



Determinants Of Green Purchasing Behaviour: With Green Products As Mediating Variables

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ABSTRACT

Purpose this study analyzes the influence of consumer attitude and personal norms on green purchasing behaviour, with green product attributes as a mediator. Methodology a quantitative survey was conducted with 83 consumers using accidental sampling. Data were analyzed with SPSS 26, including reliability, validity, regression, and Sobel mediation tests. Findings consumer attitude, personal norms, and green product attributes significantly and positively affect green purchasing behaviour. Green product attributes partially mediate the relationships between attitude and behaviour, and between norms and behaviour. The model explains 61.2% of behavioural variance. Limitations/Implications cross-sectional design and self-reported data from a limited sample restrict causal inference and generalizability. Future research should use longitudinal designs and diverse samples. Originality the study integrates psychological and product-perception theories, positioning green attributes as a key mediator in sustainable consumption, offering both theoretical and practical marketing insights.

INTRODUCTION

The imperative for sustainable consumption has become a fundamental concern for policymakers, business leaders, and academics in an era characterized by escalating environmental degradation and heightened consumer consciousness. Contemporary markets operate in environments where green purchasing behaviour is increasingly recognized as a critical lever for achieving broader sustainability goals (Abdo et al., 2023; Armutcu et al., 2024; Dangelico et al., 2021). The strategic importance of understanding this behaviour is paramount for businesses seeking to foster brand loyalty, secure competitive advantage, and align with evolving regulatory and social expectations (Al-Swidi & Saleh, 2021; Jaiswal & Kant, 2018).

Despite substantial scholarly interest in sustainable consumption, significant gaps remain in understanding the fundamental mechanisms through which consumer predispositions translate into concrete green purchasing actions. Previous research has primarily examined isolated determinants such as environmental attitudes or personal norms in simple, direct-effect models, overlooking the integrated pathways and the pivotal role of product-specific perceptions (Lopes, Pinho, et al., 2024; Ogiemwonyi et al., 2023; Wijekoon & Sabri, 2021). Particularly lacking is a comprehensive understanding of how intrinsic consumer motivations and extrinsic product perceptions interact and mediate one another to shape the final purchase decision across various product categories.

The fundamental challenge facing marketers and sustainability advocates is not merely the identification of pro-environmental consumers, but the strategic alignment of product development and communication to bridge the pervasive *attitude-behaviour gap*. Furthermore, emerging market complexities such as greenwashing, information overload, and varying levels of product availability are increasingly complicating the decision-making landscape that consumers must navigate (Hussain et al., 2020; Lavuri et al., 2021; Lavuri & Susandy, 2020; Lopes, Silva, et al., 2024). In this context, identifying the mediating role of green product attributes becomes crucial for building effective intervention strategies and ensuring the commercial success of sustainable innovations.

Green purchasing behaviour plays a pivotal role in the circular economy by driving demand for eco-friendly products, thereby incentivizing sustainable production and creating market value (Chaudhary & Bisai, 2018; García-Salirrosas & Rondon-Eusebio, 2022; Wang, 2017). However, a weak or inconsistent link between consumer values and market offerings can disrupt this value creation process, hindering environmental progress and corporate sustainability. Previous studies indicate that failed green product launches, often due to a mismatch between consumer expectations and product reality, can incur significant costs through damaged brand equity and entrenched consumer skepticism (Qureshi et al., 2023; Sheng et al., 2019; Troudi & Bouyoucef, 2020; Visser & Dlamini, 2021).

The strategic importance of green marketing has positioned product attributes as a key component in consumer decision-making frameworks. Various approaches have been adopted by firms to enhance their product appeal. Brands known for their genuine and high-performing green products enjoy superior consumer trust and a highly regarded reputation in the marketplace (Dlamini & Mahowa, 2024; Dou et al., 2025; Hazaea et al., 2022; Sharma & Paço, 2025). However, the significant challenge these brands face in building a credible green image lies in the inconsistencies and varying quality of perceived product attributes such as effectiveness, price, and availability across different categories and regions. Achieving strong and consistent green purchasing requires coordination and emphasizes the essential requirement of credible and desirable product offerings (Al-Quran et al., 2020; Vinoth et al., 2024; Zahid et al., 2018).

Regarding consumer psychology and product perception, research shows that products successfully communicating superior environmental and functional benefits demonstrate stronger purchase intentions. Studies indicate that offerings perceived as genuinely green and high-quality achieve significantly higher market penetration and willingness-to-pay compared to conventional or weakly positioned counterparts (Joshi et al., 2021; Liaquat et al., 2024; Pontes et al., 2024; Zameer & Yasmeen, 2022). The phenomenon of greenwashing illustrates the profound implications of trust failure, as evidenced by numerous established brands struggling to maintain consumer credibility when their claims are questioned. Consequently, several well-known corporations have faced reputational crises when they failed to align product attributes with consumer perceptions of greenness, leading to broader market challenges. This highlights the critical significance of managing product attribute perceptions to ensure proper market adaptation, protecting firms from consumer backlash and financial underperformance (Majeed et al., 2022; Rahman et al., 2020; Witek & Kuźniar, 2020).

Green product attributes are often considered a critical mediating mechanism for converting positive attitudes into behaviour, as they help avoid the *value-action gap* paradox by making the sustainable choice both tangible and desirable (Carrión-Bósquez et al., 2025; Chanda et al., 2023; Elbarky et al., 2023; Royani & Imaningsih, 2024). Scholars argue that a strong product-based value proposition can help overcome intention-behaviour gaps caused by situational barriers by making the green choice more accessible and rewarding. The persuasive power of compelling product attributes is further supported by numerous international studies. For instance, recent research indicates that perceived product greenness and performance are central mediators that explain when and why positive attitudes lead to actual purchase (Abeysekera et al., 2022; Gupta, 2021; Siyal et al., 2021).

Previous studies have extensively discussed green purchase determinants, both quantitatively and qualitatively, although often with a narrow focus. These studies primarily rely on established theories like the Theory of Planned Behaviour (TPB) or Value-Belief-Norm (VBN) theory to predict behavioural intentions (Ajzen, 1991). However, they have not sufficiently integrated the concrete perception of the *product itself* as a central mediating variable within a holistic framework connecting internal drivers to final behaviour (Astuti et al., 2025; Nafiudin et al., 2025; Wulandaru et al., 2025). A number of studies rely on direct-effect identification, examining simple cause-effect relationships between attitudes and intentions. Additionally, others focus on measuring behavioural outcomes without thoroughly testing the full spectrum of mediation mechanisms, particularly the role of multi-dimensional product attribute perceptions. This necessitates a more comprehensive exploration of the integrated pathways connecting consumer psyche to market behaviour through the lens of the (Charwin & Agustinus Setyawan, 2025; Tirtana & Rahmadhani, 2025; Toni, 2025).

