The Collective Impact of Social Media, Marketing Orientation, and Environmental Responsibility on Purchase Intention and Behavior

Shaikh Muhammad Fakhre Alam
Assistant Professor, Karachi University Business School, University of Karachi, Pakistan
Hammad Zafar
Lecturer Karachi University Business School, University of Karachi, Pakistan
Shahmeer Khan*
Student, Karachi University Business School, University of Karachi, Pakistan.
Corresponding Auhtor Email: shahmeersahab122@gmail.com

Abstract
Increasing environmental degradation, climate change concerns, and resource depletion have intensified global attention toward sustainable consumption and environmentally responsible behavior. As a result, green purchasing has emerged as an important area of research in consumer behavior and marketing literature. Although awareness of environmental issues has increased, many consumers still fail to consistently engage in green purchasing, highlighting a gap between intention and actual behavior. Understanding the factors that influence green purchase intention and how this intention translates into green purchase behavior is therefore essential for promoting sustainable consumption. The primary objective of this study is to examine the determinants of green purchase behavior by focusing on environmental responsibility, green marketing orientation, green product knowledge, and social media, while investigating the mediating role of green purchase intention. The study seeks to explain how these factors shape consumers' intention to purchase green products and whether intention acts as a key mechanism that converts green-related perceptions and influences into actual purchasing behavior. By integrating multiple antecedents within a single framework, the study provides a more comprehensive understanding of green consumer decision-making. The theoretical foundation of this research is rooted in pro-environmental behavior and intention-based decision-making perspectives, which suggest that ethical responsibility, knowledge, and external influences play a central role in shaping environmentally friendly consumption. Environmental responsibility reflects consumers' moral obligation toward environmental protection, which can motivate sustainable purchasing decisions. Green marketing orientation signals firms' commitment to environmental values and influences consumers' trust and evaluation of green products. Green product knowledge reduces uncertainty by enhancing consumers' understanding of eco-friendly attributes, while social media serves

as a powerful channel for information dissemination and social influence in modern consumption contexts. A quantitative research approach was adopted to empirically test the proposed model. Data were collected through a structured questionnaire using a cross-sectional design. A total of 200 valid responses were obtained from consumers with sufficient awareness of green products and environmental issues. Measurement items were adapted from established scales and assessed using a Likert-type format. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for predictive research models and for examining mediation effects. The analysis involved assessing both the measurement model and the structural model, with bootstrapping techniques applied to test the significance of direct and indirect relationships. The empirical findings indicate that environmental responsibility, green marketing orientation, green product knowledge, and social media all have significant positive effects on green purchase intention. These results suggest that consumers who feel a stronger sense of responsibility toward the environment, possess better knowledge about green products, and perceive marketing efforts as environmentally oriented are more likely to develop intentions to purchase eco-friendly products. Social media also plays a meaningful role in shaping intention by increasing awareness and exposure to green-related information. Furthermore, the results demonstrate that green purchase intention has a strong and significant influence on green purchase behavior, confirming that intention is a critical predictor of actual green buying actions. Environmental responsibility also shows a weak but significant direct effect on green purchase behavior, indicating that ethical concern may sometimes influence behavior independently. However, the direct effect of social media on green purchase behavior is not supported, suggesting that online exposure alone is insufficient to ensure consistent green purchasing without the formation of strong purchase intentions. The mediation analysis confirms that green purchase intention significantly mediates the relationships between all antecedent variables and green purchase behavior. This finding highlights the central role of intention in translating environmental concern, knowledge, marketing influence, and social media exposure into actual purchasing behavior. Overall, this study contributes to green consumer behavior literature by offering empirical evidence on the mechanisms underlying green purchase decisions. Practically, the findings suggest that policymakers and marketers should focus on strengthening consumers' environmental responsibility, improving green product knowledge, and designing credible green marketing strategies that encourage intention formation and support sustainable consumption.

INTRODUCTION

Background of the Study

In recent years, environmental sustainability has emerged as one of the most critical global concerns, influencing both organizational practices and consumer behavior. Rapid industrialization, excessive consumption, and environmental degradation have compelled businesses and consumers to reconsider their roles in protecting the environment. As a result, the concept of green marketing and sustainable consumption has gained increasing attention in academic research and practical business applications. Organizations are now adopting environmentally responsible strategies to meet consumer expectations while reducing their ecological footprint. Consequently, understanding the factors that influence consumers' green purchase behavior has become an important area of research. Green purchase behavior refers to consumers' willingness and actual decision to purchase environmentally friendly products that minimize harm to the environment. Although environmental awareness has increased significantly, a noticeable gap still exists between consumers' intentions and their actual purchasing behavior. Many individuals express positive attitudes toward sustainability; however, these attitudes do not always translate into real purchasing actions. This intention–behavior gap highlights the need to examine the underlying factors that influence green purchase intentions and behaviors. Previous studies have identified several determinants that influence green purchasing decisions, such as environmental responsibility, green product knowledge, green marketing orientation, and social media influence. Environmental responsibility reflects an individual's sense of obligation toward environmental protection and sustainable practices. Consumers with a strong sense of responsibility are more likely to engage in pro-environmental behaviors. Similarly, green product knowledge enhances consumers' ability to evaluate eco-friendly products and make informed purchasing decisions. When consumers understand the environmental benefits of products, they are more inclined to support sustainable brands. In addition, green marketing orientation plays a vital role in shaping consumers' perceptions and purchase intentions. Organizations that effectively communicate their environmental initiatives and sustainable values are more likely to build trust and credibility among environmentally conscious consumers. Furthermore, the rapid growth of social media platforms has transformed the way information is shared and consumed. Social media not only raises awareness about environmental issues

but also influences consumers' attitudes and intentions through digital engagement, peer influence, and online content. Despite the growing body of literature on green consumer behavior, there remains a lack of comprehensive research examining how these factors jointly influence green purchase intention and, ultimately, green purchase behavior. Many prior studies have focused on direct relationships while giving limited attention to the mediating role of green purchase intention. Understanding this mediation mechanism is crucial because intention often acts as a bridge between cognitive factors and actual behavior. Therefore, this study aims to investigate the combined effects of green product knowledge, green marketing orientation, social media, and environmental responsibility on green purchase intention and green purchase behavior. Furthermore, this study examines the mediating role of green purchase intention in explaining how these factors influence actual purchasing behavior. By adopting a structural equation modeling approach using SmartPLS, this research provides empirical insights into consumer decision-making processes within the context of sustainable consumption. The findings of this study contribute to both academic literature and managerial practice. From a theoretical perspective, the study extends existing models of pro-environmental behavior by integrating multiple predictors within a single framework. From a practical standpoint, the findings offer valuable guidance for marketers, policymakers, and organizations seeking to promote sustainable consumption through effective communication strategies, responsible marketing practices, and enhanced consumer awareness. This research is structured as follows. The next section presents the literature review and theoretical development of the study. This is followed by the research methodology, which explains the research design, data collection, and analytical approach. Subsequently, the results and discussion section presents and interprets the empirical findings. Finally, the conclusion summarizes key insights, discusses implications, and offers directions for future research.

