

THE IMPACT OF GREEN MARKETING ON CONSUMER PURCHASING BEHAVIOUR: THE MODERATING EFFECT OF SOCIAL INFLUENCE

Lin Feng (*corresponding author*)

E-mail: Yuej8502@163.com

ORCID:

Affiliation: University of Science and Technology, Xianyang, China

ROR: <https://ror.org/05em1gq62>

Adejare Yusuff Aremu

E-mail: zhangc@njnu.edu.cn

ORCID:

Affiliation: School of Geographical Science, Nanjing Normal University, China

ROR: <https://ror.org/036trcv74>

Annotation. Green marketing enables businesses to target consumers seeking eco-friendly products and services. The objective of this study was to examine the impact of green marketing on consumer behaviour and the moderating role of social influence. Drawing from the theory of planned behaviour and social influence theory, the study examined the moderating effects of normative, informational, and emotional social influences, as well as the mediating role of environmental consciousness. Using an online questionnaire, 927 valid responses were received from consumers across China. Partial least squares structural equation modelling (PLS-SEM) was done in Smart PLS 4. The results show that green marketing has a positive impact on consumer purchase decisions, with social influence having a statistically significant moderating effect. Environmental consciousness was found to mediate the relationship between green marketing and consumer behaviour. This study has both theoretical and practical implications by providing insights into the role of social influence on consumer purchasing behaviour in response to green marketing.

Keywords: green marketing, social influence, consumer purchasing behaviour, moderation.

JEL classification: M31, Q55, D71, D12.

Introduction

Environmental concerns have been a major issue both in public discourse and in academic research, driven by the growing evidence of climate change, biodiversity loss, and environmental degradation (Delafrooz *et al.*, 2014). The increasing frequency of natural disasters, the rise in global temperatures, and the depletion of natural resources have fueled campaigns on the need for environmental protection. Amidst these campaigns, green consumption has emerged as a potential solution to the negative human impacts on the environment (Kaur *et al.*, 2022). The concept has gained significant popularity in both developed and developing nations (Kumar, Radav, 2021). Green consumption refers to the use of products and services that have minimal negative effects on the environment but meet the basic needs of the consumer (Gonzalez *et al.*, 2009). Through green consumption, consumers take up the responsibility of advancing environmental conservation (ElHaffar *et al.*, 2020). This trend has catalyzed efforts to transition towards environmentally conscious practices that prioritize sustainability and minimize harm to the planet. Green consumption not only seeks to reduce the negative environmental

impact of goods but also reflects a broader cultural shift toward sustainable consumerism. Besides changing consumption patterns, consumers are demanding environmentally responsible practices by companies (Correia *et al.*, 2023).

The growing popularity of green consumption globally has created pressure on businesses to align their marketing strategies with sustainability initiatives to attract and retain environmentally conscious consumers (Haba *et al.*, 2023). As a result, the concept of green marketing has been gaining significant attention as enterprises seek to position themselves as part of the environmental protection initiatives. Green marketing encompasses a range of practices, from highlighting the eco-friendly attributes of products to adopting sustainable business operations and engaging in corporate social responsibility (CSR) initiatives (Correia *et al.*, 2023). Companies leveraging green marketing aim to meet the growing demand for sustainable products while enhancing their brand image and fostering consumer trust. The goal of marketing is to inform the public on the key aspects of a product or service that would satisfy their needs. The rise in environmentalism has led to companies recognizing that they can no longer operate without recognizing the environmental impact of their operations (Gryshchenko *et al.*, 2022). Environmental protection efforts have become a strategic competition tool for firms (Chandran, Bhattacharya, 2019). The growing prevalence of green marketing reflects not only a response to consumer demand but also a proactive effort by businesses to differentiate themselves in competitive markets. In many industries, offering green products or engaging in sustainable practices has evolved from being a niche strategy to a mainstream operating strategy. The objective of green marketing is to increase customer retention as consumers become increasingly environmentally aware. Companies have to understand their green consumers and curate products and services that align with their expectations. However, due to the lack of consensus on what amounts to green consumption, it is hard for firms to comprehensively select features to include in their products and services (Haba *et al.*, 2023). For that reason, there is significant interest in how green marketing influences consumer purchasing behavior. Specifically, how does green marketing influence purchasing decisions, and under what conditions is it most effective?

Research on green consumption has been evolving as new evidence is collected on the important factors that influence consumer behavior. There is a need to understand the specific factors that lead to green purchasing for green marketing to be effective (Sharma, 2021). Tan *et al.* (2022) state that green marketing influences the environmental behavior of consumers. They argue that companies should be strategic in their green communication to ensure that they increase consumer confidence in the brand's commitment to environmental sustainability, which will positively influence green purchasing decisions. However, not all green consumers are environmentally aware of the impact of specific products and services on the environment. For that consumer segment, they base their decision on the information they receive through green marketing or social interactions. Therefore, the effectiveness of green marketing is often mediated by external factors.

Research has shown that social influence has a significant impact on consumer behavior (Argo, Dahl, 2020; Mie *et al.*, 2019). Myers and Twenge (2019) state that individuals are social beings, which means that their routine actions and reactions are often influenced by their social interactions. The same effect applies to consumers on their purchase and consumption behaviors (Bhukya, Paul, 2023). Social influence shapes perceptions of what is acceptable, desirable, or even necessary, and it often operates at both conscious and subconscious levels. In the context of green consumption, social influence can amplify or derail the effectiveness of green marketing campaigns, depending on the social interpretation of the information delivered and the existing norms. For instance, individuals are more likely to adopt

environmentally friendly practices when they perceive such actions as being endorsed or adopted by their social networks. In contrast, they may reject products marketed as green if they deem the marketing claims to be superficial or misleading, a phenomenon often referred to as greenwashing (Lopes *et al.*, 2023). These dynamics are particularly evident in the age of social media, where trends, opinions, and values are rapidly disseminated and reinforced. A consumer who sees their peers endorsing a brand's green product, for example, may be more inclined to view the product as desirable and align their purchasing behavior accordingly. Conversely, a lack of social support or awareness for green products can diminish the effectiveness of green marketing strategies.