This research is designed to fill several significant gaps identified in the existing literature. First, this study introduces a holistic and integrated approach by analyzing the determinants of green purchasing behaviour not as isolated relationships, but as a complete system where consumer attitudes and personal norms interact with the mediating perception of green product attributes. This approach addresses the limitations of previous studies that tended to examine drivers in isolation from product-market realities. Second, this study innovatively positions green product attributes not merely as an outcome but as a critical mediating mechanism, which has not been extensively explored as a central transmission pathway despite being identified as a key market factor. Third, this study conducts an in-depth exploration of unique mediation pathways, such as how personal norms enhance the perceived value of green attributes, and how these attributes, in turn, catalyze the translation of general environmental concern into specific purchase actions.

The contributions of this research are multidimensional. Theoretically, this study enriches the sustainable consumption literature by proposing and testing a more comprehensive and contextual model that reflects the reality of the attitude-behaviour gap and the pivotal role of product perception. This model is expected to form the foundation for developing a more robust theory of green consumption in complex market environments. Methodologically, this study contributes by employing mediation analysis (e.g., Process Macro or Structural Equation Modeling) to estimate the indirect and direct relationships between determinants, mediators, and purchasing behaviour. This method effectively handles complex model characteristics, including multiple predictors and a key mediator, providing robust estimates under conditions of consumer decision-making complexity.

On a practical level, the research findings will yield insights with broad managerial implications and generalizability. These findings can serve as a valuable guide for marketing managers, product developers, and sustainability officers in formulating more effective green marketing strategies. Practical contributions from this research may include specific recommendations for designing and communicating credible green product attributes that effectively bridge consumer values and purchase behaviour. Thus, this research not only

contributes to the academic body of knowledge but also directly feeds into practical efforts to enhance the market success of sustainable products and accelerate the transition towards a green economy.

This study specifically aims to analyze the determinants of green purchasing behaviour with green product attributes as a mediating variable through a quantitative mediation analysis framework. The main objectives include: (1) examining the direct effects of consumer attitudes and personal norms on green purchasing behaviour; (2) testing the direct effects of these determinants on the perception of green product attributes; (3) investigating the indirect mediating effect of green product attributes on the relationship between the determinants and purchasing behaviour; and (4) analyzing the relative strength of the mediated pathways.

The urgency of this research is based on three fundamental aspects. First, from an academic perspective, this study fills a significant literature gap by developing an integrated behavioural model that positions product attributes as a core mediator, differing from the intention-centric models dominant in previous studies. Second, the methodological aspect introduces rigor through the application of advanced mediation analysis, which can overcome the limitations of simple regression in unveiling the underlying *how* and *why* of consumer behaviour. Third, the resulting practical implications have strategic relevance for businesses in translating the growing pro-environmental sentiment into actual sales, thereby making sustainability both an ethical and a commercially viable pursuit. Thus, this research not only provides a substantive contribution to the development of green consumer theory but also becomes a critical empirical foundation for strategic decision-making in sustainable marketing and product development.

LITERATURE REVIEW

Theoretical Foundations of Green Purchasing Behaviour

Understanding the determinants of green purchasing behaviour requires integrating multiple theoretical lenses from consumer psychology and marketing. At its core, the Theory of Planned Behaviour (TPB) (Ajzen, 1991) provides a foundational framework, positing that behavioural intention the immediate antecedent of behaviour is shaped by *Attitude* toward the behaviour, *Subjective Norms*, and *Perceived Behavioural Control*. In the context of green consumption, this theory is enriched by the Norm Activation Model (NAM) (Schwartz, 1977), which emphasizes the role of personal moral norms and feelings of obligation (Personal Norms) in driving pro-social and pro-environmental actions (Citra Ardila et al., 2025; Ekasasmita et al., 2025; Septya Pradana et al., 2025). These cognitive and normative drivers, however, do not operate in a vacuum; they are filtered through the consumer's perception of the market offering. This is where Signalling Theory (Spence, 1973) becomes critical, as it explains how consumers interpret tangible and intangible Green Product Attributes (e.g., eco-labels, material composition, energy efficiency) as signals of a product's true environmental quality and performance, reducing perceived risk and uncertainty in the purchase (Citra Ardila et al., 2025). An integrated theoretical approach, therefore, considers how internal drivers (Attitude, Personal Norms) are translated into action through the evaluation of external, product-specific signals, effectively positioning Green Product Attributes as a pivotal mediating construct in the decision-making pathway.

The Direct Effect of Consumer Attitude on Green Purchasing Behaviour

Consumer Attitude toward green purchasing refers to an individual's overall positive or negative evaluation of performing this specific behaviour (Ajzen, 1991). It encompasses the degree to which a consumer believes that buying green products is beneficial, important, and personally relevant. According to the Theory of Planned Behaviour, attitude is a fundamental and direct determinant of behavioural intention, which subsequently influences actual behaviour. A favourable attitude reduces perceived barriers and increases the likelihood of

action (Jaiswal & Kant, 2018; Lopes, Pinho, et al., 2024; Ogiemwonyi et al., 2023). In the context of sustainability, consumers who hold strong positive beliefs about the environmental impact and personal benefits of green purchasing are inherently more motivated to engage in such behaviour, independent of other factors. Empirical evidence robustly supports this direct pathway, indicating that pro-environmental attitude is a significant predictor of green purchase intention and, to a lesser extent, actual behaviour (Abdo et al., 2023; Al-Swidi & Saleh, 2021; Armutcu et al., 2024; Dangelico et al., 2021). Therefore, it is hypothesized that:

H1: Consumer Attitude has a positive direct effect on Green Purchasing Behaviour.

The Mediating Role of Green Product Attributes in the Attitude-Behaviour Relationship

While a direct relationship exists, the persistent *attitude-behaviour gap* in green consumption suggests that a positive attitude alone is often insufficient to guarantee a purchase. The translation of a general disposition into a specific market choice requires a concrete catalyst. This is where the perception of Green Product Attributes functions as a critical mediator. Signalling Theory (Spence, 1973) provides the explanatory mechanism: a consumer's pre-existing positive attitude acts as a lens that shapes how they perceive and interpret product-specific information. Consumers with a strong pro-environmental attitude are more likely to notice, trust, and value the green attributes of a product (Hussain et al., 2020; Lavuri & Susandy, 2020; Lopes, Silva, et al., 2024; Wijekoon & Sabri, 2021). They are predisposed to interpret eco-labels and sustainable features as credible and meaningful, thereby enhancing the perceived value and desirability of the product. This enhanced product perception, in turn, becomes the immediate driver of the purchase decision. Thus, the influence of attitude on behaviour is not only direct but also significantly indirect, channeled through the more proximal evaluation of the product's tangible attributes. Consequently, the following hypothesis is proposed:

H2: Green Product Attributes mediate the positive relationship between Consumer Attitude and Green Purchasing Behaviour.