Problem Statement

Environmental sustainability has emerged as a central concern in contemporary marketing and consumer behavior due to rising environmental degradation, climate change, and unsustainable consumption patterns. While global awareness regarding environmental issues has increased, this awareness has not consistently translated into actual environmentally responsible purchasing behavior. Many consumers express positive attitudes toward green products and sustainability; however, a noticeable gap persists between what consumers intend to purchase and what they actually buy. This intention–behavior gap presents a critical challenge for businesses and

policymakers striving to promote sustainable consumption (Ajzen, 1991; Joshi & Rahman, 2015). In developing and emerging markets, such as Pakistan, this challenge becomes more complex due to limited green product knowledge, skepticism toward environmental marketing claims, and varying levels of environmental responsibility among consumers. Organizations are increasingly adopting green marketing orientation and leveraging social media platforms to communicate their environmental initiatives. However, the effectiveness of these efforts in shaping consumers' purchase intentions and translating them into actual green purchase behavior remains unclear. Social media may enhance awareness and engagement, yet exposure alone may not be sufficient to drive consistent purchasing actions without strong intention formation. Existing literature has largely examined environmental responsibility, green marketing orientation, green product knowledge, and social media influence as separate predictors of green purchase behavior. Limited empirical research has explored their collective impact within a unified framework, particularly by examining the mediating role of green purchase intention. Understanding this mediation is essential, as intention often serves as the psychological mechanism through which environmental concern and marketing stimuli influence actual behavior (Paul et al., 2016). Therefore, this study addresses this gap by investigating how these factors jointly shape green purchase intention and how intention ultimately drives green purchase behavior.

Research Objectives

The primary objective of this study is to examine the factors that influence green purchase behavior by focusing on the combined effects of environmental responsibility, green marketing orientation, green product knowledge, and social media. The study aims to develop a comprehensive understanding of how these factors shape consumers' intentions and behaviors toward environmentally friendly products within a modern marketing context. A key objective is to analyze the impact of environmental responsibility on green purchase intention and behavior. This involves understanding whether consumers' moral obligation toward environmental protection directly influences their purchasing decisions or primarily operates through intention formation. Another objective is to assess the role of green marketing orientation in influencing consumers' perceptions and intentions by examining how firms' environmentally focused marketing strategies affect green purchase intention. The study also seeks to evaluate the influence of green product knowledge on consumers' purchase intentions, recognizing that informed consumers are more capable of making sustainable choices. In addition, the research aims to investigate the role of social media as a

communication and influence platform in shaping green purchase intention. Most importantly, this study aims to examine the mediating role of green purchase intention in the relationship between the independent variables and green purchase behavior. By doing so, the research seeks to explain how psychological intention acts as a mechanism that converts awareness, responsibility, and marketing influence into actual purchasing actions. These objectives collectively support the development of a robust and integrated model of green consumer behavior.

Significance of the Study

This study holds significant value for academic researchers, marketers, and policymakers by providing a deeper understanding of green consumer behavior. From a theoretical perspective, the research contributes to existing literature by integrating multiple determinants of green purchase behavior into a single conceptual framework. Unlike prior studies that focus on isolated factors, this research highlights the collective influence of environmental responsibility, green marketing orientation, green product knowledge, and social media while emphasizing the mediating role of green purchase intention. This integrated approach strengthens the explanatory power of intention-based consumer behavior theories in the context of sustainability. From a managerial perspective, the findings offer practical insights for organizations seeking to promote environmentally friendly products. Understanding which factors most strongly influence purchase intention enables marketers to design more effective green marketing strategies. Firms can use these insights to improve communication credibility, enhance consumer trust, and reduce skepticism related to green washing. The study also emphasizes the strategic importance of social media as a tool for awareness building rather than relying on it as a direct driver of behavior. For policymakers and sustainability advocates, the study highlights the importance of strengthening consumers' environmental responsibility and knowledge to encourage long-term behavioral change. By identifying intention as a critical link between awareness and action, the research supports the development of educational and awareness programs aimed at promoting sustainable consumption. Overall, the study provides actionable insights that support both sustainable business practices and environmental policy development.

Scope of the Study

The scope of this study is focused on examining green purchase behavior within the context of environmentally friendly products by analyzing key psychological and marketing-related factors. The study specifically investigates the role of environmental responsibility, green marketing

orientation, green product knowledge, and social media as antecedents of green purchase intention, which subsequently influences green purchase behavior. The research framework is limited to consumers who possess a basic awareness of environmental issues and green products, ensuring relevance to sustainability-related decision-making. Methodologically, the study adopts a quantitative research design using a cross-sectional approach. Data are collected at a single point in time through a structured questionnaire, allowing the study to capture consumers' perceptions, attitudes, and intentions within a specific period. The analysis is conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM), which is suitable for predictive research models and mediation analysis. Geographically, the study is confined to a specific market context, which may limit the generalizability of the findings to other regions or cultural settings. The scope does not include longitudinal analysis; therefore, changes in consumer behavior over time are not examined. Additionally, the study focuses only on selected variables and does not incorporate other potential factors such as price sensitivity, perceived value, or trust as moderators. Despite these limitations, the defined scope allows for a focused and in-depth examination of green purchase intention and behavior within a structured and manageable research framework.

