng, 2023). However, the linkage between environmental knowledge and environmentally responsible consumption behavior cannot be characterized as uniformly linear, given that multiple mediating variables may influence this relationship. The interaction between environmental knowledge and environmental beliefs represents a particularly important area for investigation, as these constructs may operate synergistically to influence purchasing intentions. Drawing upon these empirical findings, we advance the subsequent hypotheses:

H6: Environmental knowledge positively influences green purchase intention.

H7: Environmental knowledge mediates the relationship between environmental concern and green purchase intention.

3. RESEARCH METHODOLOGY

3.1. Sampling and Data Collection

The study employed a quantitative cross-sectional methodology, utilizing a structured questionnaire instrument to gather empirical data from a strategically selected cohort of Indonesian consumers (Duan *et al.*, 2022). The research scope encompassed five prominent metropolitan areas—Jakarta, Bandung, Yogyakarta, Surabaya, and Bali—thereby ensuring comprehensive coverage of varied consumer viewpoints and regional characteristics (Yusiana *et al.*, 2021). A stratified random sampling methodology was adopted to guarantee sample adequacy and

representativeness, resulting in the collection of responses from 324 participants throughout the designated geographical areas.

This sample size demonstrated methodological sufficiency, surpassing the minimum requirements prescribed for structural equation modelling applications, which served as the primary analytical framework for investigating intricate variable interrelationships (Munerah *et al.*, 2021; Rizqiyana & Wahyono, 2020). The stratification framework strengthened data integrity through the systematic inclusion of essential demographic and socioeconomic variables, encompassing age distribution, gender representation, income levels, educational qualifications, professional backgrounds, and environmental awareness indicators (Sewwandi & Dinesha, 2022; Witek & Kuźniar, 2020).

A systematic stratification methodology was implemented to reduce inherent sampling biases and ensure representative coverage of the demographic

characteristics and consumer attitudes that characterize Indonesia's market landscape. Research instruments were carefully constructed in the Indonesian language to enhance participant understanding and optimize survey completion rates (Faisal *et al.*, 2023b; Susminingsih *et al.*, 2024). The demographic profile of the respondent sample is presented in Table 1.

3.2. Measures

This investigation employed established multi-item measurement instruments to operationalise the constructs under examination, drawing upon validated scales from previous scholarly work (Vilkaite-Vaitone *et al.*, 2022). The measurement framework underwent systematic adaptation and refinement procedures to ensure contextual relevance and methodological appropriateness for the Indonesian research environment (Faisal *et al.*, 2023a; Papadas *et al.*, 2017). The instrument development process involved extensive examination of extant literature to identify

Table 1: Socio-demographic Profile of Respondents (n=324)

Characteristic	Category	Frequency	Percentage
Gender	Male	147	45.4
	Female	177	54.6
Age	18-25 years	86	26.5
	26-35 years	106	32.7
	36-45 years	82	25.3
	Over 45 years	50	15.5
Education	High school	49	15.1
	Diploma	69	21.3
	Bachelor's degree	138	42.6
	Master's degree	60	18.5
	Doctoral degree	8	2.5
Monthly Income	Less than IDR 5 million	73	22.5
	IDR 5-10 million	114	35.2
	IDR 10-15 million	82	25.3
	IDR 15-20 million	39	12.0
	More than IDR 20 million	16	5.0
Occupation	Employed	170	52.5
	Self-employed	70	21.6
	Student	59	18.2
	Unemployed	15	4.6
	Retired	10	3.1
Environmental Experience	Less than 2 years	85	26.2
	2-5 years	124	38.3
	6-10 years	89	27.5
	More than 10 years	26	8.0

psychometrically sound and theoretically grounded measures, with careful consideration of prior empirical applications, scholarly impact metrics, and established reliability coefficients (C. (Cherise) Li *et al.*, 2024). The scale validation procedures comprised multiple sequential stages designed to establish measurement precision and construct validity within the specific Indonesian operational context (Papadas *et al.*, 2017; Vilkaite-Vaitone *et al.*, 2022). The survey instruments underwent comprehensive linguistic adaptation from English to Indonesian through implementation of standardised back-translation methodologies (Fernando & Aw, 2023a). Content validity assessment was achieved through structured focus group sessions designed to evaluate respondent comprehension levels, supported by expert panel reviews examining contextual suitability and measurement structure appropriateness (De Groot & Steg, 2007; Roci & Rashid, 2023; Vilkaite-Vaitone *et al.*, 2022).

A structured five-point Likert scale methodology was employed to capture respondent evaluations, wherein participants indicated their degree of agreement across a continuum from 1 (strongly disagree) through 5 (strongly agree). This systematic approach enabled participants to express their positioning on each survey construct through a standardized response mechanism. The selection of the five-point Likert configuration was justified by its established credibility within social science research paradigms and its demonstrated ability to achieve equilibrium between measurement precision and respondent usability (Fernando & Aw, 2023b; Vilkaite-Vaitone *et al.*, 2022).

The Environmental Concern construct was operationalized through a five-item measurement scale derived from the established Ecological Paradigm theoretical framework (Ricci *et al.*, 2018), specifically designed to evaluate participant concerns regarding environmental conditions. This measurement approach draws upon foundational principles within environmental psychology to explore core beliefs concerning human-environmental interactions (Abrar *et al.*, 2021b; Liguó *et al.*, 2023). The instrument featured carefully constructed items intended to capture both environmental concern and behavioral predisposition, exemplified by statements including "I am concerned about the state of the world's environment" and "I am willing to sacrifice to protect the environment" (Rizqiyana & Wahyono, 2020a; S. *et al.*, 2024).

3.3. Data Analysis

The investigation of intricate relationships between research variables through statistical procedures adopts a systematic multi-stage methodology to

guarantee methodological precision and validity of findings. At the outset, exploratory analyses were performed, encompassing descriptive statistical measures to clarify patterns of central tendency and variability within the data, reliability testing to confirm measurement instrument consistency, and correlational analysis to examine inter-variable associations, all executed using SPSS version 26.0 (Munera *et al.*, 2021; Rizqiyana & Wahyono, 2020b). Following this preliminary phase, confirmatory factor analysis was applied to assess the adequacy of the measurement framework, ensuring that manifest variables accurately reflect their corresponding latent theoretical constructs (X. Li *et al.*, 2023). Additionally, structural equation modelling was performed using LISREL 8.80 to examine the theoretically proposed associations between constructs (Munera *et al.*, 2021). To maintain the robustness of structural equation modelling outcomes, implementation of a two-phase methodological framework is advocated (Drechsel *et al.*, 2025).

The measurement model requires comprehensive assessment of reliability, convergent validity, and discriminant validity before proceeding with structural model evaluation (Fernando & Aw, 2023a). Model fit assessment employed multiple indices including the chi-square to degrees of freedom ratio, Goodness of Fit Index, Adjusted Goodness of Fit Index, Comparative Fit Index, Tucker-Lewis Index, Estimated Root Mean Square Error, and Standardised Root Mean Square Residual to determine alignment between the theoretical model and observed data. Bootstrap analysis with 5000 iterations was conducted to establish the statistical significance of mediation relationships (Ashrafi *et al.*, 2025).