The Direct Effect of Personal Norms on Green Purchasing Behaviour

Personal Norms represent an individual's internalized moral obligation to engage in pro-environmental actions, arising from a sense of responsibility for the consequences of their inaction (Schwartz, 1977). Rooted in the Norm Activation Model, personal norms are distinct from social pressures; they are self-imposed ethical imperatives. When activated, these norms create a powerful direct motivational force to act in accordance with one's values to avoid feelings of guilt and to achieve self-approval. In green purchasing, this translates to a direct compulsion to choose environmentally friendly products as a fulfilment of a personal ethical duty. This moral motivation can often bypass more calculated, attitude-based evaluations, driving behaviour directly. Research consistently identifies personal norms as one of the strongest direct predictors of pro-environmental intentions and behaviours, including green (Chaudhary & Bisai, 2018; Lavuri et al., 2021; Wang, 2017). Based on this theoretical and empirical grounding, the hypothesis is:

H3: Personal Norms have a positive direct effect on Green Purchasing Behaviour.

The Mediating Role of Green Product Attributes in the Personal Norms-Behaviour Relationship

Similar to attitude, the influence of personal moral norms on concrete behaviour is also facilitated by market-based evaluations. A strong personal norm motivates an individual to seek out behavioural options that align with their ethics. In the marketplace, this search focuses on identifying products whose attributes clearly signal alignment with those moral values (García-Salirrosas & Rondon-Eusebio, 2022; Qureshi et al., 2023; Sheng et al., 2019). The presence of credible green attributes (e.g., certified organic, carbon-neutral) provides the tangible means for a consumer to enact their moral norms. The norm enhances the salience and perceived

importance of these attributes, making them key decision criteria. Essentially, the product's green features become the instrument through which personal ethics are operationalized. Therefore, while personal norms exert a direct push towards green behaviour, a significant portion of their effect is mediated by the consumer's active search for and positive evaluation of products that possess the "right" ethical attributes. This leads to the mediation hypothesis:

H4: Green Product Attributes mediate the positive relationship between Personal Norms and Green Purchasing Behaviour.

The Direct Effect of Green Product Attributes on Green Purchasing Behaviour

Ultimately, the purchase decision is a response to the specific product offered. Green Product Attributes encompassing functional performance, environmental benefits, price, design, and credibility constitute the final and most proximal set of evaluative criteria in the consumer's decision process (Dou et al., 2025; Troudi & Bouyoucef, 2020; Visser & Dlamini, 2021). Signalling Theory posits that these attributes reduce uncertainty and perceived risk. A product perceived as offering high environmental quality without sacrificing functional performance or value for money presents a compelling value proposition that directly drives purchase, regardless of the consumer's pre-existing attitudes or norms. This direct effect captures the reality of the market: even a consumer with moderate environmental concern will likely choose a clearly superior green product over a conventional alternative, while a highly concerned consumer may reject a poorly designed green product. The attributes themselves are the decisive factor at the point of sale (Dlamini & Mahowa, 2024; Hazaea et al., 2022; Sharma & Paço, 2025). Therefore, the final core hypothesis is:

H5: Green Product Attributes have a positive direct effect on Green Purchasing Behaviour.

METHODS

This study employs a quantitative research design with a descriptive and cross-sectional survey approach to examine the determinants of green purchasing behaviour and the mediating role of green product attributes (Sugiyono, 2022). Primary data were collected through structured questionnaires distributed to consumers who have experience in purchasing green products. The selection of respondents was conducted using accidental sampling techniques, where participants were selected based on accessibility and suitability without prior planning, ensuring representation from various consumer segments (Sugiyono, 2022). Data collection was performed using a Likert-scale questionnaire, targeting respondents who have made green purchase decisions in diverse product categories (Sekaran & Bougie, 2016).

Model Development

This study uses multiple regression analysis and path analysis to examine the relationships between consumer attitudes, personal norms, green product attributes, and green purchasing behaviour. The regression approach was selected due to its ability to test direct effects between variables, while path analysis allows for the examination of both direct and indirect (mediation) effects in a structured model (Hair, 2009). This method is appropriate for explanatory research aimed at understanding the mechanisms through which independent variables influence the dependent variable through a mediator. The approach is robust, widely recognized in behavioural research, and suitable for testing mediation hypotheses without requiring advanced structural equation modeling (Ishtiaq, 2019).

The research model builds upon the integrated theoretical framework combining the Theory of Planned Behaviour, Norm Activation Model, and Signalling Theory, which has been widely applied in green consumption research. The regression-based path analysis allows for clear estimation of both direct and indirect effects while controlling for measurement reliability through scale validation (Creswell & Miller, 2000).

Research Model

The following regression equations were used to examine the direct and mediated relationships:

$$GPA = \alpha_0 + \alpha_1 ATT + \alpha_2 PN + \zeta_1$$

$$GPB = \beta_0 + \beta_1 ATT + \beta_2 PN + \beta_3 GPA + \zeta_2$$

Where:

GPB = Green Purchasing Behaviour

GPA = Green Product Attributes (mediator)

ATT = Consumer Attitude

PN = Personal Norms

α_0, β_0 = constant terms

$\alpha_1, \alpha_2, \beta_1, \beta_2, \beta_3$ = regression coefficients

ζ_1, ζ_2 = error terms

Operational Variables

Table 1. Operational Variables

Variable Category	Variable Name	Measurement	Symbol	Expected Sign	Source
Independent Variable	Consumer Attitude	Positive evaluation of green purchasing (5-point Likert scale)	ATT	Positive	(Ajzen, 1991; Armutcu et al., 2024; Dangelico et al., 2021)
Independent Variable	Personal Norms	Moral obligation to engage in green purchasing (5-point Likert scale)	PN	Positive	(Abdo et al., 2023; Al-Swidi & Saleh, 2021; Schwartz, 1977)
Mediating Variable	Green Product Attributes	Perceived environmental quality, performance, and credibility of green products (5-point Likert scale)	GPA	Positive	(Jaiswal & Kant, 2018; Lopes, Pinho, et al., 2024; Ogiemwonyi et al., 2023)
Dependent Variable	Green Purchasing Behaviour	Frequency and intention to buy green products (5-point Likert scale)	GPB	Positive	(Hussain et al., 2020; Lavuri & Susandy, 2020; Wijekoon & Sabri, 2021)

Source: Authors' Own work

The regression-based path analysis enables the estimation of both direct effects and indirect mediation effects. The expected positive signs align with the theoretical framework and hypothesis development, where all direct and mediated relationships are hypothesized to be positive and significant.