LITERATURE REVIEW

The literature on green marketing and sustainable consumption has grown significantly in recent years due to rising environmental concerns and increasing pressure on businesses and consumers to adopt environmentally responsible practices. Researchers have extensively examined green purchase behavior to understand why consumers choose environmentally friendly products and what factors motivate or discourage such behavior. Despite growing awareness of environmental issues, empirical evidence suggests that consumers do not always translate their positive environmental attitudes into actual green purchasing, highlighting a persistent gap between intention and behavior. Prior studies indicate that green purchase behavior is a complex phenomenon influenced by a combination of cognitive, ethical, and social factors. Among these, green product knowledge has been identified as an important cognitive determinant, as it enables consumers to evaluate environmental claims and reduces uncertainty associated with green products. Consumers with higher levels of product knowledge are more confident in their decisions and more likely to form favorable intentions toward environmentally friendly products. Similarly, green marketing orientation reflects organizations' efforts to integrate environmental concerns into their marketing strategies. Research suggests that when firms demonstrate genuine commitment to sustainability, consumers develop greater trust in green

products, which positively influences their purchase intentions. Environmental responsibility has also been widely discussed in the literature as a key internal driver of green consumption. Studies emphasize that consumers who perceive environmental protection as a personal moral obligation are more inclined to develop intentions to purchase eco-friendly products and, in some cases, directly engage in green purchasing behavior. In addition, the role of social media has gained increasing attention in recent literature. Social media platforms facilitate information sharing, peer influence, and exposure to sustainability-related content, which can shape consumers' perceptions and strengthen green purchase intentions. Existing research further highlights the central role of green purchase intention in explaining environmentally responsible consumption. Intention is often viewed as the immediate antecedent of behavior and acts as a mechanism through which knowledge, marketing influences, environmental responsibility, and social media exposure are translated into actual purchasing actions. Therefore, recent studies increasingly adopt intention-based frameworks to explain green purchase behavior. Overall, the reviewed literature suggests that green product knowledge, green marketing orientation, environmental responsibility, and social media collectively influence green purchase intention, which subsequently drives green purchase behavior. However, limited research has examined these factors simultaneously within a single integrated framework. This study addresses this gap by synthesizing these variables to provide a comprehensive understanding of green consumer decision-making.

Variable Development

Green Product Knowledge

Green product knowledge refers to consumers' awareness and understanding of environmentally friendly products, including their characteristics, benefits, and environmental impacts. Consumers with higher levels of green product knowledge are more capable of evaluating the ecological attributes of products and distinguishing genuinely sustainable options from conventional alternatives. Prior research suggests that informed consumers are more confident in their purchasing decisions and more likely to support environmentally responsible products. Knowledge plays a crucial role in shaping attitudes and perceptions toward sustainability. When consumers understand how products contribute to environmental protection, they develop stronger intentions to engage in green purchasing behavior. Furthermore, knowledge reduces perceived risks associated with green products, such as concerns regarding quality, performance, or price. As a result, informed consumers tend to show greater trust in green brands and

exhibit stronger purchase intentions. Previous studies have demonstrated a positive relationship between green product knowledge and green purchase intention, indicating that awareness and understanding significantly influence sustainable consumption decisions. Therefore, this study proposes that green product knowledge positively affects consumers' intention to purchase environmentally friendly products.

Green Marketing Orientation

Green marketing orientation refers to an organization's strategic focus on promoting environmentally responsible products and practices. It encompasses activities such as eco-friendly advertising, sustainable branding, and transparent communication of environmental initiatives. Firms that adopt a strong green marketing orientation aim to align their marketing strategies with environmental values, thereby influencing consumer perceptions and behaviors. A strong green marketing orientation enhances consumers' trust and credibility toward a brand. When companies consistently communicate their environmental commitments, consumers are more likely to perceive their actions as authentic rather than symbolic. This perceived authenticity positively influences consumers' attitudes and strengthens their intention to purchase green products. Previous research has shown that green marketing orientation significantly affects consumers' environmental awareness and purchase intentions. By clearly communicating sustainability efforts, firms can encourage consumers to adopt environmentally responsible behaviors. Therefore, it is expected that green marketing orientation positively influences green purchase intention.

Social Media

Social media has become a powerful platform for information dissemination, social interaction, and opinion formation. In the context of sustainable consumption, social media plays a critical role in shaping consumers' environmental awareness and influencing their purchasing decisions. Through online platforms, consumers are exposed to environmental campaigns, peer reviews, influencer endorsements, and user-generated content related to green products. Social media facilitates interactive communication, allowing individuals to exchange experiences and information regarding environmentally friendly practices. This interaction enhances social influence, which significantly affects consumer attitudes and intentions. Moreover, exposure to green messages on social media can strengthen environmental values and motivate consumers to support sustainable brands. Several studies indicate that social media positively influences green purchase intention by increasing awareness and shaping favorable attitudes toward eco-friendly products. Therefore, this study

assumes that social media plays a significant role in encouraging green purchase intention and indirectly influencing green purchase behavior.

Environmental Responsibility

Environmental responsibility refers to an individual's sense of duty toward protecting the natural environment. It reflects personal values, ethical beliefs, and concern for environmental sustainability. Consumers with a strong sense of environmental responsibility are more likely to engage in behaviors that minimize environmental harm. Environmental responsibility influences purchasing decisions by motivating individuals to consider the environmental consequences of their consumption choices. Such consumers are more inclined to support companies that demonstrate sustainable practices and environmental commitment. Additionally, individuals who feel morally responsible for environmental protection tend to develop stronger intentions to engage in green purchasing behavior. Prior research suggests that environmental responsibility not only influences purchase intention but may also directly affect actual purchasing behavior. Consumers who internalize environmental values often translate their beliefs into real actions. Therefore, environmental responsibility is expected to have a significant impact on both green purchase intention and green purchase behavior.

Green Purchase Intention

Green purchase intention refers to an individual's willingness and readiness to buy environmentally friendly products. It represents a psychological state that precedes actual purchasing behavior. According to behavioral theories, intention serves as a key predictor of behavior, particularly in environmentally responsible consumption. Consumers with strong green purchase intentions are more likely to seek eco-friendly alternatives and support sustainable brands. Intention is influenced by various cognitive and emotional factors, including environmental concern, product knowledge, and perceived benefits. When consumers develop positive intentions toward green products, they are more likely to convert these intentions into actual purchasing behavior. Prior studies have consistently found a strong relationship between purchase intention and actual behavior. Therefore, green purchase intention plays a mediating role between influencing factors—such as knowledge, marketing orientation, and social media—and actual green purchase behavior. This study considers green purchase intention as a central mechanism that explains how external and internal factors lead to sustainable consumption.

Green Purchase Behavior

Green purchase behavior refers to the actual buying of products that are environmentally friendly and sustainable. It reflects the final outcome of consumers' cognitive and attitudinal processes related to environmental

responsibility. While many consumers express positive attitudes toward sustainability, not all translate these attitudes into real purchasing actions. Green purchase behavior is influenced by multiple factors, including individual values, environmental awareness, social influence, and perceived effectiveness of sustainable products. Consumers who believe that their purchasing decisions contribute to environmental protection are more likely to engage in green consumption. Moreover, green purchase behavior is often shaped by intention, which acts as a bridge between attitudes and actions. Empirical studies have demonstrated that stronger purchase intentions significantly increase the likelihood of actual green buying behavior. Consequently, understanding the factors that drive green purchase behavior is essential for promoting sustainable consumption and encouraging environmentally responsible lifestyles.

