ISSN:3030-332X
Impact factor: 9,493
International journal of scientific researchers
2nd International Conference on Green Economy & Sustainability 2.0, 30 April 2026

GREEN MARKETING AND CONSUMER BEHAVIOUR: AN EMPIRICAL STUDY OF SUSTAINABLE PURCHASE INTENTIONS

Kimsanboeva Khurshidakhon[1],
Dr. N. S. V. N. Raju[2],
Akbarova Farogatkhon[3],
Khamdamova Madinakhon[4]

[1,3,4]Masters of Business Administration, Faculty of Management, Sharda University Uzbekistan
khurshidakhonkimsanboeva@gmail.com;
akbarovafarogat1707@gmail.com;
madinakhon.khamdamova@ug.shardauniversity.uz

[2]Assistant Professor, Faculty of Management, Sharda University Uzbekistan
shyam.nagala@shardauniversity.uz

Abstract: This paper examines the impact of green marketing strategies on consumer behaviour in an era increasingly defined by sustainability imperatives. As ecological awareness grows, businesses face heightened pressure to integrate environmentally responsible practices into their marketing while sustaining competitive advantage. Drawing on a mixed analytical approach, the study evaluates key determinants such as perceived corporate responsibility, credibility of environmental claims, and price sensitivity in sustainable consumption. Findings indicate that although consumers generally express favourable attitudes toward eco- friendly products, actual purchasing behaviour is strongly moderated by trust and perceived value. Persistent skepticism toward exaggerated or misleading claims remains a significant obstacle. The analysis underscores that effective green marketing extends beyond promotional rhetoric, requiring transparency, consistency, and genuine alignment with sustainable practices. Firms that adopt authentic, consumer- centric strategies are more likely to foster long- term behavioural change. These insights contribute to a deeper understanding of how sustainability- driven marketing can bridge the gap between consumer intention and actual behaviour.

Keywords: Green Marketing, Consumer Behaviour, Sustainability,EnvironmentalResponsibility

1. Introduction

Environmental degradation, climate change and depletion of the planet's resources are global challenges to the sustainability of ecosystems, economies and human well-being (IPCC, 2021). Global warming, air pollution, deforestation, and the over-exploitation of resources have raised concerns about the sustainability of current patterns of consumption and production (UNEP, 2020). Taking these issues into account is no longer a question of only protecting the environment; these issues have become a topic at the top of the agenda of economics, politics, and society around the world. Sustainability is becoming a major priority for governments, businesses, and consumers and a key criterion of responsible conduct. As a result, many governments are introducing tougher environmental legislation and mandatory policies for sustainable development (OECD, 2021). As well, companies are facing pressure from stakeholders (consumers, investors, non-governmental organizations, etc.) to be sustainable (Porter & Kramer, 2011). Consequently, green marketing (in which marketers take environmental issues into account when making decisions) has proliferated, with marketers focusing on the design of green products, reducing the company's carbon footprint, packaging, and reporting the company's green credentials to customers (Polonsky, 1994). Green marketing can be defined as the development, promotion, and distribution of products and services designed to minimize negative effects on the physical environment (Polonsky, 1994). Examples of the activities in green marketing include product modification, sustainable

production processes, eco-labeling, and environmentally responsible advertising (Peattie & Crane, 2005). Today's green marketing has a two-fold meaning, where it involves not only promoting "green" products, but is also used to show corporate social responsibility and sustainability practices (Ottman, 2017). Green marketing is now viewed as a key tool for positioning companies in the marketplace and building brand equity and customer loyalty as well as gaining market share (Hartmann & Apaolaza-Ibáñez, 2012).