The analysis was conducted using SPSS version 26. Preliminary analyses included reliability testing (Cronbach's Alpha), validity testing (content and construct validity), and assumption checks (normality, multicollinearity, linearity, and homoscedasticity). The mediation effect was tested using the causal steps approach (Ghozali, 2021), supplemented with Sobel test to examine the significance of indirect effects. The regression models were evaluated using regression coefficients, t-statistics, significance levels, and coefficient of determination (R^2) to ensure the robustness of the (Hair, 2009).

RESULTS

Result Research

Table 2 summarizes the descriptive statistics of all key variables. The dependent variable, Green Purchasing Behaviour (Y), has a mean score of 4.34 (on a 1–5 Likert scale), with a standard deviation of 0.73, indicating that respondents generally exhibit favorable green purchasing practices, though with moderate variation across the sample. The independent variable Consumer Attitude (X1) averages 4.12 (SD = 0.67), reflecting positive attitudes toward green products. Personal Norms (X2) shows the highest mean (4.28, SD = 0.71), suggesting strong internalized moral obligations regarding environmental behavior. The mediator, Green Product Attributes (M), records the highest mean (4.40, SD = 0.62), indicating that perceived green product characteristics are highly rated. All variables demonstrate acceptable ranges (Min = 3, Max = 5), confirming consistent use of the measurement scale without extreme outliers.

Table 2. Descriptive Statistics (N = 83)

Variable	Min	Max	Mean	Std.Deviation
Consumer Attitude (X1)	3	5	4.12	0.67
Personal Norms (X2)	3	5	4.28	0.71
Green Purchasing Behaviour (Y)	3	5	4.34	0.73
Green Attributes (M)	3	5	4.40	0.62

Source: Authors' Own work

Table 2. presents the factor loadings from Confirmatory Factor Analysis (CFA) for all measurement items. All items exhibit factor loadings above 0.70, well exceeding the recommended threshold of 0.50 (Hair et al., 2014), confirming strong convergent validity. For instance, items under Consumer Attitude (X1) load between 0.765 and 0.812; Personal Norms (X2) items range from 0.819 to 0.845; Green Purchasing Behaviour (Y) items vary from 0.795 to 0.823; and Green Product Attributes (M) items fall between 0.784 and 0.812. The consistently high loadings indicate that each item is a reliable indicator of its respective latent construct. Additionally, the model fit indices (CFI = 0.94, TLI = 0.92, RMSEA = 0.06) further support the adequacy of the measurement model.

Table 3. Item Validity Test (Factor Loadings – CFA)

Item	Factor Loading	Status
X1.1	0.812	Valid
X1.2	0.789	Valid
X1.3	0.801	Valid
X1.4	0.765	Valid
X1.5	0.791	Valid
X1.6	0.778	Valid
X1.7	0.803	Valid

X1.8	0.796	Valid
X1.9	0.788	Valid
X2.1	0.832	Valid
X2.2	0.845	Valid
X2.3	0.819	Valid
X2.4	0.838	Valid
Y2.1	0.821	Valid
Y2.2	0.815	Valid
Y2.3	0.809	Valid
Y2.4	0.798	Valid
Y2.5	0.801	Valid
Y2.6	0.807	Valid
Y2.7	0.812	Valid
Y2.8	0.795	Valid
Y2.9	0.802	Valid
Y2.10	0.811	Valid
Y2.11	0.823	Valid
M1	0.801	Valid
M2	0.784	Valid
M3	0.792	Valid
M4	0.806	Valid
M5	0.812	Valid
M6	0.790	Valid
M7	0.799	Valid
M8	0.804	Valid

Source: Authors' Own work

Table 3 reports the internal consistency reliability of each construct using Cronbach's Alpha. All constructs demonstrate excellent reliability, with alpha values exceeding 0.88. Specifically, Consumer Attitude ($\alpha = 0.886$), Personal Norms ($\alpha = 0.902$), Green Purchasing Behaviour ($\alpha = 0.934$), and Green Product Attributes ($\alpha = 0.912$) all surpass the conventional threshold of 0.70, indicating high item homogeneity and measurement precision. These results confirm that the scales are consistent and suitable for further analysis, as recommended by (Lopes, Silva, et al., 2024).

Table 4 Reliability Test (Cronbach's Alpha)

Construct	No. of Items	Cronbach's Alpha	Status
Consumer Attitude (X1)	9	0.886	Reliable
Personal Norms (X2)	4	0.902	Reliable
Green Purchasing (Y)	11	0.934	Reliable
Green Attributes (M)	8	0.912	Reliable

Source: Authors' Own work

Table 5 displays the multicollinearity diagnostics for the predictor variables in the regression model. All Variance Inflation Factor (VIF) values are below 2.0 (Consumer Attitude: 1.366, Personal Norms: 1.460, Green Product Attributes: 1.401), and tolerance values are above 0.10 (ranging from 0.685 to 0.732). These results confirm the absence of severe multicollinearity among independent variables, as VIF values below 5.0 and tolerance above 0.20 are generally considered acceptable. This ensures that regression coefficient estimates are stable and not distorted by intercorrelated predictors.

Table 5 Multicollinearity Test (VIF & Tolerance)

Variable	Tolerance	VIF
Consumer Attitude (X1)	0.732	1.366
Personal Norms (X2)	0.685	1.460
Green Attributes (M)	0.714	1.401

Source: Authors' Own work

Table 6 presents the results of the Sobel test for mediation effects. Both indirect paths are statistically significant at $p < 0.05$. The path Consumer Attitude $\rightarrow$ Green Product Attributes $\rightarrow$ Green Purchasing Behaviour shows a significant indirect effect ($\beta = 0.214$, $Z = 2.972$, $p = 0.003$). Similarly, the path Personal Norms $\rightarrow$ Green Product Attributes $\rightarrow$ Green Purchasing Behaviour is also significant ($\beta = 0.189$, $Z = 2.908$, $p = 0.004$). These findings confirm that Green Product Attributes (M) partially mediates the relationships between the independent variables (Consumer Attitude and Personal Norms) and the dependent variable (Green Purchasing Behaviour). The Sobel test supports the significance of these indirect effects, validating the proposed mediation model.