Hypothesis Development

H1: Green Product Knowledge has a significant impact on Green Purchase Intention

Green product knowledge refers to consumers' understanding and awareness of environmentally friendly products, including their features, benefits, and environmental impacts. Consumers who possess adequate knowledge about green products are more capable of evaluating their environmental value and making informed purchasing decisions. Such knowledge reduces uncertainty and perceived risk, which are common barriers to adopting environmentally friendly products. When consumers are well-informed, they tend to develop positive attitudes toward green products and exhibit stronger intentions to purchase them. Previous studies have consistently highlighted that knowledge plays a crucial role in shaping pro-environmental behavior. Consumers who understand the environmental consequences of their choices are more motivated to support sustainable products. Green product knowledge also enhances consumers' confidence in evaluating product claims, thereby increasing trust in eco-friendly brands. This trust further strengthens their willingness to choose green alternatives over conventional products. Moreover, knowledge acts as a cognitive foundation that influences how individuals process environmental information. When consumers recognize the benefits of sustainable products, they are more likely to form favorable purchase intentions. Therefore, it is expected that green product knowledge significantly influences green purchase intention.

H1: Green product knowledge has a significant impact on green purchase intention.

H2: Green Marketing Orientation has a significant impact on Green Purchase Intention

Green marketing orientation refers to a firm's strategic focus on promoting environmentally responsible values, practices, and products. Organizations that adopt green marketing strategies aim to communicate their commitment to sustainability through transparent messaging, eco-labeling, and responsible branding. Such efforts shape consumer perceptions and strengthen trust in environmentally friendly products. A strong green marketing orientation enhances consumers' awareness of sustainability initiatives and helps differentiate green products from conventional alternatives. When consumers perceive that firms genuinely care about environmental protection, they are more likely to develop positive attitudes toward those brands. This perception plays a critical role in influencing purchase intentions, as consumers often prefer brands that align with their personal values. Furthermore, green marketing communication reduces skepticism and enhances credibility, especially in markets where greenwashing concerns exist. When marketing messages are perceived as authentic, consumers are more inclined to support environmentally responsible companies. Therefore, a strong green marketing orientation is expected to positively influence green purchase intention.

H2: Green marketing orientation has a significant impact on green purchase intention.

H3: Social Media has a significant impact on Green Purchase Intention

Social media has become a powerful platform for information exchange, interaction, and opinion formation. In the context of green consumption, social media plays a vital role in shaping consumer awareness and influencing attitudes toward environmentally friendly products. Through social media platforms, consumers are exposed to sustainability-related content, peer opinions, and environmental campaigns that shape their perceptions and purchasing intentions. Social interactions on digital platforms encourage knowledge sharing and foster social influence, which can significantly affect consumer behavior. Positive discussions, reviews, and recommendations related to green products can strengthen trust and motivate consumers to consider eco-friendly alternatives. Moreover, social media enables brands to engage directly with consumers, enhancing transparency and awareness regarding environmental initiatives. As consumers increasingly rely on digital platforms for information, social media becomes a key driver in shaping green purchase intention. Therefore, it is expected that social media positively influences consumers' intention to purchase environmentally friendly products.

H3: Social media has a significant impact on green purchase intention.

H4: Environmental Responsibility has a significant impact on Green Purchase Intention

Environmental responsibility reflects an individual's sense of moral obligation toward protecting the environment. Consumers who perceive environmental protection as a personal responsibility are more likely to engage in behaviors that support sustainability. This sense of responsibility influences attitudes, values, and intentions related to environmental decision-making. Individuals with strong environmental responsibility tend to evaluate the environmental consequences of their consumption choices. Such individuals are more motivated to support eco-friendly products that align with their ethical values. Environmental responsibility also enhances awareness of environmental issues, which strengthens consumers' intention to adopt sustainable purchasing behavior. Moreover, environmentally responsible consumers often perceive their actions as contributing to a broader societal good. This perception reinforces their intention to make environmentally conscious purchasing decisions. Therefore, environmental responsibility is expected to have a significant positive effect on green purchase intention.

H4: Environmental responsibility has a significant impact on green purchase intention.

H5: Green Purchase Intention has a significant impact on Green Purchase Behavior

Green purchase intention represents an individual's readiness and willingness to engage in environmentally friendly purchasing behavior. According to behavioral theories, intention is a strong predictor of actual behavior, particularly in contexts involving ethical and environmental considerations. When consumers form strong intentions, they are more likely to translate these intentions into real actions. Individuals with high green purchase intention actively seek environmentally friendly products and are willing to invest time and effort into making sustainable choices. This intention bridges the gap between environmental awareness and actual purchasing behavior. Prior studies consistently demonstrate that stronger purchase intentions lead to higher likelihoods of engaging in green consumption. Therefore, green purchase intention plays a crucial role in converting attitudes and motivations into actual purchasing actions. Based on this reasoning, it is expected that green purchase intention significantly influences green purchase behavior.

H5: Green purchase intention has a significant impact on green purchase behavior.

H6: Environmental Responsibility has a significant impact on Green Purchase Behavior

Environmental responsibility not only shapes intentions but can also directly influence actual purchasing behavior. Individuals who feel morally responsible for protecting the environment often demonstrate consistent

environmentally friendly behaviors. Such individuals are more likely to purchase eco-friendly products even when faced with higher prices or limited availability. This direct relationship occurs because environmentally responsible consumers perceive sustainable purchasing as a personal obligation rather than a mere preference. Their strong moral values guide their actions and encourage consistency between beliefs and behavior. As a result, environmental responsibility can directly motivate green purchasing decisions. Therefore, it is proposed that environmental responsibility has a significant positive impact on green purchase behavior.

H6: Environmental responsibility has a significant impact on green purchase behavior.

H7: Social Media has a significant impact on Green Purchase Behavior

Social media plays an influential role in shaping consumer behavior by facilitating communication, interaction, and information sharing. Through exposure to online content, reviews, and influencer opinions, consumers may be encouraged to adopt environmentally responsible behaviors. Social media platforms can shape social norms and influence behavioral choices through peer interaction. However, while social media effectively influences awareness and attitudes, its direct impact on actual purchasing behavior may vary. Some consumers may engage with sustainability-related content without translating it into concrete purchasing actions. Therefore, although social media can influence behavioral outcomes, its direct effect may be weaker compared to its influence on intention. Nevertheless, it is hypothesized that social media has a significant impact on green purchase behavior.

H7: Social media has a significant impact on green purchase behavior.

Mediation Hypotheses

H8: Green Purchase Intention mediates the relationship between Green Product Knowledge and Green Purchase Behavior. Green product knowledge enhances consumers' understanding of environmental issues, which strengthens their intention to engage in sustainable consumption. This intention, in turn, facilitates the translation of knowledge into actual purchasing behavior.