Structural equation modelling represents an advanced analytical approach for theoretical model validation, distinguished by its confirmatory analytical capabilities (Ghouse *et al.*, 2024; Liguó *et al.*, 2023; Qin & Song, 2022). The methodology exhibits exceptional utility for intricate regression modelling and non-linear relationship examination through its ability to address measurement error through latent variable incorporation (Jennings, 2005; Machaka-Mare *et al.*, 2023b). Furthermore, the technique enables simultaneous assessment of all equation systems within a unified model framework while providing thorough model fit evaluation (Kautish & Sharma, 2019; Yang *et al.*, 2024).

4. RESULTS

4.1. Measurement Model

The measurement model analysis results are detailed in Table 2, with specific focus on assessing the

Table 2: Measurement Model Results

Construct	Items	Factor Loading	Cronbach's Alpha	CR	AVE
Environmental Concern	EC1	0.82	0.85	0.89	0.62
	EC2	0.79			
	EC3	0.84			
	EC4	0.76			
	EC5	0.72			
Environmental Belief	EB1	0.85	0.88	0.91	0.71
	EB2	0.87			
	EB3	0.83			
	EB4	0.81			
Environmental Knowledge	EK1	0.75	0.83	0.87	0.53
	EK2	0.72			
	EK3	0.78			
	EK4	0.69			
	EK5	0.71			
	EK6	0.67			
Green Purchase Intention	GPI1	0.81	0.86	0.90	0.64
	GPI2	0.83			
	GPI3	0.79			
	GPI4	0.77			
	GPI5	0.80			

Note: CR = Composite Reliability; AVE = Average Variance Extracted.

reliability and internal consistency of the examined constructs. Establishing the reliability of measurements and ensuring they accurately reflect their underlying theoretical constructs represents a critical component in measurement model validation (Barrera-Verdugo, 2023; C. (Cherise) Li *et al.*, 2024). This validation procedure requires thorough evaluation across both reliability and validity parameters (Amin & Tarun, 2021; De Silva *et al.*, 2021).

The constructs within the model demonstrate adequate reliability, with Cronbach's alpha values falling within the range of 0.79 to 0.88 (Donnan *et al.*, 2023a; Susminingsih *et al.*, 2024). These coefficients surpass the established benchmark of 0.70, confirming substantial internal consistency among items comprising each construct (Asif *et al.*, 2023; Yang *et al.*, 2024). The composite reliability measures, which range from 0.83 to 0.91, provide additional support for these results, establishing robust internal consistency throughout all examined constructs (Donnan *et al.*, 2023a).

The analysis confirmed convergent validity as evidenced by all factor loadings surpassing 0.67 with statistical significance ($p < 0.001$). Additionally, the Average Variance Extracted (AVE) values ranged from

0.53 to 0.71, which exceeded the established threshold of 0.50 recommended in the literature (Fornell & Larcker, 1981).

The establishment of discriminant validity was demonstrated through the square root of AVE for each construct being greater than its correlation with other constructs (Table 3). The measurement model exhibited satisfactory fit indices with the empirical data: $\chi^2/df = 2.18$, Goodness-of-Fit Index (GFI) = 0.92, Adjusted Goodness-of-Fit Index (AGFI) = 0.90, Comparative Fit Index (CFI) = 0.95, Tucker-Lewis Index (TLI) = 0.94, Root Mean Square Error of Approximation (RMSEA) = 0.054, and Standardized Root Mean Square Residual (SRMR) = 0.047.

Table 3: Discriminant Validity Assessment

Construct	1	2	3	4
1. Environmental Concern	0.79			
2. Environmental Belief	0.51	0.84		
3. Environmental Knowledge	0.43	0.47	0.73	
4. Green Purchase Intention	0.49	0.52	0.40	0.80

Note: The diagonal elements (in bold) represent the square root of AVE, while off-diagonal elements are correlations between constructs.

4.2. Structural Model and Hypothesis Testing

The structural model shows a good fit: $\chi^2/df = 2.35$, GFI = 0.91, AGFI = 0.89, CFI = 0.94, TLI = 0.93, RMSEA = 0.058, and SRMR = 0.051. Figure 1 presents a path diagram showing the relationships between variables in a structural model.

The empirical investigation demonstrates substantial support for the proposed theoretical relationships, highlighting the intricate dynamics among factors that shape green purchase intention and their implications for holistic wellbeing (Drechsel *et al.*, 2025; Park *et al.*, 2024). Results indicate that environmental concern significantly and positively impacts both environmental beliefs ($\beta = 0.51$, $p < 0.001$) and environmental knowledge ($\beta = 0.43$, $p < 0.001$), thereby validating hypotheses H1 and H2 (Liguo *et al.*, 2023; Sinha & Annamdevula, 2025; Tavitiyaman *et al.*, 2024). These outcomes suggest that consumers with heightened environmental awareness demonstrate increased likelihood to form strong beliefs about environmental preservation importance while actively pursuing information related to ecological concerns and sustainable practices (Hamzah & Tanwir, 2021; C. (Cherise) Li *et al.*, 2024). Additionally, the analysis established that

environmental beliefs significantly and positively influence green purchase intentions ($\beta = 0.42$, $p < 0.001$), providing empirical validation for H4. This finding demonstrates that consumers maintaining firm beliefs regarding environmentally sustainable product benefits exhibit enhanced tendency to convert these attitudes into concrete purchasing decisions that align with their values and contribute to their psychological wellbeing (Fekete-Farkas, 2020; Sharma *et al.*, 2022).

The investigation revealed that environmental concern ($\beta = 0.09$, $p > 0.05$) and environmental knowledge ($\beta = 0.11$, $p > 0.05$) failed to demonstrate significant direct relationships with green purchasing intentions, leading to the rejection of hypotheses H3 and H5. Rather than representing counterintuitive outcomes, these findings provide strong empirical evidence for complete mediation, demonstrating that environmental beliefs serve as the indispensable psychological pathway through which environmental concern translates into purchase intentions. This pattern of results indicates that while environmental consciousness and understanding influence consumer perceptions and cognitions, their impact on purchasing intentions operates entirely through the intermediary mechanism of environmental beliefs (Bian & Moutinho, 2011; Donnan *et al.*, 2023b). The complete mediation

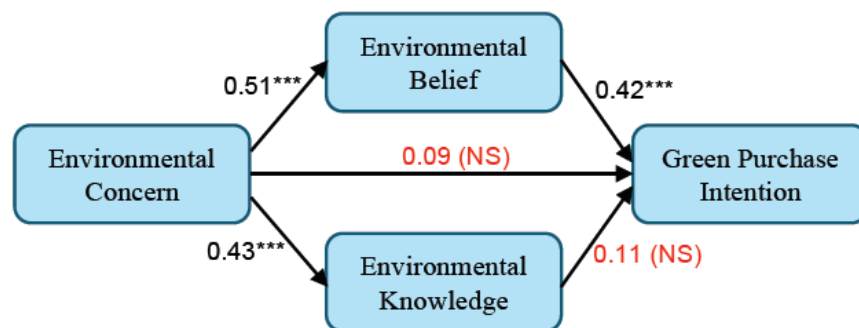


Figure 1: Path Analysis Results.