Table 6 Mediation Analysis (Sobel Test)

Path	Coefficient	Std. Error	Z-value	p-value
X1 $\rightarrow$ M $\rightarrow$ Y (Indirect)	0.214	0.072	2.972	0.003
X2 $\rightarrow$ M $\rightarrow$ Y (Indirect)	0.189	0.065	2.908	0.004

Source: Authors' Own work

Table 7 summarizes the hypothesis testing results using multiple regression and mediation analysis. All direct effects are statistically significant ($p < 0.001$). Consumer Attitude ($\beta = 0.317$, $t = 4.112$) and Personal Norms ($\beta = 0.285$, $t = 3.768$) positively influence Green Purchasing Behaviour, supporting H1 and H2. Green Product Attributes ($\beta = 0.402$, $t = 5.331$) also has a strong direct effect, supporting H3. The mediation hypotheses (H4 and H5) are supported, as evidenced by the significant indirect effects reported in Table 5. The overall regression model is significant ($F(3,79) = 41.83$, $p < 0.001$) and explains 61.2% of the variance in Green Purchasing Behaviour ($R^2 = 0.612$), indicating a robust and well-fitting model. The adjusted R^2 (0.598) confirms that the predictors meaningfully contribute to the dependent variable beyond sampling error.

Table 7 Hypothesis Testing (Regression Coefficients & t-test)

Hypothesis	Path	β	t-value	p-value	Supported?
H1	X1 $\rightarrow$ Y	0.317	4.112	0.000	Yes
H2	X1 $\rightarrow$ M $\rightarrow$ Y	0.285	3.768	0.000	Yes
H3	X2 $\rightarrow$ Y	0.402	5.331	0.000	Yes
H4	X2 $\rightarrow$ M $\rightarrow$ Y	0.214	2.972	0.003	Yes
H5	M $\rightarrow$ Y	0.189	2.908	0.004	Yes

Source: Authors' Own work

DISCUSSION

Impact Consumer Attitude on Green Purchasing Behaviour.

The findings indicate that Consumer Attitude demonstrates a positive and statistically significant relationship with Green Purchasing Behaviour. This suggests that individuals with favorable attitudes toward environmental sustainability are more likely to engage in green purchasing practices. The result aligns with the Theory of Planned Behaviour, which posits that

attitudes are a fundamental predictor of behavioral intentions and actions (Ajzen, 1991). In the context of green consumption, positive environmental attitudes translate into a greater willingness to choose eco-friendly products, even when such choices may involve higher costs or reduced convenience.

From a theoretical perspective, this finding strongly supports Value-Attitude-Behaviour theory, which suggests that personal values shape attitudes, which in turn drive specific behaviors (Hussain et al., 2020; Lavuri & Susandy, 2020; Lopes, Silva, et al., 2024; Wijekoon & Sabri, 2021). The significant positive relationship confirms that pro-environmental attitudes serve as a crucial psychological driver for sustainable consumption. Previous research similarly found that environmental attitudes significantly predict green purchase intentions and behaviors across various cultural contexts. The strength of this relationship in the current study reinforces the importance of cultivating positive environmental attitudes through education, awareness campaigns, and value-based marketing strategies (Chaudhary & Bisai, 2018; Lavuri et al., 2021; Wang, 2017).

Impact Green Product Attributes mediate Consumer Attitude and Green Purchasing Behaviour.

The mediation analysis reveals that Green Product Attributes partially mediate the relationship between Consumer Attitude and Green Purchasing Behaviour. This indicates that Consumer Attitude influences Green Purchasing Behaviour not only directly but also indirectly through the perceived attributes of green products. Specifically, individuals with positive environmental attitudes are more likely to recognize and value the specific attributes of green products, which in turn enhances their green purchasing behavior (Spence, 1973).

This mediation finding extends Signaling Theory to the green consumption context, suggesting that green product attributes serve as credible signals that translate attitudinal predispositions into actual purchase decisions. When consumers hold favorable environmental attitudes, they are more attentive to product-related sustainability cues, and these cues strengthen their purchase intentions (Abdo et al., 2023; Al-Swidi & Saleh, 2021; Armutcu et al., 2024). The partial mediation suggests that while attitudes directly influence behavior, the cognitive evaluation of product-specific attributes plays an important complementary role. Previous studies similarly identified product attributes as key mediators in sustainable consumption pathways, though with varying degrees of mediation strength depending on product categories and consumer segments (Jaiswal & Kant, 2018; Lopes, Pinho, et al., 2024; Ogiemwonyi et al., 2023).

Impact Personal Norms on Green Purchasing Behaviour.

The results show that Personal Norms have a positive and statistically significant influence on Green Purchasing Behaviour. This indicates that individuals' internalized moral obligations regarding environmental protection strongly motivate sustainable consumption choices. The finding supports Norm Activation Theory, which proposes that personal norms activated by awareness of consequences and ascription of responsibility drive pro-environmental behaviors (Schwartz, 1977). In this context, consumers who feel personally responsible for environmental outcomes and believe their actions can make a difference are more likely to engage in green purchasing.

The significant relationship between Personal Norms and Green Purchasing Behaviour also aligns with Ethical Consumption Theory, which emphasizes moral considerations in purchase decisions (Chaudhary & Bisai, 2018; García-Salirrosas & Rondon-Eusebio, 2022; Wang, 2017). Unlike attitudes, which are evaluative, personal norms represent moral imperatives that

can compel action even in the face of external constraints. This explains why individuals with strong environmental personal norms may choose green products despite higher prices or limited availability. Previous research consistently demonstrates the powerful role of personal norms in predicting various pro-environmental behaviors, including green purchasing. The current finding reinforces this established relationship in the specific context of product consumption (Qureshi et al., 2023; Sheng et al., 2019; Visser & Dlamini, 2021).

Impact Green Product Attributes mediate Personal Norms and Green Purchasing Behaviour.

The analysis confirms that Green Product Attributes partially mediate the relationship between Personal Norms and Green Purchasing Behaviour. This suggests that personal norms influence green purchasing not only through direct moral motivation but also by enhancing attention to and valuation of green product characteristics. Individuals with strong environmental personal norms are more likely to actively seek out and positively evaluate sustainability-related product attributes, which subsequently increases their likelihood of green purchases (Dou et al., 2025; Sharma & Paço, 2025; Troudi & Bouyoucef, 2020).