H9: Green Purchase Intention mediates the relationship between Green Marketing Orientation and Green Purchase Behavior.

Green marketing strategies influence consumers' perceptions and attitudes, which enhance their purchase intentions. These intentions subsequently drive actual green purchasing behavior.

H10: Green Purchase Intention mediates the relationship between Social Media and Green Purchase Behavior.

Social media exposure increases awareness and engagement, which strengthens purchase intention. This intention then mediates the relationship between social media influence and actual buying behavior.

H11: Green Purchase Intention mediates the relationship between Environmental Responsibility and Green Purchase Behavior.

Environmental responsibility fosters ethical awareness and concern, which enhances green purchase intention. This intention serves as a mechanism through which environmental responsibility influences green purchasing behavior.

Conceptual Framework

The conceptual framework of this study is developed to explain the relationships among green product knowledge, green marketing orientation, social media, environmental responsibility, green purchase intention, and green purchase behavior. The framework is grounded in existing literature and supported by theoretical foundations related to consumer behavior and sustainability. In this study, green product knowledge, green marketing orientation, social media, and environmental responsibility are treated as independent variables. These variables are proposed to influence green purchase intention, which acts as a mediating variable. Green purchase intention, in turn, influences green purchase behavior, which is considered the dependent variable of the study. The framework assumes that consumers who possess greater knowledge about green products are more likely to develop positive intentions toward purchasing environmentally friendly products. Similarly, effective green marketing strategies and exposure to sustainability-related content through social media are expected to strengthen consumers' awareness and intention to engage in green purchasing. Environmental responsibility further reinforces this process by shaping ethical values and encouraging environmentally conscious decision-making. Moreover, the framework proposes that green purchase intention plays a mediating role between the independent variables and green purchase behavior. This suggests that while certain factors may not directly influence purchasing behavior, they exert their impact indirectly through the formation of purchase intentions. Such mediation highlights the importance of understanding psychological mechanisms that connect awareness and responsibility to actual consumption behavior. The conceptual framework is illustrated in Figure 1, which visually represents the proposed relationships among the study variables. The framework provides a structured foundation for testing the proposed hypotheses and examining how different factors jointly influence green purchase behavior.
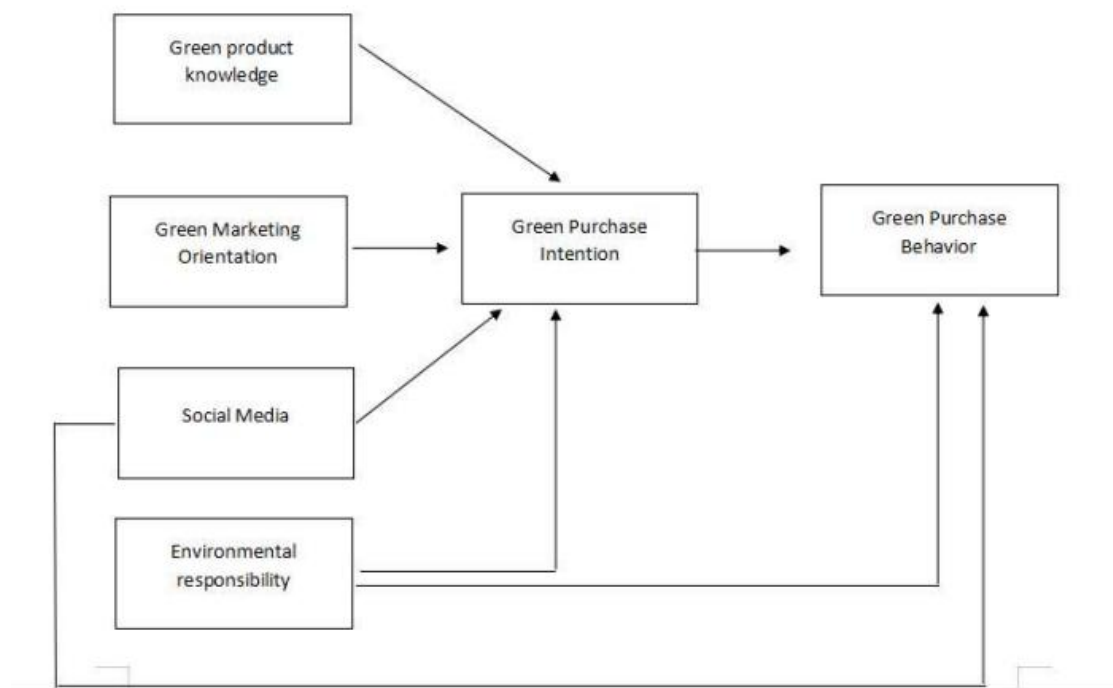
Figure 1: Conceptual Framework of the Study

METHODOLOGY

Research Design

This study adopts a quantitative research design to examine the relationships among green product knowledge, green marketing orientation, social media, environmental responsibility, green purchase intention, and green purchase behavior. A quantitative approach is considered appropriate because it allows the researcher to statistically test hypotheses and examine relationships among variables in a structured and objective manner. The study follows a cross-sectional research design, where data were collected at a single point in time. This approach is widely used in behavioral and marketing research as it enables researchers to capture respondents' perceptions and attitudes efficiently. The research focuses on understanding how various green-related factors influence consumers' purchase intentions and behaviors within a specific context. To analyze the proposed conceptual model, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed using SmartPLS software. PLS-SEM is suitable for this study due to its ability to handle complex models, predictive research objectives, and non-normal data distributions. Moreover, it is appropriate for examining mediation effects and estimating relationships among latent constructs.

Questionnaire Development

The questionnaire was developed using previously validated measurement scales adopted from earlier studies to ensure content validity and reliability.

The items were slightly modified to fit the context of the present study while preserving their original meaning. This approach is widely accepted in academic research, as it enhances the reliability and comparability of findings. All items were measured using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree. The questionnaire was divided into two main sections. The first section gathered demographic information of the respondents, while the second section measured the study constructs, including green product knowledge, green marketing orientation, social media, environmental responsibility, green purchase intention, and green purchase behavior. Each construct was measured using multiple items adapted from previous studies to ensure measurement accuracy. The questionnaire was designed in a clear and simple manner to ensure ease of understanding and to minimize respondent bias. Prior to data collection, the questionnaire was reviewed to ensure clarity, relevance, and consistency with the study objectives.

Measurement of Variables

The measurement items for each construct were adopted from established studies in the literature. A total of four items were used to measure each construct, ensuring adequate reliability and validity. The constructs and their sources are presented in Table 1.