However, the success of green marketing strategies is dependent on consumer acceptance and behavior. While consumers may have a general concern for the environment and a preference for green products, many researchers have found that consumers' attitudes do not always translate into customer purchase behavior (Young et al., 2010). A gap often found in academia is often referred to as the 'attitude-behavior gap', when people's attitudes do not align with their behavior (Kollmuss & Agyeman, 2002), such as professing a preference for sustainable products but opting for cheaper and easier products when they make a purchasing decision. Price sensitivity is one of the reasons for the intention-action gap: green products are often perceived as more expensive than their non-green equivalents (Gleim et al., 2013). Other factors that have been cited for obstructing purchase of green products include limited availability of green products in the market, and distrust of green marketing claims (Joshi & Rahman, 2015). Due to the rise of greenwashing (in which claims and marketing strategies are false or exaggerated) consumers have become more skeptical and this has made it increasingly important for companies to be credible and transparent in green marketing (Delmas & Burbano, 2011). Consumer behavior is inspired by a range of psychological, social and cultural factors, including environmental concern, personal norms, social norms and perceived consumer effectiveness (Ajzen, 1991; Stern, 2000). Consumers who are more knowledgeable about environmental issues and who believe that their actions can make a difference, are more likely to engage in sustainable behavior (Ellen et al., 1991). Social influence, such as peer pressure and social norms, can also play a role in consumers' pro-environmental behaviors (White et al., 2019). In this regard, understanding the determinants of sustainable purchase intentions is important from both an academic and a practical perspective. From an academic perspective, it contributes to the consumer behavior literature on sustainability by identifying and determining the drivers of sustainable purchase intentions. From the perspective of the real-world business community, this research provides information on how companies can develop effective green marketing strategies. This study is aimed at investigating the factors that can promote purchase intention towards sustainable products. Specifically, the role of green marketing efforts on consumer's behavior is examined in terms of its influence on purchase intention towards sustainable products. Environmental awareness, green claim trust, social influence, and perceived consumer effectiveness are examined as antecedents. Thus, the study provides a more integrated understanding of the mechanisms that lead to sustainable consumption behavior. The results of this research will be useful for better aligning green marketing strategies with consumer expectations and better managing green marketing efforts. In addition, sustainable consumption will have positive environmental implications, and inform efforts to steer market economies towards more sustainable and responsible consumption and productionpatterns.

2. Literature Review

2.1 Green Marketing

Green marketing in modern marketing theory and practice has become a marketing tool as a result of the increase in global awareness of sustainability and the environment and relates to the business of making and selling products including, making claims and marketing strategies, product design, pricing, promoting and distribution, that are environmentally sustainable (Polonsky, 1994). Green marketing can be defined at its most basic level as reducing any harmful effects a product and/or service may have on the environment. The term was coined in the late 20th century as the environment began to impact consumer purchasing choices and governments began to regulate. Early definitions focused exclusively on environmental products. An increased understanding of sustainable product processes, ethical sourcing, and corporate social responsibility has broadened the meaning of green marketing, to take in the entire value chain, rather than merely the marketing process, (Peattie & Crane, 2005). One of the

biggest possible benefits of effective green marketing is an improved brand image. To the extent that a company communicates a meaningful commitment to environmental issues, that company is likely to be seen as socially responsible and honest (Hartmann & Apaolaza-Ibáñez, 2012). The improved profile can create customer loyalty, as environmentally aware customers are more likely to purchase from brands that adhere to sustainable core values (Ottman, 2017). Green marketing can also give a company a competitive edge as it can differentiate its products from the competition in a crowded market. Further economic benefits associated with green marketing practices can be observed in the reduction of costs for a firm. Green practices lead to a reduction in resource, waste, and energy costs that firms can benefit from (Porter & Kramer, 2011). Furthermore, the demand for sustainable products has increased, providing opportunities for capturing the attention of environmentally conscious consumers. Apart from these possible advantages, green marketing deals with numerous challenges. A chief problem relates to the question of how consumers view environmental claims, and whether those claims are perceived as true or false. Another problem of green marketing, related to the first one, is so-called 'greenwashing', which refers to companies overstating the environmental benefits of their products (Delmas & Burbano, 2011). This may also lead consumers to be skeptical of green marketing messages, reducing their effect on purchasing. Transparency means that green marketing must communicate verified, clear, and reliable information on the company's environmental protection practices in order to gain the trust and confidence of consumers (Chen 2010). Certifications, eco-labels, and third-party endorsements can also increase the credibility of these claims, but would also be suspect if consumers did not understand their meaning or the criteria by which they are granted. Another obstacle is the cost of green products. Sustainable products may be more expensive to produce due to the use of eco-friendly materials or methods. As eco-friendly products are generally at a higher price point, they may not be accessible or appealing to consumers who are more sensitive about the price (Gleim et al., 2013). This creates a conflict with environmental sustainability which makes finding a balance between these two require design trade-offs. Cultural and regional aspects make a difference as well. Different regions have different views on environmental sustainability and conservation, which affects the acceptance of green products (Joshi & Rahman, 2015). For example, in developing countries the price may prevent consumers from purchasing environmentally friendly products, while in developed countries environmental factors may become an increasingly important consumer consideration when making purchasing decisions. Ultimately, Green marketing is complex and differs across contexts when promoting environmentally friendly products and practices. Companies must weigh opportunities like brand equity and market differentiation against challenges such as consumer trust, pricing, and awareness to determine effective green marketing strategies.