The interplay between green marketing and social influence is further complicated by the diverse ways in which consumers respond to social pressures. Some consumers may align their consumption with social trends while others may prioritize personal values and economic considerations. Understanding these variations is essential for businesses aiming to tailor their green marketing efforts to different consumer segments. Given the growing significance of green marketing and its potential to drive sustainable consumption, this paper seeks to examine the factors that influence its effectiveness, with a particular focus on the moderating role of social influence. Specifically, the study explores the impact of green marketing practices on consumer purchasing behavior. By investigating the role of social influence as a moderating variable, the research aims to provide deeper insights into how societal dynamics shape the relationship between green marketing and consumer decision-making. In that regard, the primary objectives of this study are:

- To analyze the impact of green marketing on consumer purchasing behavior.
- To analyze the extent to which social influence enhances or diminishes the effectiveness of green marketing strategies.

This research contributes to the growing body of literature on sustainable business practices and consumer behavior by addressing a critical gap: the moderating role of social influence on the relationship between green marketing and consumer purchasing behavior. While numerous studies have examined the effectiveness of green marketing, we could not find any that explored the moderating role of social factors in shaping consumer eco-friendly purchase decisions. Using evidence from consumers, the findings of this study show the dynamics of green consumption in a socially interconnected world.

The remainder of this paper is organized as follows: Section 1 provides a review of relevant literature and theoretical frameworks on green marketing, consumer purchasing behavior, and social influence. Section 2 covers the hypotheses development. Section 3 outlines the research methodology, including the conceptual framework, data collection methods, and analytical approach. Section 4 presents the findings of the study. Finally, Section 5 discusses the implications of the findings for theory and practice and concludes with recommendations for future research.

1. Literature Review

1.1 Green Marketing

Environmentalism has been on the rise around the world for decades, as people and organizations seek to curb the continuous degradation of the environment due to human actions. In that aspect, green marketing has gained popularity among businesses as an avenue to attract and retain environmentally conscious customers. Delafrooz *et al.* (2014) state that green marketing has undergone different stages since the start of the 20th century. The first era occurred between 1960 and the early 1970s as concerns

were raised about the air pollution by industries, necessitating companies to showcase how they were reducing their external environmental impacts. The American Association of Marketing first introduced the concept of green marketing in 1975 (Zhu, Sarkis, 2016). In the 1980s, the second era began with new concepts emerging, like clean technology and sustainability (Delafrooz *et al.*, 2014). Over this period, the United Nations provided the definition of green consumption as meeting the needs of current generations without compromising future generations (Brundtland Report, 1987). The third phase started in the late 1990s and early 2000s, with a focus on sustainable green marketing. Since then, green marketing has continuously been integrated into enterprise marketing strategies. However, there is still no single comprehensive definition of the concept (Majeed *et al.*, 2022).

The term green marketing is used interchangeably with ecological marketing and eco-marketing (Nadanyiova *et al.*, 2020). Zafar *et al.* (2020) argue that green marketing is marketing that considers environmental issues. They are a set of actions that aim to reduce the negative environmental impacts during product exchange (Dangelico, Vocalelli, 2017). Regardless of the definition used, green marketing involves a focus on integrating environmental issues in different aspects of product and service production and distribution. The aim of green marketing is to target consumers who are concerned about the impact of their actions on the environment (Polonsky, 2008). Companies use the strategy to show how they contribute to solving environmental problems (Cherian, Jacob, 2012). The mode of communication is through various tools, including advertising channels, corporate public relations, branding, and sustainability reports (Tan *et al.*, 2022). All the avenues used seek to persuade customers that the actions of the company benefit both the consumer and the environment (Tiwari *et al.*, 2011).

1.2 Consumer Purchasing Behavior

Consumer purchasing behavior has been extensively explored in literature. The theory of planned behavior, developed by Ajzen (1991), is one of the most influential frameworks for understanding and predicting human behavior. The theory states that an individual's intention to engage in a specific behavior is the immediate antecedent to the behavior itself. Ajzen (1991) argues that the intention is influenced by three key factors that are attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude refers to an individual's positive or negative evaluation of the behavior. In the context of green marketing, this could involve consumers' beliefs about the benefits and efficacy of purchasing eco-friendly products. Subjective norms are the perceived social pressures to perform or not to perform the behavior. For instance, if consumers believe that their peers or society expect them to purchase sustainable products, they may feel compelled to comply. The perceived behavioral control relates to the perceived ease or difficulty of performing the behavior, which is influenced by past experiences and anticipated obstacles. For green consumption, factors such as the availability of green products and their affordability play a critical role. The theory of planned behavior provides a suitable framework for examining consumer purchasing behavior in the context of green marketing by integrating individual, social, and situational aspects of human decision-making processes.

1.3 Green Consumers

Even though green marketing targets a broad range of consumers, including influencing non-environmentally conscious consumers, there is a niche target market often referred to as green consumers (Correia *et al.*, 2023). Hailes (2007) defines a green consumer as an individual who associates their actions of buying or consuming a product with the likelihood of contributing to environmental protection. Such a consumer is engaged in green consumption behavior with the aim of solving environmental problems (Dagher *et al.*, 2015). Green consumers believe that it is their

responsibility to make a difference (Boztepe, 2012). In light of those definitions, this study considers a consumer to be a green consumer if they are concerned about the environmental impacts of the products that they acquire and make efforts to select those with maximum positive impacts.