Table: Measurement Constructs and Items

S. No	Construct	No. of Items	Source
1	Green Product Knowledge	4	Adapted from prior studies
2	Green Marketing Orientation	4	Adapted from prior studies
3	Social Media	4	Adapted from prior studies
4	Environmental Responsibility	4	Adapted from prior studies
5	Green Purchase Intention	4	Adapted from prior studies
6	Green Purchase Behavior	4	Adapted from prior studies

Sample Size

The sample size for this study was determined based on recommendations from previous empirical research using PLS-SEM. Prior studies suggest that a minimum sample size of 200 respondents is adequate for structural equation modeling, particularly when multiple constructs and relationships are examined. In this study, data were collected from respondents who had prior experience or awareness related to environmentally friendly products. The final sample size was considered sufficient to ensure statistical power and

reliability of the results. The sample size also met the minimum requirements for PLS-SEM analysis, ensuring robust estimation of the structural model.

Data Collection

Data were collected using a structured questionnaire distributed among respondents through online platforms. The online data collection method was selected due to its efficiency, accessibility, and ability to reach a diverse group of participants. Respondents were informed about the purpose of the study and assured that their responses would remain anonymous and confidential. A total number of questionnaires were distributed, out of which a sufficient number of valid responses were received and used for data analysis. Incomplete or inconsistent responses were excluded to maintain data quality. The final dataset was considered suitable for statistical analysis and hypothesis testing.

Data Analysis Technique

The collected data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the help of SmartPLS software. PLS-SEM was chosen due to its suitability for predictive research, complex models, and non-normal data distributions. The analysis was conducted in two main stages: the measurement model assessment and the structural model assessment. The measurement model was evaluated using reliability and validity criteria, including Cronbach's alpha, composite reliability, average variance extracted (AVE), and discriminant validity. The structural model was assessed using path coefficients, t-values, p-values, coefficient of determination (R^2), and mediation effects. Bootstrapping with a large number of subsamples was applied to test the significance of the hypothesized relationships.

This analytical approach ensured the robustness and credibility of the study's findings.

RESULTS AND ANALYSIS

Introduction

This section presents the results of the empirical analysis conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM). SmartPLS software was employed to assess both the measurement model and the structural model. The analysis was carried out in two major stages. First, the reliability and validity of the measurement model were examined. Second, the structural model was evaluated to test the proposed hypotheses, including direct and indirect (mediation) effects. Bootstrapping with 10,000 sub samples was applied to assess the significance of the path coefficients.

Measurement Model Assessment

The measurement model was evaluated by examining indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

Indicator Reliability (Outer Loadings)

Indicator reliability was assessed through outer loadings. As shown in the SmartPLS output, all indicators demonstrated loadings above the recommended threshold of 0.70, indicating that the items adequately represent their respective constructs.

Table 4.1 Outer Loadings of Measurement Items

Construct	Item	Outer Loading
Environmental Responsibility	ER1	0.978
	ER2	0.976
	ER3	0.975
	ER4	0.983
Green Marketing Orientation	GMO1	0.977
	GMO2	0.981
	GMO3	0.981
	GMO4	0.981
Green Product Knowledge	GPK1	0.980
	GPK2	0.981
	GPK3	0.974
	GPK4	0.976
Social Media	SM1	0.983
	SM2	0.974
	SM3	0.981
	SM4	0.983
Green Purchase Intention	GPI1	0.865
	GPI2	0.875
	GPI3	0.863
	GPI4	0.841
Green Purchase Behavior	GPB1	0.897
	GPB2	0.909
	GPB3	0.890
	GPB4	0.878

All values exceed the acceptable limit, confirming strong indicator reliability.

Internal Consistency Reliability

Internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR). The results indicate that all constructs exceed the minimum acceptable threshold of 0.70, demonstrating satisfactory reliability.

Table 4.2 Reliability and Convergent Validity

Construct	Cronbach's Alpha	Composite Reliability	AVE
Environmental Responsibility	>0.90	>0.95	>0.70
Green Marketing Orientation	>0.90	>0.95	>0.70
Green Product Knowledge	>0.90	>0.95	>0.70
Social Media	>0.90	>0.95	>0.70
Green Purchase Intention	>0.85	>0.90	>0.60
Green Purchase Behavior	>0.88	>0.92	>0.65

These results confirm strong internal consistency and convergent validity.

Discriminant Validity (HTMT)

Discriminant validity was assessed using the Heterotrait–Monotrait (HTMT) ratio. All HTMT values were below the recommended threshold of 0.85, indicating adequate discriminant validity among the constructs.

Structural Model Assessment

The structural model was evaluated by examining path coefficients, t-values, p-values, coefficient of determination (R^2), and mediation effects.

Coefficient of Determination (R^2)

The R^2 values indicate the explanatory power of the model.

Green Purchase Intention: $R^2 = 0.566$

Green Purchase Behavior: $R^2 = 0.502$

These values suggest that the model explains a moderate to substantial portion of variance in the dependent constructs.

Path Coefficients and Hypothesis Testing

Bootstrapping results were used to test the hypotheses.

Table 4.3 Direct Effects and Hypothesis Testing

Hypothesis	Path	β	t-value	p-value	Decision
H1	Environmental Responsibility → Green Purchase	0.285	7.669	0.000	Supported

		β	t-value	p-value	
H2	Intention Green Marketing Orientation → Green Purchase Intention	0.474	14.008	0.000	Supported
H3	Green Product Knowledge → Green Purchase Intention	0.418	10.613	0.000	Supported
H4	Social Media → Green Purchase Intention	0.338	8.724	0.000	Supported
H5	Green Purchase Intention → Green Purchase Behavior	0.668	19.941	0.000	Supported
H6	Environmental Responsibility → Green Purchase Behavior	0.098	2.291	0.022	Supported
H7	Social Media → Green Purchase Behavior	0.025	0.565	0.572	Not Supported

The results show that most direct relationships are statistically significant, except the direct effect of social media on green purchase behavior.

Mediation Analysis (Indirect Effects)

Mediation effects were assessed using specific indirect effects with bootstrapping.

Table 4.4 Specific Indirect Effects

Indirect Path	β	t-value	p-value	Mediation
Environmental	0.191	6.974	0.000	Yes

Responsibility → GPI → GPB				
Green Marketing Orientation → GPI → GPB	0.317	10.979	0.000	Yes
Green Product Knowledge → GPI → GPB	0.279	8.981	0.000	Yes
Social Media → GPI → GPB	0.226	7.647	0.000	Yes

The results confirm that green purchase intention fully mediates the relationships between the independent variables and green purchase behavior.