This mediation pathway can be explained through Moral Licensing Theory, whereby individuals with strong personal norms may use green product attributes as justifications for sustainable consumption choices. The perceived alignment between product characteristics and personal values reduces cognitive dissonance and facilitates behavior consistent with moral standards. The partial mediation indicates that while personal norms provide the foundational motivation, product attributes offer the concrete justification for specific purchase decisions. Research similarly found that moral and ethical considerations interact with product evaluations in complex ways, with product attributes serving as important conduits for translating moral principles into market behaviors (Dlamini & Mahowa, 2024; Hazaea et al., 2022; Zahid et al., 2018).

Impact Green Product Attributes on Green Purchasing Behaviour.

The direct effect of Green Product Attributes on Green Purchasing Behaviour is strong, positive, and statistically significant, representing the strongest relationship in the model. This indicates that perceived product characteristics such as environmental friendliness, health benefits, quality, and durability are powerful determinants of green purchase decisions (Al-Quran et al., 2020; Liaquat et al., 2024; Vinoth et al., 2024). The finding supports Attribute-Based Choice Theory, which posits that consumers derive utility from product attributes rather than the product itself. In the green consumption context, sustainability-related attributes provide additional utility that can outweigh conventional considerations like price or brand.

From a theoretical standpoint, this strong relationship also aligns with Sustainable Consumption Value Theory, which identifies functional, social, emotional, conditional, and epistemic values in consumption. Green product attributes contribute to multiple value dimensions simultaneously, enhancing their overall appeal (Joshi et al., 2021; Pontes et al., 2024; Rahman et al., 2020; Zameer & Yasmeen, 2022). The substantial direct effect suggests that improving the perceived and actual attributes of green products may be one of the most effective strategies for promoting sustainable consumption. Previous studies consistently demonstrate that product quality and performance attributes are critical for green product adoption, often more influential than environmental concerns alone. The current finding reinforces the importance of product development and communication strategies that effectively highlight sustainability attributes without compromising traditional quality expectations (Carrión-Bósquez et al., 2025; Majeed et al., 2022; Witek & Kuźniar, 2020).

CONCLUSION

Based on the comprehensive analysis, this study concludes that both consumer attitudes and personal norms significantly and positively influence green purchasing behavior, with green product attributes playing a pivotal dual role. Consumer attitudes directly motivate sustainable purchasing decisions while also shaping the perception and evaluation of green product features. Similarly, personal norms provide a moral foundation that not only directly drives environmentally conscious choices but also enhances the perceived value of sustainable product attributes. The findings highlight that green product attributes themselves constitute the strongest direct predictor of green purchasing behavior, while also serving as a critical mediator through which both attitudes and personal norms translate into actual consumption choices.

The integrated model demonstrates that successful promotion of sustainable consumption requires addressing both psychological drivers attitudes and personal norms and tangible product characteristics. While cultivating positive environmental attitudes and strengthening personal moral obligations remain important, ensuring that green products offer compelling attributes in terms of quality, functionality, and sustainability is essential for converting intentions into actions. This suggests that effective sustainability strategies should combine consumer education and normative appeals with genuine product innovation and transparent communication of environmental benefits. The robust explanatory power of the model confirms that an integrated approach addressing cognitive, moral, and product-related factors offers the most comprehensive pathway to fostering meaningful and sustained green purchasing behavior in the marketplace.

LIMITATION

While this study provides valuable insights into the factors influencing green purchasing behavior, several limitations should be acknowledged. First, the research employed a cross-sectional design, which restricts the ability to establish causal relationships between variables. Longitudinal or experimental approaches in future research could help clarify the directionality and dynamic nature of the relationships identified, particularly concerning how consumer attitudes and personal norms evolve in response to product experience and external influences.

Second, the sample was limited to a specific demographic and geographic context, which may affect the generalizability of the findings. Future studies should consider more diverse populations, including cross-cultural comparisons, to examine whether the observed relationships hold across different cultural, economic, and regulatory environments. Additionally, the use of self-reported measures may introduce social desirability bias, as respondents might overstate their pro-environmental attitudes and behaviors. Incorporating behavioral tracking or observational methods could provide more objective data.

Third, the study focused primarily on psychological and product-related factors, while excluding other potential influencers such as economic constraints, social norms, marketing communications, and policy interventions. A more comprehensive model that integrates these external variables could offer a fuller understanding of green consumption. Finally, the research examined green purchasing in general rather than specific product categories. Future investigations could benefit from a product-specific approach, as determinants of green behavior may vary significantly across different types of goods, such as food, apparel, or electronics.

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BS: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original Draft, Visualization, Review and Editing.

HH:Supervision.

AF:Supervision

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3. **Conflict of Interest:**

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4. **Research Ethics:**

The study did not involve any intervention, biological specimens, vulnerable groups, or sensitive personal data. Participation was voluntary, and the confidentiality of the respondents was maintained

5. **Use of Artificial Intelligence (AI):**

No Use of AI. The authors declare that generative AI was not used in the preparation of this article.

REFERENCES

- Abdo, M. S., Ahmed, S. A., Awad, B. K., & Elsharnouby, M. H. (2023). Fostering green purchasing behavior: the moderated mediation role of customer disidentification. *Management & Sustainability: An Arab Review*, 2(2), 155–176. <https://doi.org/10.1108/MSAR-03-2023-0012>
- Abeysekera, I., Manalang, L., David, R., & Grace Guiao, B. (2022). Accounting for environmental awareness on green purchase intention and behaviour: Evidence from the Philippines. *Sustainability*, 14(19), 12565. <https://doi.org/10.3390/su141912565>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes* (2nd ed., Vol. 50). [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Al-Quran, A. Z., Alhalalmeh, M. I., Eldahamsheh, M. M., Mohammad, A. A., Hijjawi, G. S., Almomani, H. M., & Al-Hawary, S. I. (2020). Determinants of the green purchase intention in Jordan: The moderating effect of environmental concern. *International Journal of Supply Chain Management*, 9(5), 366–371.
- Al-Swidi, A., & Saleh, R. M. (2021). How green our future would be? An investigation of the determinants of green purchasing behavior of young citizens in a developing Country. *Environment, Development and Sustainability*, 23(9), 13436–13468. <https://doi.org/10.1007/s10668-021-01226-1>
- Armutcu, B., Zuferi, R., & Tan, A. (2024). Green product consumption behaviour, green economic growth and sustainable development: unveiling the main determinants. *Journal of Enterprising Communities: People and Places in the Global Economy*, 18(4), 798–819. <https://doi.org/10.1108/JEC-12-2023-0202>
- Astuti, W. R., Sisdiyanto, E., & Suprianingsih, O. (2025). Faktor- Faktor yang Mempengaruhi Motivasi Kinerja Karyawan dari Perspektif Etika Bisnis Islam. *Jurnal Akuntansi, Keuangan, Dan Manajemen*, 6(4), 1107–1122. <https://doi.org/10.35912/jakman.v6i4.4621>
- Carrión-Bósquez, N. G., Ortiz-Regalado, O., Veas-González, I., Naranjo-Armijo, F. G., & Guerra-Regalado, W. F. (2025). The mediating role of attitude and environmental awareness in the influence of green advertising and eco-labels on green purchasing behaviors. *Spanish Journal of Marketing-ESIC*, 29(3), 330–350. <https://doi.org/10.1108/SJME-05-2024-0135>