1.4 Social Influence

Based on the theory of planned behavior, as discussed earlier, social influence is among the three factors shaping consumer purchasing behavior, hence the need to examine how social factors affect green purchasing behavior. The social influence theory by Kelman (1958) offers a structured perspective on how interpersonal interactions and societal dynamics shape behavior. The theory refers to the impact that the behavior of an individual is influenced by others. Kelman (1958) classifies social influence into compliance, identification, and internalization. Compliance is meant to ensure that the individual avoids punishments or seeks to gain a reward. Identification involves adopting behaviors to establish or maintain relationships with a group or individual. Internalization refers to adopting attitudes and behaviors because they align with one's personal values or beliefs. Kim and Kim (2020) highlight that people will comply with the requests of a person they like or approve of, and the similarities between two people will enhance compliance. Identification will occur to help maintain the relationship with others. However, humans are not entirely reactive beings (Bandura, 2009). They retain a degree of control over their decisions based on personal values and beliefs (Johnstone, Hooper, 2016). Therefore, the social influence theory provides a useful framework for analyzing the impact of social influence on consumer purchasing behavior, especially in the context of green marketing. People will conform to social norms in order to maintain their relationship with others, including family members. Peers are agents of influence, shaping consumer preferences and behaviors through shared experiences and direct interactions. Additionally, cultural and societal norms impact the adoption of specific consumer behavior. However, the strength of that influence varies due to personal internalization of the subject matter (Johnstone, Hooper, 2016). In green marketing, these dimensions provided by the social influence theory explain varying degrees of consumer engagement with sustainable practices. For instance, compliance may drive consumers to avoid environmentally harmful products due to societal disapproval, whereas internalization might moderate this influence.

2. Research Framework and Hypotheses Development

The theory of planned action and the social influence theory indicate that consumer purchasing behavior is influenced by an interplay between personal attitudes and societal factors. The literature analyzed showed that while social influence has an impact on consumer behavior, the influence of personal attitudes could moderate that impact. Drawing on the two theories, this section develops hypotheses that articulate the expected relationships among key variables.

2.1 Green Marketing and Consumer Purchasing Behavior

Green marketing seeks to influence consumer purchasing behavior by showcasing the environmental benefits of a company's products and services or its operations (Boztepe, 2012). There is a positive relationship between green marketing approaches and consumer green purchasing behaviors (Boztepe, 2012). Cuc *et al.* (2022), in their study, established that green communication within green marketing has a significant impact on purchasing behavior. Chen *et al.* (2024) established that green information presentation on fashion brands has a direct or indirect effect on consumer green purchasing behavior. Iqbal *et al.* (2023) also concluded that green marketing has a significant impact on green purchase intention. Based on these findings in previous literature, the following hypothesis is proposed:

H1: Green marketing has a positive impact on consumer purchasing behavior.

2.2 The Moderating Role of Social Influence

According to the theory of social influence, social interactions can amplify or attenuate specific actions in individuals. Applying the theory to green marketing, it implies that social influence could enhance or diminish the effectiveness of green marketing by shaping consumer perceptions and decision-making processes. Lee *et al.* (2011) established that positive informational influence has a positive impact on consumer purchasing decisions to shop online. Liang *et al.* (2024) also established that social influence has a significant impact on purchase intention. Chang *et al.* (2023) concluded that social networks and interpersonal relationships have a significant influence on the online food delivery market in Vietnam. Based on the above studies, there is a consensus that social influence plays a critical role in consumer purchase decisions. However, based on the internationalization perspective of the social influence theory, a direct relationship may not exist between green marketing and consumer purchasing decisions. For this study, we consider social influence from three dimensions that are normative influence, informational influence, and emotional influence. Individuals are often motivated to conform to social norms and expectations to gain approval and avoid disapproval. Nolan *et al.* (2008) established that normative social influence had the greatest impact on people's behavior. They also observed that informational social influence played a role in individual decisions on energy conservation. Therefore, if green marketing is aligned with the prevailing societal norms, consumers are likely to engage in green purchasing behavior. Additionally, credible endorsements and accurate information on product or service sustainability can enhance consumer trust and purchasing intentions. Positive reinforcement, such as social recognition for sustainable choices, can motivate consumers to purchase green products. In line with the above analysis, this study proposes:

H2: Normative social influence moderates the relationship between green marketing and consumer purchasing behavior.

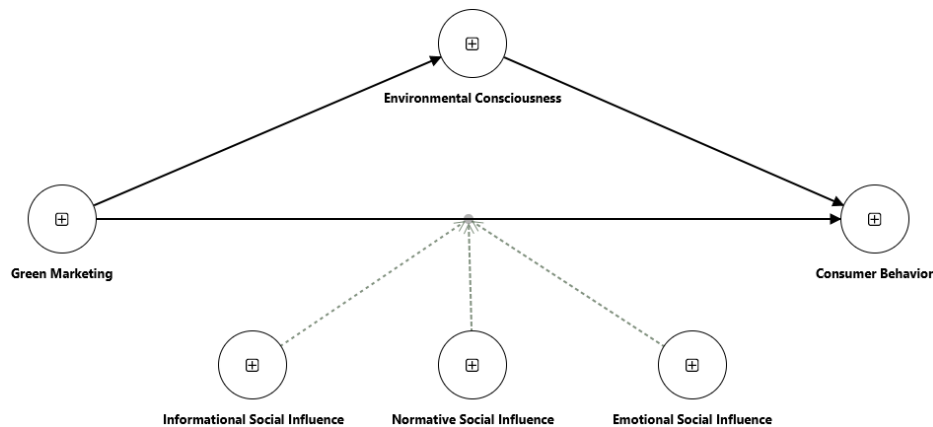
H3: Informational social influence moderates the relationship between green marketing and consumer purchasing behavior.