2.2 Consumer Behavior and Sustainability

Sustainability consumer behavior is multi-faceted. Cognitive, emotional, social, and situational factors play a role in what the consumer chooses to do or not do at the level of the individual, the group, or of society. Understanding this can help to identify the drivers of environmentally sustainable consumption. On the cognition level, environmental knowledge is an important factor of consumer behavior. Environmental knowledge is positively associated with green consumption and pro-environmental product attributes used to evaluate different products (Joshi & Rahman, 2015). Furthermore, awareness is usually not enough to elicit actual behavior change without having positive attitudes and motivations. Consumer attitude is one of the most important factors of actual purchasing behavior for green products. When consumers perceive that green products have benefits to the environment and also to themselves, it creates a favorable attitude towards buying green products (Ajzen, 1991). Product quality, safety and long-term cost savings improve perceptions of potential adopters while negative perceptions like uncertainty about efficacy or price irrationality prevent potential users from adopting the innovation. Emotional factors also affect consumer behavior. Positive emotions such as guilt, pride and moral obligation have been shown to lead to pro-environmental behavior (White et al., 2019). For example, consumers might act in a manner that alleviates the feeling of guilt for having bought a product that is harmful to the environment by switching to a more supportive product. This

concern for self-image can lead to a positive impact on green consumption. Social influences are also a key component of sustainable consumer behavior. Peers, family and social networks have an influence on consumer behavior and consumption habits. Social norms (expectations of how one should behave in specific circumstances) may promote (or prevent) sustainable consumption (Cialdini et al., 1990) in cases where pro-environmental behavior is perceived as a socially desirable behavior. Cultural values may also influence consumer behavior as people's perceptions and priority of the environment may differ. For instance, cultures that prioritize collective welfare and environmental protection have higher levels of sustainable consumption. In contrast, others place a greater emphasis on individualism and economic concerns with little regard to environmental factors (Hofstede, 2001). Another consumer variable that promotes sustainable participation is perceived consumer effectiveness (PCE), which is defined as the consumers' belief that their action can help to solve environmental problems (Ellen et al., 1991). Consumers with a high level of PCE are more likely to engage in pro-environmental behavior because they believe they can make a difference, whereas people with a low level of PCE may not believe that they can make a difference and thus don't engage in pro-environmental behavior. The attitude-behavior gap refers to the fact that consumers who exhibit positive attitudes towards sustainability do not necessarily reflect these attitudes in their purchasing decisions (Kollmuss & Agyeman, 2002). Barriers include cost, product availability, and habitual consumption behavior. Convenience may also be a reason for consumer preference: ease of access and speed could be prioritized over concerns of environmental impact. Trust is another critical determinant of consumer behavior. As mentioned, scepticism of green claims can reduce the effectiveness of marketing. When consumers believe that green product-related information is trustworthy and that the green products have an environmental benefit, they are more likely to buy it (Chen, 2010).