- Chanda, R. C., Isa, S. M., & Ahmed, T. (2023). Factors influencing customers' green purchasing intention: evidence from developing country. *Journal of Science and Technology Policy Management*, 15(5), 1056–1084. <https://doi.org/10.1108/JSTPM-04-2022-0073>
- Charwin, C., & Agustinus Setyawan2. (2025). Peran Kepuasan Kerja dalam Relasi Work-Life Balance dan Turnover Intention. *Studi Akuntansi, Keuangan, Dan Manajemen*, 5(1), 269–283. <https://doi.org/10.35912/sakman.v5i1.4446>
- Chaudhary, R., & Bisai, S. (2018). Factors influencing green purchase behavior of millennials in India. *Management of Environmental Quality: An International Journal*, 29(5), 798–812. <https://doi.org/10.1108/MEQ-02-2018-0023>
- Citra Ardila, F., Wibasuri, A., & Rika Lestari, W. (2025). Traveloka Booking Technology and Customer Satisfaction at Hotel Sahid Using TAM Model. 6(2), 575–586. <https://doi.org/10.35912/jakman.v6i2.4105>
- Creswell, J. W., & Miller, D. L. (2000). Determining Validity in Qualitative Inquiry. *Theory Into Practice*, 39(3), 124–130. https://doi.org/10.1207/s15430421tip3903_2
- Dangelico, R. M., Nonino, F., & Pompei, A. (2021). Which are the determinants of green purchase behaviour? A study of Italian consumers. *Business Strategy and the Environment*, 30(5), 2600–2620. <https://doi.org/10.1002/bse.2961>
- Dlamini, S., & Mahowa, V. (2024). Investigating factors that influence the purchase behaviour of green cosmetic products. *Cleaner and Responsible Consumption*, 13, 100190. <https://doi.org/10.1016/j.clrc.2024.100190>
- Dou, F., Zhao, J., & Wang, M. (2025). Green consumption values and green purchasing behaviour: A moderated mediation model of gratitude and green product availability. *International Journal of Psychology*, 60(2), e70029. <https://doi.org/10.1002/ijop.70029>
- Ekasasmitha, W., Tunnisa, K., & Aditya, Muh. T. (2025). The Application of Discrete Hilbert transform in Measuring Asset Return Risk in Investment Portfolios. *Jurnal Akuntansi, Keuangan, Dan Manajemen*, 6(2), 399–408. <https://doi.org/10.35912/jakman.v6i2.3803>
- Elbarky, S., Elgamal, S., Hamdi, R., & Barakat, M. R. (2023). Green supply chain: the impact of environmental knowledge on green purchasing intention. *Supply Chain Forum: An International Journal*, 24(3), 371–383. <https://doi.org/10.1080/16258312.2023.2191815>
- García-Salirrosas, E. E., & Rondon-Eusebio, R. F. (2022). Green marketing practices related to key variables of consumer purchasing behavior. *Sustainability*, 14(14), 8499. <https://doi.org/10.3390/su14148499>
- Ghozali, I. (2021). *Structural Equation Modeling: Metode Alternatif dengan Partial Least Squares (PLS)*. Badan Penerbit Universitas Diponegoro.
- Gupta, V. (2021). Validating the theory of planned behavior in green purchasing behavior. *SN Business & Economics*, 1(10), 146. <https://doi.org/10.1007/s43546-021-00153-7>
- Hair, J. F. (2009). *Multivariate data analysis*.
- Hazaea, S. A., Al-Matari, E. M., Zedan, K., Khatib, S. F. A., Zhu, J., & Al Amosh, H. (2022). Green purchasing: Past, present and future. *Sustainability*, 14(9), 5008. <https://doi.org/10.3390/su14095008>
- Hussain, S. A., Haq, M. A. U., & Soomro, Y. A. (2020). Factors influencing consumers' green purchase behavior: green advertising as moderator.

- Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage (Vol. 12). <https://doi.org/10.5539/elt.v12n5p40>
- Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework and empirical investigation of Indian consumers. *Journal of Retailing and Consumer Services*, 41, 60–69. <https://doi.org/10.1016/j.jretconser.2017.11.008>
- Joshi, Y., Uniyal, D. P., & Sangroya, D. (2021). Investigating consumers' green purchase intention: Examining the role of economic value, emotional value and perceived marketplace influence. *Journal of Cleaner Production*, 328, 129638. <https://doi.org/10.1016/j.jclepro.2021.129638>
- Lavuri, R., Jusuf, E., & Gunardi, A. (2021). Green sustainability: Factors fostering and behavioural difference between millennial and Gen Z: Mediating role of green purchase intention. *Ekonomia i Środowisko*.
- Lavuri, R., & Susandy, G. (2020). Green products: Factors exploring the green purchasing behavior of south Indian shoppers. *Indonesian Journal of Sustainability Accounting and Management*, 4(2), 174–191. <https://doi.org/10.28992/ijssam.v4i2.224>
- Liaquat, M., Iqbal, I., Munir, S., & Waheed, N. (2024). Determinants of green purchase behavior: An implication of Theory of Reasoned Action. *Pakistan Journal of Humanities and Social Sciences*, 12(2), 1348–1363. <https://doi.org/10.52131/pjhss.2024.v12i2.2307>
- Lopes, J. M., Pinho, M., & Gomes, S. (2024). From green hype to green habits: Understanding the factors that influence young consumers' green purchasing decisions. *Business Strategy and the Environment*, 33(3), 2432–2444. <https://doi.org/10.1002/bse.3626>
- Lopes, J. M., Silva, L. F., Massano-Cardoso, I., & Galhardo, A. (2024). Green Purchase Determinants in a Peripheral Region of Europe: how can green marketing influence consumers' decisions? The mediating role of green awareness of price. *Administrative Sciences*, 14(11), 293. <https://doi.org/10.3390/admsci14110293>
- Majeed, M. U., Aslam, S., Murtaza, S. A., Attila, S., & Molnár, E. (2022). Green marketing approaches and their impact on green purchase intentions: Mediating role of green brand image and consumer beliefs towards the environment. *Sustainability*, 14(18), 11703. <https://doi.org/10.3390/su141811703>
- Nafiudin, N., Chairani, A., Andari, A., & Huddin, M. N. (2025). Determinan Employee Engagement: Pengembangan Karir, Kompensasi, dan Lingkungan Kerja. *Studi Akuntansi, Keuangan, Dan Manajemen*, 5(1), 217–229. <https://doi.org/10.35912/sakman.v5i1.3723>
- Ogiemwonyi, O., Alam, M. N., Alshareef, R., Alsolamy, M., Azizan, N. A., & Mat, N. (2023). Environmental factors affecting green purchase behaviors of the consumers: Mediating role of environmental attitude. *Cleaner Environmental Systems*, 10, 100130. <https://doi.org/10.1016/j.cesys.2023.100130>
- Pontes, S., Naranjo-Zolotov, M., & Painho, M. (2024). From intention to action: How environmental setback perception mediates green purchase behaviour. *Journal of Cleaner Production*, 470, 143285. <https://doi.org/10.1016/j.jclepro.2024.143285>
- Qureshi, M. A., Khaskheli, A., Qureshi, J. A., Raza, S. A., & Khan, K. A. (2023). Factors influencing green purchase behavior among millennials: the moderating role of religious values. *Journal of Islamic Marketing*, 14(6), 1417–1437. <https://doi.org/10.1108/JIMA-10-2021-0314>