H4: Emotional social influence moderates the relationship between green marketing and consumer purchasing behavior.

2.3 Mediating Role of Environmental Awareness

The relationship between green marketing and social influence is further shaped by individual and situational factors as per the theory of planned behavior. Majeed *et al.* (2022) established that consumer beliefs have a moderating effect on the impact of green marketing methods on customer decisions to purchase eco-friendly products. Cuc *et al.* (2022) also found that there is a mediating role of environmental awareness and environmentally oriented lifestyle on the relationship between green marketing and consumer intentions to purchase such products. These studies highlight that customer understanding of environmental issues and their attitudes towards eco-friendly products influence their green purchase intentions. Environmentally conscious consumers may be more responsive to social influence mechanisms, especially if the influence aligns with their personal values on environmental conservation. In contrast, customers with limited knowledge of environmental issues will be reluctant to conform to social influences on green products and services. Based on those arguments, this study proposes:

H5: Environmental consciousness mediates the relationship between green marketing and consumer behavior.



Source: created by the authors.

Figure 1. Conceptual Model

3. Methodology

3.1 Survey Instrument

The data collection tool for this study was a structured survey instrument designed to measure the relationships outlined in the five hypotheses. Respondents were supplied with a self-administered questionnaire.

Table 1. Measures

GM	Green Marketing	References
GM1	Advertisements that emphasize environmental benefits catch my attention.	Boztepe (2012) Iqbal et al. (2023)
GM2	I prefer brands that actively highlight their sustainability initiatives.	
GM3	Companies that use environmentally friendly packaging appeal to me.	
GM4	I trust marketing claims that are backed by credible environmental certifications.	
GM5	Eco labels and eco branding help me make purchasing decisions	
CB	Consumer Purchasing Behavior	Chen et al. (2024)
CB1	I consider advertisements highlighting environmental benefits when making purchasing decisions.	
CB2	I am more likely to buy products designed to minimize environmental impact.	
CB3	Clear communication of eco-friendly product features influences my purchase choices.	
CB4	I seek out products with environmentally friendly packaging.	
NSI	Normative Social Influence	Nolan et al. (2008)
NSI1	I feel social pressure to buy products that are environmentally friendly.	
NSI2	My family and friends expect me to make sustainable purchasing choices.	
NSI3	Purchasing eco-friendly products helps me gain approval from others.	
ISI	Informational Social Influence	Lee et al. (2011)
ISI1	Reviews or endorsements from others influence my decisions to buy sustainable products.	
ISI2	I regularly search online to understand the environmental impact of products.	
ISI3	I rely on information from sustainability campaigns to make purchase decisions	
ESI	Emotional Social Influence	Chang et al. (2023)
ESI1	I feel a sense of accomplishment when acknowledged for sustainable purchasing decisions.	
ESI2	Positive feedback from others reinforces my choice to buy eco-friendly products.	

Table 1 (continuation). Measures

GM	Green Marketing	References
EC	Environmental Consciousness	Majeed <i>et al.</i> (2022)
EC1	I am aware of the environmental consequences of my actions.	
EC2	I actively consider sustainability in my daily decisions.	
EC3	Reducing my environmental footprint is a priority.	

Source: created by the authors.

The first part of the survey instrument collected information on age, gender, educational background, and occupation. This section ensured that the sample was representative and allowed for controlling demographic influences. Multiple constructs related to green marketing strategies, social influence dimensions, and consumer purchasing behavior were adapted from validated scales in previous literature to ensure reliability and validity. The survey employed a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) to measure respondent perceptions and attitudes. The initial questionnaire was then sent to three academic experts in marketing and consumer behavior to ensure each of the constructs was appropriate to the tests to be done. The questionnaire was then translated into Chinese and then reviewed by two bilingual professionals to ensure that there was no distortion (Liang *et al.*, 2024). A pilot study was conducted with 20 respondents to ensure the clarity and reliability of the survey items. Based on feedback, minor adjustments were made to improve the readability and flow of the questionnaire. The consultation and pretesting exercises were crucial to ensure that the constructs were contextually and culturally relevant to consumers and were without ambiguities (Akram *et al.*, 2018). The final measures were as shown in *Table 1*.

3.2 Sample and Data Collection

Since the goal was to reach as many consumers as possible, the final questionnaire was uploaded to an influential survey platform (www.wjx.cn), and the link was then distributed via leading messaging applications in China (WeChat and Weibo).

Table 2. Demographic Characteristics of the Respondents (n = 927)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Age	20-24 years	212	22.87%
	25-34 years	308	33.23%
	35-44 years	185	19.96%
	45-54 years	120	12.94%
	55+ years	102	11.00%
Gender	Male	470	50.70%
	Female	457	49.30%
Educational Background	High School or Below	180	19.42%
	Associate's Degree	221	23.84%
	Bachelor's Degree	355	38.30%
	Master's Degree or Above	171	18.45%
Occupation	Student	110	11.87%
	Employed (Full-time)	560	60.41%
	Employed (Part-time)	140	15.10%
	Unemployed	80	8.63%
	Other	37	3.99%

Source: own calculations.

The target group was consumers aged 20 and above who form the main portion of buyers in China, which meant that a filter question on age was administered before a respondent could access the questionnaire. The questionnaire included a clear message that the information collected was for academic purposes only and the anonymity of the respondents was maintained. Each IP address had a single chance to fill out the survey to reduce the risk of repetitions. A total of 974 people took part in the survey over a 1-month period in November, 2024. The collected questionnaires were then examined for incomplete answers, and straight-line answers were eliminated. A total of 927 responses formed the final valid sample, which was a 95.17% response rate. *Table 2* provides a summary of the respondent's demographics.