*Note: Solid paths indicate significant relationships; dashed paths indicate non-significant relationships. All path coefficients are standardized. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, ns = not significant.

Table 4: Results of Hypothesis Testing

Hypothesis	Path	Standardized Coefficient	t-value	p-value	Result
H1	EC → EB	0.51	8.74	<0.001	Supported
H2	EC → EK	0.43	7.18	<0.001	Supported
H3	EC → GPI	0.09	1.47	>0.05	Not Supported
H4	EB → GPI	0.42	6.24	<0.001	Supported
H5	EK → GPI	0.11	1.68	>0.05	Not Supported
H6	EC → EB → GPI	0.21	5.13	<0.001	Supported
H7	EC → EK → GPI	0.05	2.14	<0.05	Supported

Note: EC = Environmental Concern; EB = Environmental Belief; EK = Environmental Knowledge; GPI = Green Purchase Intention.

observed in this study underscores the critical role of value-based belief systems as the primary mechanism for translating environmental awareness into behavioral intentions.

The study explored the intermediary role of environmental beliefs and environmental knowledge in the association between environmental concern and intentions to purchase green products. Results indicated that environmental beliefs (indirect effect = 0.21, $p < 0.001$) and environmental knowledge (indirect effect = 0.05, $p < 0.05$) served as significant mediators in this relationship, thus confirming hypotheses H6 and H7. These results demonstrate that environmental concern exercises an indirect influence on green purchasing intentions by affecting environmental beliefs and knowledge (Ng, 2023). Particularly noteworthy is the observation that the mediating influence of environmental beliefs substantially exceeded that of environmental knowledge (0.21 vs. 0.05), implying that affective, value-based belief systems assume a significantly more critical function than cognitive informational understanding in converting environmental concern into purchasing intentions (Ashrafi *et al.*, 2025).

This pattern of complete mediation, wherein direct effects are non-significant while indirect effects through mediators are substantial, provides compelling evidence that environmental beliefs represent the essential psychological mechanism linking environmental awareness to sustainable consumption behavior. The dominance of the belief pathway over the knowledge pathway suggests that interventions aimed at fostering sustainable consumption should prioritize value alignment and moral conviction development rather than focusing exclusively on information provision and environmental education.

5. DISCUSSION

5.1. Theoretical Implications and Contributions to Wellbeing Research

This investigation validates the Theory of Planned Behaviour and Stimulus-Organism-Response model within Indonesia's emerging market context, demonstrating their relevance to holistic wellbeing outcomes. The complete mediation pattern—wherein environmental concern and knowledge show no direct effects on purchase intentions while operating entirely through environmental beliefs—establishes beliefs as the essential psychological gateway. This finding demonstrates the primacy of value-based affective mechanisms over cognitive informational pathways in driving sustainable consumption behavior.

5.2. Individual Wellbeing Implications

Environmental beliefs as primary mediators align with eudaimonic wellbeing theory, where psychological fulfillment derives from value-congruent behavior. When consumers purchase sustainable products reflecting their environmental beliefs, they experience moral satisfaction and enhanced purpose—key wellbeing components transcending hedonic pleasure. The Value-Belief-Norm framework demonstrates that personal values shape beliefs, generating moral norms compelling action. Value congruence between beliefs and behavior significantly contributes to life satisfaction, representing authentic living that enhances wellbeing beyond immediate consumption utility.

Complete mediation suggests cognitive awareness alone proves insufficient without corresponding belief systems. Educational interventions focusing solely on environmental knowledge may fail to produce behavioral change without cultivating underlying value orientations and belief structures. For individual wellbeing, the most psychologically satisfying approach involves developing authentic environmental values rather than merely providing information or creating external incentives, thereby fostering intrinsically motivated sustainable consumption.

5.3. Societal and Planetary Wellbeing Implications

Environmental beliefs' stronger mediating effect carries significant implications for societal and planetary wellbeing. Belief-based interventions fostering shared values and collective environmental responsibility prove more sustainable for long-term governance than purely educational campaigns. Widely shared environmental beliefs create social cohesion around sustainability goals and establish collective norms reinforcing pro-environmental behavior. This collective dimension fosters social capital, trust, and cooperative behavior, with societies demonstrating greater resilience in addressing environmental challenges.

Planetary wellbeing requires fundamental value system shifts rather than merely increasing environmental problem awareness. Belief-based interventions create deeper, more enduring behavioral change extending across multiple consumption domains and lifestyle choices, ultimately reducing ecological footprints and enhancing sustainability. The complete mediation pattern suggests that without strong environmental beliefs, even extensive environmental knowledge may fail to generate behavioral changes necessary for planetary health.

The substantially stronger mediating effect of environmental beliefs relative to environmental

knowledge indicates that value-based factors exercise considerably greater influence than informational comprehension in driving green purchasing intentions. This finding advances academic discussions concerning emotional versus rational components in motivating environmentally responsible behavior while illuminating pathways through which sustainable consumption contributes to holistic wellbeing. The Value-Belief-Norm framework demonstrates that belief systems mediate between fundamental values and behavioral norms, shaping behavioral expressions affecting wellbeing outcomes across multiple dimensions.

6. PRACTICAL IMPLICATIONS

6.1. Marketing and Communication Strategies

Marketing practitioners should reconceptualize approaches to promoting environmentally responsible consumption. Rather than focusing predominantly on information dissemination emphasizing environmental problems, strategies should prioritize emotional engagement and value alignment fostering deep-seated environmental beliefs. Communication campaigns should emphasize personal relevance of environmental issues, connecting stewardship to consumers' existing value systems. Marketing messages should frame green products as expressions of personal values and contributions to collective environmental goals, proving more effective in motivating purchase intentions.

6.2. Policy and Governance Implications

Government agencies should recognize that purely informational approaches, while valuable for building environmental knowledge, prove insufficient for generating behavioral change without corresponding belief system development. Policies should incorporate mechanisms for value cultivation and belief development through early education programs emphasizing environmental ethics and personal responsibility. Policy interventions should create environments reinforcing environmental beliefs and establishing sustainable consumption as normatively expected choice, thereby strengthening social dimensions of environmental beliefs and contributing to societal wellbeing through shared environmental values.

6.3. Educational Institutions and Programs

Educational institutions play critical roles in cultivating environmental beliefs contributing to individual and societal wellbeing. Environmental education programs should extend beyond factual knowledge transmission to incorporate value education,

moral development, and experiential learning fostering emotional connections to nature and deep-seated stewardship beliefs. Pedagogical approaches engaging students emotionally, encouraging critical reflection on environmental values, and providing meaningful environmental action opportunities cultivate belief systems driving sustainable consumption. Programs should explicitly connect environmental beliefs to individual wellbeing, demonstrating how value-aligned living enhances life satisfaction and psychological fulfillment.