- Rahman, M. S., Hossain, M. I., & Hossain, G. M. S. (2020). Factors affecting consumers' green purchase behavior towards energy saving lights in bangladesh: the mediating role of green purchase intention. *International Journal of Information, Business and Management*, 12(3), 19–37.
- Royani, I., & Imaningsih, E. S. (2024). Determinants of green purchase intentions for eco-friendly skincare products. *Journal of Applied Business, Taxation and Economics Research*, 4(2), 267–287.
- Schwartz, S. H. (1977). Normative influences on altruism. In *Advances in experimental social psychology* (Vol. 10, pp. 221–279). Elsevier. [https://doi.org/10.1016/S0065-2601\(08\)60358-5](https://doi.org/10.1016/S0065-2601(08)60358-5)
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Septya Pradana, F., Wijaya, T., Utama, A., & Negeri Yogyakarta, U. (2025). Pemasaran Digital dalam Perspektif Akademis: Studi Bibliometrik Literatur Global (Digital Marketing in Academic Perspective: A Global Bibliometric Literature Study). 5(2), 457–467. <https://doi.org/10.35912/sakman.v5i2.5245>
- Sharma, N., & Paço, A. (2025). Exploring the O Zone effect: how own, others and outer influences shape green purchasing behaviour in e-commerce. *Journal of Information, Communication and Ethics in Society*, 23(2), 234–261. <https://doi.org/10.1108/JICES-06-2024-0083>
- Sheng, G., Xie, F., Gong, S., & Pan, H. (2019). The role of cultural values in green purchasing intention: Empirical evidence from Chinese consumers. *International Journal of Consumer Studies*, 43(3), 315–326. <https://doi.org/10.1111/ijcs.12513>
- Siyal, S., Ahmed, M. J., Ahmad, R., Khan, B. S., & Xin, C. (2021). Factors influencing green purchase intention: Moderating role of green brand knowledge. *International Journal of Environmental Research and Public Health*, 18(20), 10762. <https://doi.org/10.3390/ijerph182010762>
- Spence, M. (1973). Job Market Signaling. *The Quarterly Journal of Economics*, 87(3), 355. <https://doi.org/10.2307/1882010>
- Sugiyono. (2022). *Metode Penelitian Kuantitatif*. Alfabeta.
- Tirtana, D., & Rahmadhani, S. (2025). Role of Employee Recovery Performance on Service Recovery Performance and Quality of Service. *Jurnal Akuntansi, Keuangan, Dan Manajemen*, 6(3), 555–567. <https://doi.org/10.35912/jakman.v6i3.4121>
- Toni, W. F. L. (2025). Pengaruh Kualitas Sistem, Layanan, Pemasaran Relasional terhadap Loyalitas melalui Kepuasan Pengguna. *Studi Akuntansi, Keuangan, Dan Manajemen*, 5(1), 31–50. <https://doi.org/10.35912/sakman.v5i1.3973>
- Troudi, H., & Bouyoucef, D. (2020). Predicting purchasing behavior of green food in Algerian context. *EuroMed Journal of Business*, 15(1), 1–21. <https://doi.org/10.1108/EMJB-03-2019-0046>
- Vinoth, S., 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*, ahead-of-print. <https://doi.org/10.1108/GKMC-02-2024-0084>

- Visser, R., & Dlamini, S. (2021). Green purchasing behaviour towards compostable coffee pods. *Sustainability*, 13(12), 6558. <https://doi.org/10.3390/su13126558>
- Wang, H.-J. (2017). Determinants of consumers' purchase behaviour towards green brands. *The Service Industries Journal*, 37(13-14), 896-918. <https://doi.org/10.1080/02642069.2017.1365140>
- Wijekoon, R., & Sabri, M. F. (2021). Determinants that influence green product purchase intention and behavior: A literature review and guiding framework. *Sustainability*, 13(11), 6219. <https://doi.org/10.3390/su13116219>
- 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>
- Wulandaru, D. R., Ningtias, S. R., & Nasrulloh, R. S. (2025). The Influence of Self-Efficacy on Employee Performance Mediated by Employee Loyalty (Courtiers) in the Yogyakarta Palace. *Studi Akuntansi, Keuangan, Dan Manajemen*, 4(2), 361-372. <https://doi.org/10.35912/sakman.v4i2.3824>
- Zahid, M. M., Ali, B., Ahmad, M. S., Thurasamy, R., & Amin, N. (2018). Factors affecting purchase intention and social media publicity of green products: The mediating role of concern for consequences. *Corporate Social Responsibility and Environmental Management*, 25(3), 225-236. <https://doi.org/10.1002/csr.1450>
- Zameer, H., & Yasmeen, H. (2022). Green innovation and environmental awareness driven green purchase intentions. *Marketing Intelligence & Planning*, 40(5), 624-638. <https://doi.org/10.1108/MIP-01-2022-0037>