3.3 Data Analysis

Data analysis was conducted using structural equation modeling (SEM). The technique was chosen for its ability to simultaneously analyze multiple dependent and independent variables (Liao *et al.*, 2023). As an exploratory study, partial least squares structural equation modeling (PLS-SEM) was the most suitable analytical method (Liao *et al.*, 2023). SmartPLS version 4 was used for the data analysis.

4. Results

4.1 Measurement Model Analysis

The reliability and validity of constructs were tested using confirmatory factor analysis in Smart PLS 4. Cheung *et al.* (2023) state that Cronbach's alpha values exceeding 0.7 indicate good internal consistency in the constructs. The results in *Table 3* show that all constructs have Cronbach's alpha values above 0.7, indicating good internal consistency. In addition, all constructs exceed 0.7 for composite reliability (rho_a and rho_c), confirming the consistency of the indicators in measuring their respective constructs (Akter *et al.*, 2017). Fornell and Larcker (1981) mention that a suitable measurement model should have adequate convergent validity at a threshold of 0.5. All constructs exceed the 0.5 threshold for average variance extracted (AVE), demonstrating good convergent validity in the model.

Table 3. Confirmatory Factor Analysis

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Consumer Behavior	0.847	0.848	0.897	0.685
Emotional Social Influence	0.920	0.922	0.938	0.717
Environmental consciousness	0.745	0.761	0.855	0.665
Green Marketing	0.88	0.885	0.912	0.675
Informational Social Influence	0.801	0.819	0.883	0.715
Normative Social Influence	0.867	0.867	0.919	0.791

Source: own calculations.

Table 4. Fornell Larcker Discriminant validity

	CB	ESI	EC	GM	ISI	NSI
CB	0.827					
ESI	0.368	0.81				
EC	0.519	0.337	0.815			
GM	0.638	0.4	0.652	0.821		

Table 4 (continuation). Fornell Larcker Discriminant validity

	CB	ESI	EC	GM	ISI	NSI
ISI	0.618	0.396	0.712	0.717	0.846	
NSI	0.565	0.388	0.67	0.605	0.684	0.889

Source: own calculations.

Table 5. Heterotrait-Monotrait (HTMT) Discriminant Validity

	CB	ESI	EC	GM	ISI	NSI	IS x GM	NSI x GM	ESI x GM
CB									
ESI	0.571								
EC	0.639	0.558							
GM	0.722	0.618	0.8						
ISI	0.742	0.633	0.513	0.837					
NSI	0.649	0.58	0.654	0.683	0.814				
IS x GM	0.165	0.276	0.385	0.330	0.381	0.366			
NSI x GM	0.123	0.318	0.346	0.286	0.395	0.344	0.803		
ESI x GM	0.137	0.129	0.345	0.346	0.224	0.235	0.619	0.588	

Source: own calculations.

Discriminant validity was analyzed using the Heterotrait-Monotrait (HTMT) and Fornell-Lacker criteria. As shown in *Table 4*, the square root of the AVE of all the constructs is higher than the intercorrelation between the constructs, indicating discriminant validity based on the Fornell-Larcker criterion (Ali *et al.*, 2022). Henselar *et al.* (2015) state that HTMT confirms discriminant validity if all the values are less than 0.90. This threshold was met as shown in *Table 5*.

4.2 Structural Model Analysis

The hypotheses and structural model were analyzed using PLS-SEM in SmartPLS. *Table 6* presents a summary of the results of the PLS-SEM bootstrapping done with 5000 resamples.

There is a strong positive and statistically significant impact of green marketing on consumer behavior ($\beta = 0.305$; $p < 0.001$), highlighting its effectiveness in shaping consumer decisions. The moderation analysis showed that social influence moderates the relationship between green marketing and consumer behavior. Normative social influence moderates ($\beta = 0.116$; $p < 0.001$) the relationship between green marketing and consumer purchasing behavior. Even though the effect is weak, it is statistically significant. Informational social influence ($\beta = 0.222$; $p < 0.001$) and emotional social influence ($\beta = 0.395$; $p < 0.001$) moderate the relationship between green marketing and consumer behavior by amplifying the effect. Therefore, H1, H2, H3, and H4 are fully supported.

Table 6. Summary of the PLS-SEM bootstrapping outcome

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values	Result
Emotional Social Influence -> Consumer Behavior	0.075	0.078	0.036	2.107	0.035	Supported

Table 6 (continuation). Summary of the PLS-SEM bootstrapping outcome

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	Result
Environmental consciousness -> Consumer Behavior	0.297	0.293	0.049	6.000	0.000	Supported
Green Marketing -> Consumer Behavior	0.350	0.354	0.046	7.595	0.000	Supported
Green Marketing -> Environmental consciousness	0.652	0.654	0.025	25.956	0.000	Supported
Informational Social Influence -> Consumer Behavior	0.255	0.257	0.056	4.549	0.000	Supported
Normative Social Influence -> Consumer Behavior	0.198	0.195	0.065	3.06	0.002	Supported
Informational Social Influence x Green Marketing -> Consumer Behavior	0.222	0.219	0.055	4.044	0.000	Supported
Normative Social Influence x Green Marketing -> Consumer Behavior	0.116	0.115	0.047	2.479	0.013	Supported
Emotional Social Influence x Green Marketing -> Consumer Behavior	0.398	0.403	0.083	4.795	0.007	Supported

Source: own calculations.