6.4. Corporate Sustainability Initiatives

Corporations should invest in initiatives cultivating environmental beliefs among employees and consumers rather than focusing exclusively on green product attributes or environmental certifications. Corporate social responsibility programs should emphasize authentic environmental values and demonstrate genuine environmental stewardship commitment resonating emotionally with stakeholders. Companies should recognize that belief-driven consumers represent distinct market segments characterized by deeper, more enduring sustainable consumption commitment. Building relationships with these consumers requires authentic environmental engagement transcending greenwashing, emphasizing shared values and meaningful environmental impact.

6.5. Intervention Design Principles

Intervention designers should adopt key principles based on complete mediation findings. Interventions should cultivate intrinsic motivation through value development rather than relying on extrinsic incentives or fear-based messaging. Programs should emphasize personal psychological benefits of value-aligned behavior, connecting environmental stewardship to individual wellbeing through moral satisfaction. Interventions should foster collective environmental beliefs and social norms around sustainability, recognizing belief development requires sustained engagement rather than one-time informational exposure. Finally, interventions should be culturally contextualized, integrating environmental beliefs with existing value systems for authentic internalization.

7. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

7.1. Methodological Limitations

The cross-sectional design precludes definitive causal inferences regarding relationships among environmental concern, beliefs, knowledge, and purchase intentions. While theoretical framework and empirical findings suggest environmental concern influences beliefs and knowledge, subsequently

affecting purchase intentions, temporal precedence necessary for establishing causality cannot be definitively demonstrated. Future research should employ longitudinal designs tracking consumers over extended periods, examining how environmental concern changes relate temporally to belief and knowledge developments, and how these psychological changes manifest in evolving purchase intentions and actual behaviors.

Experimental and quasi-experimental designs represent promising methodological approaches. Intervention studies manipulating environmental beliefs through value-based educational programs or emotional engagement strategies, while comparing outcomes to knowledge-focused interventions or control conditions, could provide more definitive evidence regarding causal efficacy of belief-based approaches. Such experimental designs would enable researchers to test practical implications derived from these findings while establishing clearer causal connections between belief cultivation and behavioral outcomes.

7.2. The Intention-Behavior Gap

A significant limitation involves focusing on purchase intentions rather than actual purchasing behavior. While purchase intention represents theoretically important and empirically validated predictor within Theory of Planned Behaviour framework, substantial evidence demonstrates intentions do not invariably translate into corresponding actions. The intention-behavior gap may be particularly pronounced in green consumption, where barriers including higher prices, limited product availability, inferior quality perceptions, and competing priorities may prevent consumers from acting on purchase intentions.

Future research should examine actual purchasing behavior as dependent variable, employing methods such as purchase diary studies, behavioral observation, or transaction data analysis to capture real consumption patterns. Such behavioral studies would provide more definitive evidence regarding whether complete mediation pattern observed for purchase intentions extends to actual purchasing behavior, or whether additional factors moderate intention translation into actions. Research should investigate specific factors facilitating or impeding belief-driven intentions translation into actual purchases.

7.3. Sample Generalizability and Context Specificity

The sample drawn exclusively from five major Indonesian metropolitan areas—Jakarta, Bandung,

Yogyakarta, Surabaya, and Bali—while representing significant consumer markets, raises generalizability concerns. Rural and smaller-city consumers may face substantially different market conditions, including limited green product access, different price sensitivities, and distinct cultural values regarding environmental stewardship. Environmental beliefs and their relationship to purchase intentions may differ systematically between urban and rural populations, across socioeconomic strata, and among different regional contexts.

Future research should examine psychological mechanisms underlying green purchase intentions across diverse geographical contexts, socioeconomic conditions, and cultural settings within Indonesia and across other emerging economies. Comparative studies examining urban versus rural consumers, different regional contexts, and various cultural groups would illuminate boundary conditions of the theoretical model. Cross-cultural research comparing Indonesia with other emerging and developed economies would establish findings generalizability and identify culturally specific factors shaping environmental beliefs-sustainable consumption relationships.

7.4. Measurement and Construct Considerations

While measurement instruments demonstrated adequate psychometric properties, future research should continue refining conceptualization and measurement of environmental beliefs as distinct from related constructs including environmental attitudes, values, and worldviews. The moderate correlation between environmental beliefs and environmental knowledge suggests these constructs are related yet distinct, but precise relationship nature warrants further investigation. Future research should explicitly examine whether environmental knowledge functions as antecedent to environmental belief formation or whether these constructs develop independently through different pathways.

The potential for interaction or moderation effects between environmental beliefs and knowledge in predicting purchase intentions represents another important investigation area. Environmental knowledge and beliefs may operate synergistically, with knowledge providing informational foundation enabling beliefs to translate more effectively into behavioral intentions. Additionally, the multidimensional nature of environmental beliefs, environmental knowledge, and environmental concern warrants more nuanced examination, with future research employing more differentiated conceptualizations illuminating which specific dimensions prove most influential.

7.5. Moderating and Contextual Factors

The current study examined direct and mediated relationships among core constructs but did not extensively investigate potential moderating factors strengthening or weakening these relationships. Individual difference variables warranting investigation include personality traits, self-identity constructs, values hierarchies, and psychological factors such as self-efficacy and locus of control. Cultural values, generational cohorts, and life stage may systematically moderate observed relationships. Situational factors including perceived product performance, price premiums, product availability, and social influences may moderate belief translation into intentions.

7.6. Expanding the Wellbeing Framework

While this study incorporated holistic wellbeing considerations into theoretical framework and discussion, future research should more explicitly and comprehensively examine wellbeing outcomes associated with belief-driven sustainable consumption. Studies directly measuring psychological wellbeing outcomes including life satisfaction, purpose in life, personal growth, and positive affect as dependent variables would provide more definitive evidence regarding wellbeing benefits of value-aligned environmental behavior. Research examining mechanisms through which sustainable consumption contributes to individual wellbeing would illuminate psychological processes linking environmental beliefs, sustainable behavior, and wellbeing outcomes.

At societal level, future research should examine how widespread environmental beliefs and collective sustainable consumption patterns contribute to social cohesion, community wellbeing, and social capital. Research investigating spillover effects of environmental beliefs—examining whether belief-driven sustainable consumption in one domain extends to other environmental behaviors and life domains—would provide valuable insight into broader lifestyle transformations associated with strong environmental beliefs. Research integrating individual, societal, and planetary wellbeing outcomes within comprehensive framework would advance understanding of sustainable consumption contributions to holistic wellbeing.

8. CONCLUSION

This study provides compelling empirical evidence regarding psychological mechanisms through which environmental concern translates into green purchase intentions among Indonesian consumers, while illuminating relationships between sustainable consumption patterns and holistic wellbeing across

individual, societal, and planetary dimensions. Employing integrated theoretical framework combining Theory of Planned Behaviour with Stimulus-Organism-Response model, the investigation examined how environmental beliefs and knowledge mediate relationships between environmental concern and purchase intentions.