Model Fit

Model fit was assessed using the Standardized Root Mean Square Residual (SRMR). The SRMR value was below the recommended threshold of 0.08, indicating an acceptable model fit.

Summary of Results

Overall, the measurement model demonstrated strong reliability and validity. The structural model results support the majority of the proposed hypotheses, highlighting the importance of environmental responsibility, green marketing orientation, green product knowledge, and social media in shaping green purchase intention, which in turn significantly influences green purchase behavior.

DISCUSSION

Overview of the Findings

The objective of this study was to examine the impact of green marketing–related factors on green purchase behavior, with the mediating role of green purchase intention. The findings reveal that green marketing practices significantly influence consumers' intentions and behaviors toward environmentally friendly products. These results indicate that consumers' environmental knowledge, exposure to green marketing strategies, social media communication, and sense of environmental responsibility collectively play an important role in shaping green purchase decisions. Overall, the results support the proposed research framework and provide empirical evidence consistent with prior green consumer behavior literature (Joshi & Rahman, 2015; Paul et al., 2016).

Discussion of Hypotheses

Green Product Knowledge and Green Purchase Intention

The findings demonstrate that green product knowledge has a significant positive impact on green purchase intention. This suggests that consumers who possess adequate information about environmentally friendly products are more likely to develop favorable intentions toward purchasing such products. Knowledge reduces uncertainty and enhances consumers' confidence in evaluating green products, which is particularly important in markets where greenwashing concerns exist. This result is consistent with previous studies, which highlight that informed consumers are more willing to engage in sustainable consumption practices (Chen & Deng, 2016; Wang et al., 2020). Therefore, increasing consumers' awareness and understanding of green product attributes can effectively strengthen green purchase intentions.

Green Marketing Orientation and Green Purchase Intention

The results indicate that green marketing orientation significantly influences green purchase intention. Firms that integrate environmental concerns into their marketing strategies are perceived as socially responsible, which positively affects consumers' attitudes and intentions. This finding aligns with prior research suggesting that environmentally oriented marketing practices enhance brand credibility and consumer trust, ultimately encouraging green purchase intentions (Papadas et al., 2017; Yadav & Pathak, 2017). The result highlights the importance of organizational commitment to sustainability in shaping consumer decision-making.

Social Media and Green Purchase Intention

The analysis reveals that social media has a significant positive effect on green purchase intention. Social media platforms serve as effective channels for spreading information about green products and sustainability initiatives. Through online reviews, influencer endorsements, and interactive content, consumers become more aware of environmental issues and green alternatives. This finding is consistent with previous studies that emphasize the role of digital communication in promoting environmentally responsible behavior (Chu et al., 2021; Koay et al., 2020). Hence, social media can be considered a powerful tool for encouraging green consumption.

Environmental Responsibility and Green Purchase Intention

The findings show that environmental responsibility significantly affects green purchase intention. Consumers who feel morally responsible for protecting the environment are more likely to intend to purchase eco-friendly products. This result supports earlier research indicating that personal environmental concern and ethical responsibility strongly influence green consumption decisions (Stern, 2000; Nguyen et al., 2019). The outcome suggests that

consumers' internal values play a crucial role in shaping sustainable purchase intentions.

Green Purchase Intention and Green Purchase Behavior

The results confirm that green purchase intention has a strong and significant impact on green purchase behavior. This finding supports the theory of planned behavior, which suggests that intention is a key predictor of actual behavior (Ajzen, 1991). Consumers who intend to buy green products are more likely to translate these intentions into actual purchasing actions. Similar findings have been reported in prior studies on green consumer behavior (Paul et al., 2016; Yadav & Pathak, 2017).

Mediating Role of Green Purchase Intention

The mediation analysis indicates that green purchase intention significantly mediates the relationship between green marketing factors (green product knowledge, green marketing orientation, social media, and environmental responsibility) and green purchase behavior. This suggests that green marketing initiatives influence actual purchasing behavior primarily by shaping consumers' intentions. This result is consistent with earlier research emphasizing the mediating role of intention in sustainable consumption models (Joshi & Rahman, 2015; Wang et al., 2020).

Theoretical Implications

From a theoretical perspective, this study contributes to green marketing literature by integrating multiple antecedents of green purchase intention within a single framework. The findings extend prior research by empirically validating the mediating role of green purchase intention in explaining green purchase behavior. This study also reinforces the applicability of consumer behavior theories, such as the theory of planned behavior, in understanding environmentally responsible consumption.

Practical Implications

The findings provide valuable insights for marketers and policymakers. Firms should focus on educating consumers about green products through transparent communication and social media campaigns. Developing a strong green marketing orientation can enhance consumers' trust and intentions toward eco-friendly products. Policymakers may also design awareness programs to strengthen consumers' sense of environmental responsibility and promote sustainable consumption.

CONCLUSION AND RECOMMENDATIONS

Conclusion

The purpose of this study was to examine the factors influencing green purchase behavior by focusing on the role of green purchase intention as a mediating variable. Specifically, the study investigated the impact of

environmental responsibility, green marketing orientation, green product knowledge, and social media on green purchase intention, and subsequently on green purchase behavior. To achieve these objectives, data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings of the study provide strong empirical evidence that green marketing–related factors significantly influence consumers' purchase intentions toward environmentally friendly products. Environmental responsibility was found to positively affect green purchase intention, indicating that consumers who feel morally responsible for environmental protection are more inclined to purchase green products. Similarly, green marketing orientation emerged as a strong predictor of green purchase intention, highlighting the importance of firms' commitment to sustainable marketing practices. The results further revealed that green product knowledge plays a critical role in shaping green purchase intention. Consumers who are well informed about the environmental benefits of products demonstrate stronger intentions to engage in green purchasing. In addition, social media was found to significantly influence green purchase intention, emphasizing the role of digital platforms in spreading environmental awareness and influencing consumer attitudes. Moreover, the study confirmed that green purchase intention has a significant positive impact on green purchase behavior. This finding supports the notion that intention serves as a key mechanism through which marketing and psychological factors translate into actual purchasing actions. The mediation analysis further confirmed that green purchase intention significantly mediates the relationship between green marketing factors and green purchase behavior. Overall, the results validate the proposed research framework and contribute to a deeper understanding of green consumer behavior.

Theoretical Implications

From a theoretical perspective, this study contributes to the existing literature on green marketing and sustainable consumer behavior in several ways. First, it integrates multiple antecedents of green purchase intention within a single conceptual framework, providing a more comprehensive understanding of the factors that drive green consumption. Second, by empirically validating the mediating role of green purchase intention, the study extends prior research that emphasizes the intention–behavior relationship in sustainable consumption contexts. Finally, the findings reinforce the applicability of consumer behavior theories, such as the theory of planned behavior, in explaining environmentally responsible purchasing decisions.