The mediation effect of environmental consciousness on the relationship between green marketing and consumer behavior was confirmed. There is a significant positive relationship between green marketing and environmental consciousness ($\beta = 0.652$; $p < 0.001$) and between environmental consciousness and consumer behavior ($\beta = 0.297$; $p < 0.001$). Therefore, H5 was supported.

Conclusions

The study findings show that green marketing has a positive impact on consumer behavior. Anchored on the theory of planned behavior and social influence theory, the results show that social and individual factors influence consumer eco-friendly purchasing decisions. Normative social influence, representing the expectations of peers and society, enhances the relationship between green marketing and consumer behavior. When purchasing products or services, individuals may consult friends and family, which helps to inform their decisions (Suki *et al.*, 2016). Notably, there is a likelihood of purchasing products that are socially accepted to align with societal norms and gain social approval. Coupled with the presence of adequate information, consumers can be influenced to make specific decisions in relation to purchasing eco-friendly products and services. People conform to others' choices when they believe that those individuals have more accurate information or expertise, and they use this social information to make more informed decisions (Lee *et al.*, 2011). This behavioral influence is evidenced by the reliance on product reviews and expert recommendations in online purchase decisions (Lee *et al.*, 2011). A third aspect of social influence is the approval that people get from others for specific behaviors. The findings of this study indicate that the likelihood of being acknowledged for using eco-friendly products will enhance the purchasing behavior of a consumer for such products. Unlike informational or normative influence, which rely more on cognitive or social approval factors, emotional social influence

is based on the emotional responses that are triggered by others, creating strong psychological and behavioral effects.

Individual awareness of the environmental impact of specific products and services influences their purchase decisions. Customers with limited awareness of environmental issues are unlikely to consider eco-friendly products, especially in situations where they have a premium price. The findings show that as environmental awareness increases, customers are likely to make green purchase decisions from green marketing. This mediation reflects the theory of planned behavior's emphasis on perceived behavioral control, as increased environmental consciousness empowers consumers to act on their values and intentions. They are able to analyze green marketing messages and determine their relevance to their personal beliefs on sustainability.

This study contributes to the literature by integrating the theory of planned behavior and social influence theory to explain consumer responses to green marketing. The evaluation of the moderating roles of normative, informational, and emotional social influences enhances the understanding of how social dynamics affect the effectiveness of green marketing strategies. Additionally, the mediation by environmental consciousness offers insights into the internal processes driving sustainable consumer behavior, extending the theoretical framework of the theory of planned behavior. The findings also emphasize the underexplored role of emotional factors in sustainability studies, suggesting that positive emotions significantly influence consumer responses to green marketing campaigns.

From a practical perspective, the findings of the study indicate that marketers should design initiatives that leverage social norms, such as eco-certifications and public commitments, to increase the perceived social value of green products. Encouraging peer recommendations and collaborating with credible experts can further amplify informational social influence. Marketing campaigns should evoke positive emotions, such as pride or belonging, by showcasing how consumers' eco-friendly choices contribute to environmental sustainability. Policy makers should consider increasing consumer engagement to educate them on environmental issues, which will lead to a rise in sustainable purchasing behavior.

Despite its contributions, this study has several limitations. First, the reliance on self-reported data may introduce social desirability bias. Future research could use behavioral experiments to validate these findings. Second, the study focuses on general green marketing and consumer behavior without considering specific industries or product categories. Examining sector-specific dynamics could yield more targeted insights. Future studies can build on the findings of this research to enhance understanding and implementation of green marketing strategies in diverse contexts.

Literature

Ajzen, I. (1991), "The Theory of planned behavior", *Organizational Behavior and Human Decision Processes*, Vol. 50, No 2, pp.179-211, [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).

Akram, U., Hui, P., Khan, M.K., Yan, C., Akram, Z. (2018), "Factors affecting online impulse buying: evidence from Chinese social commerce environment", *Sustainability*, Vol. 10, No 2, 352, <https://doi.org/10.3390/su10020352>.

Akter, S., Fosso Wamba, S., Dewan, S. (2017), "Why PLS-SEM is suitable for complex modelling? An empirical illustration in big data analytics quality", *Production Planning & Control*, Vol. 28, No 11-12, pp.1011-1021, <https://doi.org/10.1080/09537287.2016.1267411>.

Ali, M., Ullah, S., Ahmad, M.S., Cheok, M.Y., Alenezi, H. (2023), "Assessing the impact of green consumption behavior and green purchase intention among millennials toward sustainable environment", *Environmental Science and Pollution Research*, Vol. 30, No 9, pp.23335-23347, <https://doi.org/10.1007/s11356-022-23811-1>.

Argo, J.J., Dahl, D.W. (2020), "Social influence in the retail context: a contemporary review of the literature", *Journal of Retailing*, Vol. 96, No 1, pp.25-39, <https://doi.org/10.1016/j.jretai.2019.12.005>.

Bandura, A. (2009), "Social cognitive theory of mass communication", in: J. Bryant, M.B. Oliver (Eds.), *Media effects*, Milton Park: Routledge, pp.110-140.

Bhukya, R., Paul, J. (2023), "Social influence research in consumer behavior: What we learned and what we need to learn? A hybrid systematic literature review", *Journal of Business Research*, Vol. 162, 113870, <https://doi.org/10.1016/j.jbusres.2023.113870>.

Boztepe, A. (2012), "Green marketing and its impact on consumer buying behavior", *European Journal of Economic & Political Studies*, Vol. 5, No 1, <https://pdfs.semanticscholar.org/cfa6/1e98d7e1fe74ddedd579949a2b226f985a2f.pdf>.

Brundtland Report (1987), *World commission on the environment and development: Our common future*, Oslo: United Nations.