The empirical findings demonstrate environmental concern significantly influences both environmental beliefs and environmental knowledge, confirming heightened environmental awareness activates both affective and cognitive psychological mechanisms. However, the study reveals critical asymmetry in how these mechanisms translate into behavioral intentions. Environmental beliefs demonstrate substantial positive relationship with green purchase intentions, while environmental knowledge exhibits no significant direct effect. Most significantly, analysis reveals complete mediation, establishing environmental beliefs as essential psychological pathway through which environmental awareness transforms into sustainable consumption intentions.

The substantially stronger mediating effect of environmental beliefs compared to environmental knowledge carries profound theoretical and practical implications. Theoretically, these findings advance understanding of psychological drivers of sustainable consumption by demonstrating primacy of affective, value-based mechanisms over purely cognitive informational pathways. The complete mediation pattern provides strong evidence that environmental beliefs function as critical psychological gateway through which environmental consciousness must pass to generate behavioral intentions, suggesting interventions focused exclusively on knowledge enhancement prove largely ineffective.

From holistic wellbeing perspective, environmental beliefs primacy illuminates multiple pathways through which sustainable consumption contributes to wellbeing outcomes. At individual level, belief-driven sustainable consumption enhances psychological wellbeing through value congruence and moral satisfaction, key eudaimonic wellbeing components. At societal level, widespread environmental beliefs create shared values and collective norms around environmental responsibility, contributing to social cohesion and collective wellbeing. At planetary level, environmental beliefs serving as primary mechanism suggests lasting solutions require fundamental value system shifts rather than merely increasing environmental problem awareness.

This study establishes environmental beliefs as primary psychological mechanism through which environmental concern translates into green purchase

intentions, demonstrating complete mediation and primacy of affective, value-based pathways over cognitive informational mechanisms. These findings advance theoretical understanding of sustainable consumption psychology while providing practical guidance for interventions promoting environmentally responsible behavior. By illuminating connections between environmental beliefs, sustainable consumption, and holistic wellbeing across multiple levels, this research contributes to developing more effective approaches to advancing sustainable consumption in emerging economies.

CONFLICTS OF INTEREST

The author declared no conflicts of interest.

REFERENCE

- Abrar, M., Sibtain, M. M., & Shabbir, R. (2021a). Understanding purchase intention towards eco-friendly clothing for generation Y & Z. *Cogent Business & Management*, 8(1), 1997247. <https://doi.org/10.1080/23311975.2021.1997247>
- Abrar, M., Sibtain, M. M., & Shabbir, R. (2021b). Understanding purchase intention towards eco-friendly clothing for generation Y & Z. *Cogent Business & Management*, 8(1), 1997247. <https://doi.org/10.1080/23311975.2021.1997247>
- Ahmad, W., & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of Cleaner Production*, 267, 122053. <https://doi.org/10.1016/j.jclepro.2020.122053>
- Al Falah, K., Al Sughayir, A., & Albarq, A. N. (2024). The importance of environmental concern, trust and convenience in consumers' purchase intentions of organic foods in a developing country. *Cogent Business & Management*, 11(1), 2361319. <https://doi.org/10.1080/23311975.2024.2361319>
- Al Mamun, A., Naznen, F., Yang, Q., Ali, M. H., & Hashim, N. M. H. N. (2023). Modelling the significance of celebrity endorsement and consumer interest on attitude, purchase intention, and willingness to pay a premium price for green skincare products. *Heliyon*, 9(6), e16765. <https://doi.org/10.1016/j.heliyon.2023.e16765>
- Al Mamun, A., Rahman, M. K., Masud, M. M., & Mohiuddin, M. (2023). Willingness to pay premium prices for green buildings: Evidence from an emerging economy. *Environmental Science and Pollution Research*, 30(32), 78718-78734. <https://doi.org/10.1007/s11356-023-27998-9>
- Alam, M. Z., Ahmad, T., & Abunar, S. (2024). Investigating towards the sustainable green marketing environment of readymade apparel industries: A structural equation modelling approach. *Uncertain Supply Chain Management*, 12(1), 513-520. <https://doi.org/10.5267/j.uscm.2023.9.001>
- Amin, S., & Tarun, M. T. (2021). Effect of consumption values on customers' green purchase intention: A mediating role of green trust. *Social Responsibility Journal*, 17(8), 1320-1336. <https://doi.org/10.1108/SRJ-05-2020-0191>
- Ansari, S., & Gupta, S. (2021). Customer perception of the deceptiveness of online product reviews: A speech act theory perspective. *International Journal of Information Management*, 57, 102286. <https://doi.org/10.1016/j.ijinfomgt.2020.102286>
- Ashrafi, D. M., Islam, K. F., Shahid, T. S., & Sarker, Md. A. R. (2025). Going green or staying grey: Modelling the factors of green tech product purchase behaviour through interpretive structural modelling and MICMAC approach. *Journal of Science and Technology Policy Management*. <https://doi.org/10.1108/JSTPM-07-2024-0292>
- Asif, M. H., Zhongfu, T., Irfan, M., Ahmad, B., & Ali, M. (2023). Assessing eco-label knowledge and sustainable consumption behavior in energy sector of Pakistan: An environmental sustainability paradigm. *Environmental Science and Pollution Research*, 30(14), 41319-41332. <https://doi.org/10.1007/s11356-023-25262-8>
- Asif, M. H., Zhongfu, T., Irfan, M., & Işık, C. (2022). Do environmental knowledge and green trust matter for purchase intention of eco-friendly home appliances? An application of extended theory of planned behavior. *Environmental Science and Pollution Research*, 30(13), 37762-37774. <https://doi.org/10.1007/s11356-022-24899-1>
- Bagheri, A., Emami, N., & Damalas, C. A. (2023). Monitoring point source pollution by pesticide use: An analysis of farmers' environmental behavior in waste disposal. *Environment, Development and Sustainability*, 25(7), 6711-6726. <https://doi.org/10.1007/s10668-022-02326-2>
- Barrera-Verdugo, G. (2023). The link between social media exposure and students' moral reasoning and environmental concern: A generational analysis in Chile. *Cogent Social Sciences*, 9(1), 2167570. <https://doi.org/10.1080/23311886.2023.2167570>
- Bhardwaj, S., Sreen, N., Das, M., Chitnis, A., & Kumar, S. (2023). Product specific values and personal values together better explains green purchase. *Journal of Retailing and Consumer Services*, 74, 103434. <https://doi.org/10.1016/j.jretconser.2023.103434>
- Bian, X., & Moutinho, L. (2011). The role of brand image, product involvement, and knowledge in explaining consumer purchase behaviour of counterfeits: Direct and indirect effects. *European Journal of Marketing*, 45(1/2), 191-216. <https://doi.org/10.1108/03090561111095658>
- Borusiak, B., Szymkowiak, A., Pierański, B., & Szalotka, K. (2021). The Impact of Environmental Concern on Intention to Reduce Consumption of Single-Use Bottled Water. *Energies*, 14(7), 1985. <https://doi.org/10.3390/en14071985>
- Braga Junior, S., Martínez, M. P., Correa, C. M., Moura-Leite, R. C., & Da Silva, D. (2019). Greenwashing effect, attitudes, and beliefs in green consumption. *RAUSP Management Journal*, 54(2), 226-241. <https://doi.org/10.1108/RAUSP-08-2018-0070>
- Bulut, C., Nazli, M., Aydin, E., & Haque, A. U. (2021). The effect of environmental concern on conscious green consumption of post-millennials: The moderating role of greenwashing perceptions. *Young Consumers*, 22(2), 306-319. <https://doi.org/10.1108/YC-10-2020-1241>
- Chan, A., & Sekarsari, A. (n.d.). Green Marketing: A Study of Consumers' Buying Behavior in Relation to Green Products in Indonesia. 8(3).
- Chauhan, H., Pandey, A., Mishra, S., & Rai, S. K. (2021). Modeling the predictors of consumers' online purchase intention of green products: The role of personal innovativeness and environmental drive. *Environment, Development and Sustainability*, 23(11), 16769-16785. <https://doi.org/10.1007/s10668-021-01337-9>
- Chen, C.-C., Chen, C.-W., & Tung, Y.-C. (2018). Exploring the Consumer Behavior of Intention to Purchase Green Products in Belt and Road Countries: An Empirical Analysis. *Sustainability*, 10(3), 854. <https://doi.org/10.3390/su10030854>
- Chen, Y.-S., Chang, T.-W., Li, H.-X., & Chen, Y.-R. (2020). The Influence of Green Brand Affect on Green Purchase Intentions: The Mediation Effects of Green Brand Associations and Green Brand Attitude. *International Journal of Environmental Research and Public Health*, 17(11), 4089. <https://doi.org/10.3390/ijerph17114089>
- Choi, D., & Johnson, K. K. P. (2019). Influences of environmental and hedonic motivations on intention to purchase green products: An extension of the theory of planned behavior. *Sustainable Production and Consumption*, 18, 145-155. <https://doi.org/10.1016/j.spc.2019.02.001>
- De Groot, J. I. M., & Steg, L. (2007). Value Orientations and Environmental Beliefs in Five Countries: Validity of an