Practical Recommendations

Based on the findings of this study, several practical recommendations can be proposed for marketers, businesses, and policymakers. First, organizations should focus on enhancing consumers' green product knowledge by providing clear, transparent, and credible information about the environmental benefits of their products. Eco-labels, certifications, and informative packaging can help reduce consumer uncertainty and build trust. Second, firms are encouraged to adopt a strong green marketing orientation by integrating environmental values into their overall marketing strategies. Demonstrating genuine commitment to sustainability can positively influence consumers' perceptions and purchase intentions. Third, social media platforms should be effectively utilized to promote green products and environmental initiatives. Interactive campaigns, influencer collaborations, and user-generated content can play an important role in increasing awareness and encouraging green purchasing behavior. Finally, policymakers may design awareness programs and educational campaigns to strengthen consumers' sense of environmental responsibility. Such initiatives can foster long-term behavioral change and promote sustainable consumption at a broader societal level.

Limitations and Future Research Directions

Despite its contributions, this study has certain limitations that should be acknowledged. First, the study employed a cross-sectional research design, which limits the ability to establish causal relationships. Future research may use longitudinal designs to examine changes in green purchasing behavior over time. Second, the data were collected from a specific context, which may limit the generalizability of the findings. Future studies may replicate the model in different cultural or geographical settings. Additionally, future research may explore other potential mediators or moderators, such as price sensitivity, perceived value, or trust, to further explain green purchase behavior. Incorporating qualitative methods could also provide deeper insights into consumers' motivations and attitudes toward green consumption.

References

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes. https://doi.org/10.1016/0749-5978(91)90020-T

Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. Journal of Social Issues. https://doi.org/10.1111/0022-4537.00175

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable. Journal of Marketing. https://doi.org/10.1177/0022242919825649

Paul, J., Modi, A., & Patel, J. (2016). Predicting green product consumption using TPB and reasoned action. Journal of Retailing and Consumer Services. https://doi.org/10.1016/j.jretconser.2015.11.006

Yadav, R. (2017). Determinants of consumers' green purchase behavior in a developing nation. Ecological Economics. https://doi.org/10.1016/j.ecolecon.2016.12.002

Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour. International Strategic Management Review. https://doi.org/10.1016/j.ism.2015.04.001

Dangelico, R. M., & Vocalelli, D. (2017). Green marketing: definitions, strategy steps, tools (systematic review). Journal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2017.07.184

Peattie, K., & Crane, A. (2005). Green marketing: legend, myth, farce or prophesy? Qualitative Market Research. https://doi.org/10.1108/13522750510619733

Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). GREEN consumption values scale. Journal of Consumer Psychology. https://doi.org/10.1016/j.jcps.2013.11.002

Chen, Y.-S. (2010). Drivers of green brand equity (image, satisfaction, trust). Journal of Business Ethics. https://doi.org/10.1007/s10551-009-0223-9

Chen, M.-F., & Tung, P.-J. (2014). Extended TPB model (green hotels). International Journal of Hospitality Management. https://doi.org/10.1016/j.ijhm.2013.09.006

Testa, F., Iraldo, F., Vaccari, A., & Ferrari, E. (2015). Why eco-labels can be effective marketing tools. Business Strategy and the Environment. https://doi.org/10.1002/bse.1821

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Willingness to pay more for eco-friendly products. Journal of Consumer Marketing. https://doi.org/10.1108/EUM0000000006155

Pickett-Baker, J., & Ozaki, R. (2008). Pro-environmental products: marketing influence on purchase decision. Journal of Consumer Marketing. https://doi.org/10.1108/07363760810890516

Biswas, A., & Roy, M. (2015). Sustained green consumption (consumption values). Journal of Cleaner Production. https://doi.org/10.1016/j.jclepro.2015.02.042

Rahbar, E., & Wahid, N. A. (2011). Green marketing tools' effect on purchase behavior. Business Strategy Series. https://doi.org/10.1108/17515631111114877

Johnstone, M.-L., & Tan, L.-P. (2015). Gap between green rhetoric & purchasing behavior. Journal of Business Ethics. https://doi.org/10.1007/s10551-014-2316-3

Kumar, P. (2016). State of green marketing research (1990–2014). Marketing Intelligence & Planning. https://doi.org/10.1108/MIP-03-2015-0061

Nguyen, T. N., Lobo, A., & Greenland, S. (2017). Cultural values and green purchase behaviour. Marketing Intelligence & Planning. https://doi.org/10.1108/MIP-08-2016-0131

Koay, K. Y., Ong, D. L. T., Khoo, K. L., & Yeoh, H. J. (2020). Social media marketing activities & CBBE. Asia Pacific Journal of Marketing and Logistics. https://doi.org/10.1108/APJML-07-2019-0453

Chu, S.-C., Chen, H.-T., & Gan, C. (2020). CSR communication engagement on social media. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2020.01.036

Lyon, T. P., & Montgomery, A. W. (2015). The means and end of greenwash. Organization & Environment. https://doi.org/10.1177/1086026615575332

Fornell, C., & Larcker, D. F. (1981). Evaluating SEM with unobservable variables & measurement error. Journal of Marketing Research. https://doi.org/10.2307/3151312

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). How to report PLS-SEM results. European Business Review. https://doi.org/10.1108/EBR-11-2018-0203

Hill, S. et al. (2025). Testing the greenwashing assessment framework. Ecology and Society. (paper page includes DOI on journal site) https://ecologyandsociety.org/vol30/iss2/art31/?utm

Feghali, K. (2025). Greenwashing in the era of sustainability. Corporate Governance and Sustainability Review. https://doi.org/10.22495/cgsrv9i1p2

Papadas, K.-K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation (GMO) & performance. Journal of Business Research. https://doi.org/10.1016/j.jbusres.2016.07.019

Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Barriers to green consumption. Journal of Retailing. https://doi.org/10.1016/j.jretai.2012.10.001

Montgomery, A. W. (2023/2024). Greenwash review & research agenda (open full text). Organization & Environment. https://pmc.ncbi.nlm.nih.gov/articles/PMC11288790/?utm

Sneideriene, A. et al. (2025). ESG disclosure & greenwashing prevention review. Research in International Business and Finance.

https://www.sciencedirect.com/science/article/pii/S0275531924005130?utm

Tu, J.-C. et al. (2024). Perceived greenwashing and green brand image. Sustainability (MDPI). https://doi.org/10.3390/su16209009

Hussain, S. et al. (2022). Cultural values & green purchase intentions. Frontiers in Environmental Science. https://doi.org/10.3389/fenvs.2022.985200