Chandran, C., Bhattacharya, P. (2021), "Hotel's best practices as strategic drivers for environmental sustainability and green marketing", in: S.K. Dixit, K.-H. Lee, P.T. Loo (Eds.), *Consumer Behavior in Hospitality and Tourism*, 1st edition, Routledge, pp.66-81.

Chang, W., Chao, R.-F., Le, N.A. (2023), "Examining the impact of social influence on purchase behavior of online food delivery in Vietnam: The moderating role of trust and physical obstacles during the COVID-19 Pandemic", *International Journal of Research in Business and Social Science (2147-4478)*, Vol. 12, No 6, pp.1-10, <https://doi.org/10.20525/ijrbs.v12i6.2704>.

Chen, L., Haider, M.J., He, J. (2024), "Should "green information" be interactive? The influence of green information presentation on consumers' green participation behavior for driving sustainable consumption of fashion brands", *Journal of Cleaner Production*, Vol. 470, September, 143329, <https://doi.org/10.1016/j.jclepro.2024.143329>.

Cherian, J., Jacob, J. (2012), "Green marketing: A study of consumers' attitude towards environment friendly products", *Asian social science*, Vol. 8, No 12, 117, <https://doi.org/10.5539/ass.v8n12p117>.

Cheung, G.W., Cooper-Thomas, H.D., Lau, R.S., Wang, L.C. (2024), "Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations", *Asia Pacific Journal of Management*, Vol. 41, No 2, pp.745-783, <https://doi.org/10.1007/s10490-023-09871-y>.

Correia, E., Sousa, S., Viseu, C., Larginho, M. (2023), "Analyzing the influence of green marketing communication in consumers' green purchase behavior", *International Journal of Environmental Research and Public Health*, Vol. 20, No 2, 1356. <https://doi.org/10.3390/ijerph20021356>.

Cuc, L.D., Pelau, C., Szentesi, S.G., Sanda, G. (2022), "The impact of green marketing on the consumers' intention to buy green products in the context of the green deal", *Amfiteatru Economic*, Vol. 24, No 60, pp.330-345, <https://doi.org/10.24818/EA/2022/60/330>.

Dangelico, R.M., Vocalelli, D. (2017), "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature", *Journal of Cleaner production*, Vol. 165, September, pp.1263-1279, <https://doi.org/10.1016/j.jclepro.2017.07.184>.

- Dagher, G., Itani, O.S., Kassar, A.N. (2015), "The impact of environment concern and attitude on green purchasing behavior: Gender as the moderator", *Contemporary Management Research*, Vol. 11, No 2, pp.179-206.
- Delafrooz, N., Taleghani, M., Nouri, B. (2014), "Effect of green marketing on consumer purchase behavior", *QScience Connect*, Vol. 2014, No 1, 5, <https://doi.org/10.5339/connect.2014.5>.
- ElHaffar, G., Durif, F., Dubé, L. (2020), "Towards closing the attitude-intention-behavior gap in green consumption: A narrative review of the literature and an overview of future research directions", *Journal of cleaner production*, Vol. 275, December, 122556, <https://doi.org/10.1016/j.jclepro.2020.122556>.
- Fornell, C., Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of marketing research*, Vol. 18, No 1, pp.39-50, <https://doi.org/10.1177/002224378101800104>.
- Gonzalez, C., Korchia, M., Menuet, L., Urbain, C. (2009), "How do socially responsible consumers consider consumption? An approach with the free associations method", *Recherche et Applications en Marketing (English Edition)*, Vol. 24, No 3, pp.25-41, <https://doi.org/10.1177/205157070902400301>.
- Gryshchenko, O., Babenko, V., Bilovodska, O., Voronkova, T., Ponomarenko, I., Shatskaya, Z. (2022), "Green tourism business as marketing perspective in environmental management", *Global Journal of Environmental Science and Management*, Vol. 8, No 1, pp.117-132, <https://doi.org/10.22034/gjesm.2022.01.09>.
- Haba, H.F., Bredillet, C., Dastane, O. (2023), "Green consumer research: Trends and way forward based on bibliometric analysis", *Cleaner and Responsible Consumption*, Vol. 8, March, 100089, <https://doi.org/10.1016/j.clrc.2022.100089>.
- Hailes, J. (2007), *The new green consumer guide*, London: Simon & Schuster, pp.254-254.
- Iqbal, A., Iqbal, M.S., Athar, A., Khan, S.A. (2023), "Impact of Green Marketing on Consumer Purchase Intention: The Moderating Role of Environmental Knowledge", *Journal of Social & Organizational Matters*, Vol. 2, No 2, pp.43-58, <https://doi.org/10.56976/jsom.v2i2.25>.
- Johnstone, M.L., Hooper, S. (2016), "Social influence and green consumption behaviour: A need for greater government involvement", *Journal of Marketing Management*, Vol. 32, No 9-10, pp.827-855, <https://doi.org/10.1080/0267257X.2016.1189955>.
- Kaur, B., Gangwar, V.P., Dash, G. (2022), "Green marketing strategies, environmental attitude, and green buying intention: A multi-group analysis in an emerging economy context", *Sustainability*, Vol. 14, No 10, 6107, <https://doi.org/10.3390/su14106107>.
- Kim, M., Kim, J. (2020), "How does a celebrity make fans happy? Interaction between celebrities and fans in the social media context", *Computers in Human Behavior*, Vol. 111, October, 106419, <https://doi.org/10.1016/j.chb.2020.106419>.
- Kumar, S., Yadav, R. (2021), "The impact of shopping motivation on sustainable consumption: A study in the context of green apparel", *Journal of Cleaner Production*, Vol. 295, May, 126239, <https://doi.org/10.1016/j.jclepro.2021.126239>.
- Lee, M.K., Shi, N., Cheung, C.M., Lim, K.H., Sia, C.L. (2011), "Consumer's decision to shop online: The moderating role of positive informational social influence", *Information & Management*, Vol. 48, No 6, pp.185-191, <https://doi.org/10.1016/j.im.2010.08.005>.
- Liang, S.Z., Xu, J.L., Huang, E. (2024), "Comprehensive analysis of the effect of social influence and brand image on purchase intention", *SAGE Open*, Vol. 14, No 1, 21582440231218771, <https://doi.org/10.1177/21582440231218771>.