- Instrument to Measure Egoistic, Altruistic and Biospheric Value Orientations. *Journal of Cross-Cultural Psychology*, 38(3), 318-332.
<https://doi.org/10.1177/0022022107300278>
- De Silva, M., Wang, P., & Kuah, A. T. H. (2021). Why wouldn't green appeal drive purchase intention? Moderation effects of consumption values in the UK and China. *Journal of Business Research*, 122, 713-724.
<https://doi.org/10.1016/j.jbusres.2020.01.016>
- Donnan, J. R., Johnston, K., Coombs, M., Najafizada, M., & Bishop, L. D. (2023a). Exploring Consumer Preferences for Cannabis Vaping Products to Support Public Health Policy: A Discrete Choice Experiment. *Applied Health Economics and Health Policy*, 21(4), 651-659.
<https://doi.org/10.1007/s40258-023-00804-w>
- Donnan, J. R., Johnston, K., Coombs, M., Najafizada, M., & Bishop, L. D. (2023b). Exploring Consumer Preferences for Cannabis Vaping Products to Support Public Health Policy: A Discrete Choice Experiment. *Applied Health Economics and Health Policy*, 21(4), 651-659.
<https://doi.org/10.1007/s40258-023-00804-w>
- Drechsel, P., Kracklauer, A. H., Menrad, K., & Decker, T. (2025). Packaging for a greener tomorrow: A structural equation model of consumer intentions to purchase environmentally friendly packaged foods in Germany. *Cleaner and Responsible Consumption*, 100275.
<https://doi.org/10.1016/j.clrc.2025.100275>
- Duan, Y., Wu, R., Ji, H., Chen, X., Xu, J., Chen, Y., Sun, M., Pan, Y., & Zhou, L. (2022). Drinking water behavior and willingness to use filters by middle-aged and elderly residents in rural areas: A cross-sectional study in Tengchong, China. *Frontiers in Public Health*, 10, 961870.
<https://doi.org/10.3389/fpubh.2022.961870>
- Faisal, Y. A., Gunawan, I., Cupian, Hayati, A., Apriliadi, A., & Fajri, M. (2023a). Examining the Purchase Intentions of Indonesian Investors for Green Sukuk. *Sustainability*, 15(9), 7430.
<https://doi.org/10.3390/su15097430>
- Faisal, Y. A., Gunawan, I., Cupian, Hayati, A., Apriliadi, A., & Fajri, M. (2023b). Examining the Purchase Intentions of Indonesian Investors for Green Sukuk. *Sustainability*, 15(9), 7430.
<https://doi.org/10.3390/su15097430>
- Fawehinmi, O., Yusliza, M. Y., Mohamad, Z., Noor Faezah, J., & Muhammad, Z. (2020). Assessing the green behaviour of academics: The role of green human resource management and environmental knowledge. *International Journal of Manpower*, 41(7), 879-900.
<https://doi.org/10.1108/IJM-07-2019-0347>
- Fekete-Farkas, M. (2020). Why Not Green Marketing? Determinates of Consumers' Intention to Green Purchase Decision in a New Developing Nation.
- Fernando, A. G., & Aw, E. C.-X. (2023a). What do consumers want? A methodological framework to identify determinant product attributes from consumers' online questions. *Journal of Retailing and Consumer Services*, 73, 103335.
<https://doi.org/10.1016/j.jretconser.2023.103335>
- Fernando, A. G., & Aw, E. C. X. (2023b). What do consumers want? A methodological framework to identify determinant product attributes from consumers' online questions. *Journal of Retailing and Consumer Services*, 73, 103335.
<https://doi.org/10.1016/j.jretconser.2023.103335>
- Fu, L., Sun, Z., Zha, L., Liu, F., He, L., Sun, X., & Jing, X. (2020). Environmental awareness and pro-environmental behavior within China's road freight transportation industry: Moderating role of perceived policy effectiveness. *Journal of Cleaner Production*, 252, 119796.
<https://doi.org/10.1016/j.jclepro.2019.119796>
- Ghose, S. M., Shekhar, R., Ali Sulaiman, M. A. B., & Azam, A. (2024). Green purchase behaviour of Arab millennials towards eco-friendly products: The moderating role of eco-labelling. *The Bottom Line*.
<https://doi.org/10.1108/BL-08-2023-0246>
- Gu, W., Chan, K. W., Kwon, J., Dhaoui, C., & Septianto, F. (2023). Informational vs. emotional B2B firm-generated-content on social media engagement: Computerized visual and textual content analysis. *Industrial Marketing Management*, 112, 98-112.
<https://doi.org/10.1016/j.indmarman.2023.04.012>
- Hamzah, M. I., & Tanwir, N. S. (2021). Do pro-environmental factors lead to purchase intention of hybrid vehicles? The moderating effects of environmental knowledge. *Journal of Cleaner Production*, 279, 123643.
<https://doi.org/10.1016/j.jclepro.2020.123643>
- Han, H. (2015). Travelers' pro-environmental behavior in a green lodging context: Converging value-belief-norm theory and the theory of planned behavior. *Tourism Management*, 47, 164-177.
<https://doi.org/10.1016/j.tourman.2014.09.014>
- Huang, Y.-C. (2023). Integrated concepts of the UTAUT and TPB in virtual reality behavioral intention. *Journal of Retailing and Consumer Services*, 70, 103127.
<https://doi.org/10.1016/j.jretconser.2022.103127>
- Jennings, G. R. (2005). Business, Social Science Methods Used in. In *Encyclopedia of Social Measurement* (pp. 219-230). Elsevier.
<https://doi.org/10.1016/B0-12-369398-5/00270-X>
- Johnson, C. Y., Bowker, J. M., & Cordell, H. K. (2004). Ethnic Variation in Environmental Belief and Behavior: An Examination of the New Ecological Paradigm in a Social Psychological Context. *Environment and Behavior*, 36(2), 157-186.
<https://doi.org/10.1177/0013916503251478>
- Joo, K., & Hwang, J. (2023). Do Consumers Intend to Use Indoor Smart Farm Restaurants for a Sustainable Future? The Influence of Cognitive Drivers on Behavioral Intentions. *Sustainability*, 15(8), 6666.
<https://doi.org/10.3390/su15086666>
- Kamboj, S., Matharu, M., & Gupta, M. (2023). Examining consumer purchase intention towards organic food: An empirical study. *Cleaner and Responsible Consumption*, 9, 100121.
<https://doi.org/10.1016/j.clrc.2023.100121>
- Kautish, P., & Sharma, R. (2019). Value orientation, green attitude and green behavioral intentions: An empirical investigation among young consumers. *Young Consumers*, 20(4), 338-358.
<https://doi.org/10.1108/YC-11-2018-0881>
- Kumar, R., Kumar, K., Singh, R., Sá, J. C., Carvalho, S., & Santos, G. (2023). Modeling Environmentally Conscious Purchase Behavior: Examining the Role of Ethical Obligation and Green Self-Identity. *Sustainability*, 15(8), 6426.
<https://doi.org/10.3390/su15086426>
- Li, C. (Cherise), Agyeiwaah, E., & Zhao, Y. (2024). Understanding tourists' eco-paralysis, environmental concern, and pro-environmental behavior: An explanatory sequential mixed methods study. *Journal of Sustainable Tourism*, 32(10), 2060-2079.
<https://doi.org/10.1080/09669582.2023.2266778>
- Li, X., Dai, J., Zhu, X., Li, J., He, J., Huang, Y., Liu, X., & Shen, Q. (2023). Mechanism of attitude, subjective norms, and perceived behavioral control influence the green development behavior of construction enterprises. *Humanities and Social Sciences Communications*, 10(1), 266.
<https://doi.org/10.1057/s41599-023-01724-9>
- Liguo, X., Ahmad, M., Khan, S., Haq, Z. U., & Khattak, S. I. (2023). Evaluating the role of innovation in hybrid electric vehicle-related technologies to promote environmental sustainability in knowledge-based economies. *Technology in Society*, 74, 102283.
<https://doi.org/10.1016/j.techsoc.2023.102283>
- Machaka-Mare, Z. M., Mpinganjira, M., & Maduku, D. K. (2023a). Understanding Binge Drinking Quitting Intention and Behaviour Using an Extended TPB. *Social Marketing Quarterly*, 29(2), 107-126.
<https://doi.org/10.1177/15245004231171888>
- Machaka-Mare, Z. M., Mpinganjira, M., & Maduku, D. K. (2023b). Understanding Binge Drinking Quitting Intention and Behaviour Using an Extended TPB. *Social Marketing Quarterly*, 29(2), 107-126.
<https://doi.org/10.1177/15245004231171888>