- Liao, Y.K., Nguyen, H.L.T., Dao, T.C., Nguyen, P.T.T., Sophea, H. (2024), "The antecedents of customers' attitude and behavioral intention of using e-banking: the moderating roles of social influence and customers' traits", *Journal of Financial Services Marketing*, Vol. 29, No 3, pp.1037-1061, <https://doi.org/10.1057/s41264-023-00254-4>.
- Lopes, J.M., Gomes, S., Trancoso, T. (2023), "The dark side of green marketing: How greenwashing affects circular consumption?", *Sustainability*, Vol. 15, No 15, 11649, <https://doi.org/10.3390/su151511649>.
- 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*, Vol. 14, No 18, 11703. <https://doi.org/10.3390/su141811703>.
- Mi, L., Zhu, H., Yang, J., Gan, X., Xu, T., Qiao, L., Liu, Q. (2019), "A new perspective to promote low-carbon consumption: The influence of reference groups", *Ecological Economics*, Vol. 161, July, pp.100-108, <https://doi.org/10.1016/j.ecolecon.2019.03.019>.
- Myers, D., Abell, J., Sani, F. (2019), *Social Psychology*, McGraw Hill.
- Nadanyiova, M., Gajanova, L., Majerova, J. (2020), "Green marketing as a part of the socially responsible brand's communication from the aspect of generational stratification", *Sustainability*, Vol. 12, No 17, 7118, <https://doi.org/10.3390/su12177118>.
- Polonsky, M.J. (2008), "An introduction to green marketing", *Global Environment: Problems and Policies*, Vol. 2, No 1, pp.1-10.
- Sharma, A.P. (2021), "Consumers' purchase behavior and green marketing: A synthesis, review and agenda", *International Journal of Consumer Studies*, Vol. 45, No 6, pp.1217-1238, <https://doi.org/10.1111/ijcs.12722>.
- Suki, N.M., Suki, N.M., Mokhtar, A.H.A., Ahmad, R. (2016), "Assessing normative and informational influences on students' opinion in engaging electronic word of mouth via social networking sites", *Procedia Economics and Finance*, Vol. 37, pp.190-195, [https://doi.org/10.1016/S2212-5671\(16\)30112-5](https://doi.org/10.1016/S2212-5671(16)30112-5).
- Tan, Z., Sadiq, B., Bashir, T., Mahmood, H., Rasool, Y. (2022), "Investigating the impact of green marketing components on purchase intention: The mediating role of brand image and brand trust", *Sustainability*, Vol. 14, No 10, 5939, <https://doi.org/10.3390/su14105939>.
- Tiwari, S., Tripathi, D.M., Srivastava, U., Yadav, P.K. (2011), "Green marketing-emerging dimensions", *Journal of Business Excellence*, Vol. 2, No 1, pp.18-23, <http://www.bioinfo.in/contents.php?id=54>.
- Zafar, S., Aziz, A., Hainf, M. (2020), "Young consumer green purchase behavior", *International Journal of Marketing Research Innovation*, Vol. 4, No 1, pp.1-12, <https://doi.org/10.46281/ijmri.v4i1.493>.
- Zhu, Q., Sarkis, J. (2016), "Green marketing and consumerism as social change in China: Analyzing the literature", *International Journal of Production Economics*, Vol. 181, pp.289-302, <https://doi.org/10.1016/j.ijpe.2016.06.006>

ŽALIOSIOS RINKODAROS POVEIKIS VARTOTOJŲ PIRKIMO ELGSENAI: MODERUOJANTI SOCIALINĖ ĮTAKA

Lin Feng, Adejare Yusuff Aremu

Santrauka. Žalioji rinkodara leidžia įmonėms orientuotis į vartotojus, ieškančius ekologiškų produktų ir paslaugų. Šio tyrimo tikslas – ištirti žaliosios rinkodaros poveikį vartotojų elgsenai ir moderuojantį socialinės įtakos vaidmenį. Remiantis suplanuotos elgsenos teorija ir socialinės įtakos teorija, tyrime nagrinėtas moderuojantis normatyvinės, informacinės ir emocinės socialinės įtakos poveikis, taip pat tarpininkaujantis aplinkosaugos sąmoningumo vaidmuo. Pasitelkus internetinį klausimyną buvo gauti 927 teisingi atsakymai iš vartotojų visoje Kinijoje. Dalinis mažiausių kvadratų struktūrinių lygčių modeliavimas (PLS-SEM) atliktas programa „Smart PLS 4“. Rezultatai rodo, kad žalioji rinkodara teigiamai veikia vartotojų pirkimo sprendimus, o socialinė įtaka susijusi su statistiškai reikšmingu moderavimu. Nustatyta, kad aplinkosaugos sąmoningumas tarpininkauja žaliosios rinkodaros ir vartotojų elgsenos ryšiui. Šis tyrimas reikšmingas tiek teoriškai, tiek praktiškai, nes suteikia įžvalgų apie socialinės įtakos vaidmenį vartotojų pirkimo elgsenai reaguojant į žaliąją rinkodarą.

Reikšminiai žodžiai: žalioji rinkodara; socialinė įtaka; vartotojų pirkimo elgsena; saikas.