- Mahmud, A. (2024). How and when consumer corporate social responsibility knowledge influences green purchase behavior: A moderated-mediated model. *Heliyon*, 10(3), e24680. <https://doi.org/10.1016/j.heliyon.2024.e24680>
- Majeed, S., Kim, W. G., & Kim, T. (2023a). Perceived green psychological benefits and customer pro-environment behavior in the value-belief-norm theory: The moderating role of perceived green CSR. *International Journal of Hospitality Management*, 113, 103502. <https://doi.org/10.1016/j.ijhm.2023.103502>
- Majeed, S., Kim, W. G., & Kim, T. (2023b). Perceived green psychological benefits and customer pro-environment behavior in the value-belief-norm theory: The moderating role of perceived green CSR. *International Journal of Hospitality Management*, 113, 103502. <https://doi.org/10.1016/j.ijhm.2023.103502>
- Munerah, S., Koay, K. Y., & Thambiah, S. (2021). Factors influencing non-green consumers' purchase intention: A partial least squares structural equation modelling (PLS-SEM) approach. *Journal of Cleaner Production*, 280, 124192. <https://doi.org/10.1016/j.jclepro.2020.124192>
- Ng, K. Y. N. (2023). Effects of organizational culture, affective commitment and trust on knowledge-sharing tendency. *Journal of Knowledge Management*, 27(4), 1140-1164. <https://doi.org/10.1108/JKM-03-2022-0191>
- Nkoulou Mvondo, G. F., Jing, F., Hussain, K., Jin, S., & Raza, M. A. (2022). Impact of International Tourists' Co-creation Experience on Brand Trust, Brand Passion, and Brand Evangelism. *Frontiers in Psychology*, 13, 866362. <https://doi.org/10.3389/fpsyg.2022.866362>
- Osorio, M. L., Centeno, E., & Cambra-Fierro, J. (2023). An empirical examination of human brand authenticity as a driver of brand love. *Journal of Business Research*, 165, 114059. <https://doi.org/10.1016/j.jbusres.2023.114059>
- Papadas, K.-K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research*, 80, 236-246. <https://doi.org/10.1016/j.jbusres.2017.05.024>
- Park, J., Ryu, Y., & Kim, Y. (2024). Factors influencing air passengers' intention to purchase voluntary carbon offsetting programs: The moderating role of environmental knowledge. *Journal of Air Transport Management*, 118, 102619. <https://doi.org/10.1016/j.jairtraman.2024.102619>
- Qin, B., & Song, G. (2022). Internal Motivations, External Contexts, and Sustainable Consumption Behavior in China—Based on the TPB-ABC Integration Model. *Sustainability*, 14(13), 7677. <https://doi.org/10.3390/su14137677>
- Ricci, E. C., Banterle, A., & Stranieri, S. (2018). Trust to Go Green: An Exploration of Consumer Intentions for Eco-friendly Convenience Food. *Ecological Economics*, 148, 54-65. <https://doi.org/10.1016/j.ecolecon.2018.02.010>
- Rizqiyana, I., & Wahyono, W. (2020a). The Influence of Eco-Brand, Eco-Labeling and Environmental Advertisement on Consumer Purchasing Behavior through Brand Image. *Management Analysis Journal*, 9(2), 211-220. <https://doi.org/10.15294/maj.v9i2.28510>
- Rizqiyana, I., & Wahyono, W. (2020b). The Influence of Eco-Brand, Eco-Labeling and Environmental Advertisement on Consumer Purchasing Behavior through Brand Image. *Management Analysis Journal*, 9(2), 211-220. <https://doi.org/10.15294/maj.v9i2.28510>
- Roci, M., & Rashid, A. (2023). Economic and environmental impact of circular business models: A case study of White Goods-as-a-Service using multi-method simulation modelling. *Journal of Cleaner Production*, 407, 137147. <https://doi.org/10.1016/j.jclepro.2023.137147>
- Rokka, J., & Uusitalo, L. (2008a). Preference for green packaging in consumer product choices - Do consumers care? *International Journal of Consumer Studies*, 32(5), 516-525. <https://doi.org/10.1111/j.1470-6431.2008.00710.x>
- Rokka, J., & Uusitalo, L. (2008b). Preference for green packaging in consumer product choices—Do consumers care? *International Journal of Consumer Studies*, 32(5), 516-525. <https://doi.org/10.1111/j.1470-6431.2008.00710.x>
- Rukhsar, Yameen, M., & Khanam, Z. (2025). Understanding the consumer purchase behaviour towards green electronic products: Using insight from the theory of planned behaviour. *IIM Ranchi Journal of Management Studies*, 4(1), 31-54. <https://doi.org/10.1108/IRJMS-01-2024-0002>
- S., V., Srivastava, N., & Mittal, A. (2024). How does green trust mediate the relationship between environmental concern and green brand knowledge during green purchases? *Global Knowledge, Memory and Communication*. <https://doi.org/10.1108/GKMC-04-2024-0229>
- Santirocchi, A., Spataro, P., Alessi, F., Rossi-Arnaud, C., & Cestari, V. (2023). Trust in science and belief in misinformation mediate the effects of political orientation on vaccine hesitancy and intention to be vaccinated. *Acta Psychologica*, 237, 103945. <https://doi.org/10.1016/j.actpsy.2023.103945>
- Saputra, A. D., Pranoto, W., & Yuniarty. (2021). The Factors of Environmental and Social Awareness, Altruism as Determinants of Purchase Intention, Green Brand Loyalty and Green Brand Evangelism. *2021 Innovations in Energy Management and Renewable Resources*(52042), 1-6. <https://doi.org/10.1109/IEMRE52042.2021.9386784>
- Saputro, E. P., Setyaningrum, D. P., & Febriyanto, A. (2025). Understanding Generation Z Muslims in Indonesia to switching intention to buy green products: A stimulus-organism-response approach. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-02-2024-0083>
- Sewwandi, J. P. N., & Dinesha, P. K. C. (2022). The impact of green marketing tools on green product purchase behavior: The moderation effect of consumer demographics. *Asian Journal of Marketing Management*, 1(01). <https://doi.org/10.31357/ajmm.v1i01.5469>
- Sharma, N., Paço, A., & Kautish, P. (2022). The impact of eco-innovation on green buying behaviour: The moderating effect of emotional loyalty and generation. *Management of Environmental Quality: An International Journal*, 33(4), 1026-1045. <https://doi.org/10.1108/MEQ-11-2021-0267>
- Simanjuntak, M., Nafila, N. L., Yuliati, L. N., Johan, I. R., Najib, M., & Sabri, M. F. (2023). Environmental Care Attitudes and Intention to Purchase Green Products: Impact of Environmental Knowledge, Word of Mouth, and Green Marketing. *Sustainability*, 15(6), 5445. <https://doi.org/10.3390/su15065445>
- Sinha, R., & Annamdevula, S. (2025). Unveiling the consequences of perceived greenwash among youth: A focus on the moderating role of environmental knowledge. *Society and Business Review*. <https://doi.org/10.1108/SBR-02-2024-0059>
- Susminingsih, S., Mujib, A., Wahdati, A., Baharuddin, M. A., & Maylawati, D. S. (2024). Religiosity as an intervening variable in consumers' increased green purchase intention (GPI) toward natural dye batik in Indonesia. *Journal of Islamic Marketing*, 15(12), 3357-3381. <https://doi.org/10.1108/JIMA-06-2023-0184>
- Tavitiyaman, P., Zhang, X., & Chan, H. M. (2024). Impact of environmental awareness and knowledge on purchase intention of an eco-friendly hotel: Mediating role of habits and attitudes. *Journal of Hospitality and Tourism Insights*, 7(5), 3148-3166. <https://doi.org/10.1108/JHTI-08-2023-0580>
- Vafaei-Zadeh, A., Nikbin, D., Seong Zhen, K., & Hanifah, H. (2025). Exploring the determinants of green electronics purchase intention through the stimulus-organism-response model. *Social Responsibility Journal*, 21(3), 473-497. <https://doi.org/10.1108/SRJ-02-2024-0109>
- Vilkaite-Vaitone, N., Skackauskiene, I., & Díaz-Meneses, G. (2022). Measuring Green Marketing: Scale Development and Validation. *Energies*, 15(3), 718. <https://doi.org/10.3390/en15030718>
- Watson, J. E. M., Evans, T., Venter, O., Williams, B., Tulloch, A., Stewart, C., Thompson, I., Ray, J. C., Murray, K., Salazar, A., McAlpine, C., Potapov, P., Walston, J., Robinson, J. G., Painter, M., Wilkie, D., Filardi, C., Laurance, W. F., Houghton,

- R. A., Lindenmayer, D. (2018). The exceptional value of intact forest ecosystems. *Nature Ecology & Evolution*, 2(4), 599-610.
<https://doi.org/10.1038/s41559-018-0490-x>
- Witek, L., & Kuźniar, W. (2020). Green Purchase Behavior: The Effectiveness of Sociodemographic Variables for Explaining Green Purchases in Emerging Market. *Sustainability*, 13(1), 209.
<https://doi.org/10.3390/su13010209>
- Yang, J., Al Mamun, A., Reza, M. N. H., Yang, M., & Aziz, N. A. (2024). Predicting the significance of consumer environmental values, beliefs, and norms for sustainable fashion behaviors: The case of second-hand clothing. *Asia Pacific Management Review*, 29(2), 179-194.
<https://doi.org/10.1016/j.apmr.2024.01.001>
- Yue, B., Sheng, G., She, S., & Xu, J. (2020). Impact of Consumer Environmental Responsibility on Green Consumption Behavior in China: The Role of Environmental Concern and Price Sensitivity. *Sustainability*, 12(5), 2074.
<https://doi.org/10.3390/su12052074>
- Yusiana, R., Widodo, A., & Hidayat, A. M. (2021). Green Purchase Intention: An Investigation Green Brand Knowledge and Green Perceived Value of Bioplastic Products in Bandung - Indonesia. *Inclusive Society and Sustainability Studies*, 1(2), 24-32.
<https://doi.org/10.31098/issues.v1i2.709>
- Zhang, L., Fan, Y., Zhang, W., & Zhang, S. (2019). Extending the Theory of Planned Behavior to Explain the Effects of Cognitive Factors across Different Kinds of Green Products. *Sustainability*, 11(15), 4222.
<https://doi.org/10.3390/su11154222>

<https://doi.org/10.65638/2978-882X.2025.01.01>

© 2025 Widodo *et al.*

This is an open-access article licensed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the work is properly cited.