2.3 Theoretical Framework

One of the most influential theories in consumer behavior, including sustainable behavior, is the Theory of Planned Behavior (TPB). The TPB (Ajzen, 1991) postulates that intention is the most immediate antecedent of behavior. Furthermore, intention is formed by three antecedents: attitudes, subjective norms, and perceived behavioral control. Attitude refers to the individual's evaluation of the behavior involved, such as the buying of green products. A positive attitude towards green product implies that consumers believe green products are helpful for them as well as less expensive, which in turn influences purchase intention positively. These attitudes are determined by the person's beliefs as to the consequences of the behavior and the individual's evaluation of these consequences. Subjective norms are the perceived social pressure to perform or not perform certain behaviors. An example of subjective norms in the context of green consumerism would be the expectations of family, friends or society towards environmentally conscious behavior. Perceived social norms of important others towards sustainable consumption lead individuals to adopt consumption practices consistent with sustainability. Perceived behavioral control (PBC) is the extent to which an individual believes that they can perform the behavior given the resources and opportunities available and includes concepts of affordability, accessibility and availability of information. If consumers believe green products are widely available and easy to use, they are more likely to purchase them. While TPB has been widely used and is a strong predictor of sustainable consumption behavior, it has been criticized for not sufficiently accounting for the moral and ethical aspects of behavior that are thought to be particularly important in the context of environmental sustainability (Stern, 2000).

Value-Belief-Norm (VBN) Theory

An alternative theory linked to pro-environmentalism is the Value-Belief-Norm (VBN) theory of pro-environmental behavior, as proposed by Stern (2000). The VBN theory has an emphasis on the moral dimensions of pro-environmental behavior, arguing that pro-environmental behavior is a result of a causal chain that begins with individual values and is mediated by beliefs and norms. The model postulates three types of values: egoistic, altruistic and biospheric. The latter, which promote concern for the environment, have the most effect on the intention to behave sustainably. These cognitions or values affect people's beliefs about the environment, such as their knowledge on the environmental

consequences of actions. These activate personal norms which are self-imposed moral obligations about what is right. For example, the belief that one has a moral obligation to protect the environment leads people to engage in pro-environmental behaviors such as buying environmentally-friendly products. However, focus on the moral dimension separates it from TPB, which stresses rational decision-making processes. The VBN theory has been used to help explain a number of pro-environmental behaviors such as energy and water conservation, recycling, and sustainable consumption. It has been asserted that the VBN theory suggests individuals need to have intrinsic motivations and ethical norms to change their behaviors over long periods of time.

Integration of TPB and VBN

However, in more recent research, scholars have suggested that using TPB and VBN together allows for a more holistic understanding of sustainable consumer behavior (Han, 2015). The TPB focuses mainly on rational behavior and social norms, whereas VBN posits a more important role for moral norms and underlying personal values (Stern, 2000; Ajzen, 1991). These theories are complementary, forming ideal candidates for combination. The combination of these perspectives enables a better understanding of the psychological, social and ethical factors that influence intent to purchase sustainably. The three central TPB constructs are attitudes, subjective norms and perceived behavioral control. Attitudes are an individual's beliefs regarding a green product, e.g. when offered, i.e. beliefs about environmental friendliness, quality, or long-term or immediate value. Subjective norms are social pressures imposed by others (e.g., family, friends, and society) to act environmentally, whereas perceived behavioral control is the individual's perception of control over how difficult or easy a behavior is to perform. These determinants, such as costs, product availability, or ease of information acquisition (Ajzen, 1991), can more directly affect behavioral intention, which is the immediate antecedent of the actual behavior. In contrast, the VBN theory adds a second moral dimension to the analysis of behavior by arguing that personal values, biospheric values and internalized norms could lead to an individual's feeling of moral obligation towards the environment when the individual strongly endorses biospheric values or altruistic values (Stern, 2000). Personal moral norm is a strong motivator of pro-environmental behavior in the absence of rewards or social normative influence from the environment. Combining TPB and VBN could overcome the strengths and weaknesses of individual theory, because TPB lacks focus on moral and ethical values, while VBN only explains behavior at the level of values and fails to acknowledge the role of constraints as well as social factors. To some extent, however, they combine to provide a fuller understanding of consumer behavior. For example, if a consumer has a positive attitude towards green products (TPB), supportive subjective norms (TPB) and a high perceived behavioral control (TPB), the likelihood of buying sustainably increases considerably, especially if they also have a strong obligation for environmental protection (VBN) that, in turn, has a high positive impact on sustainable consumption behavior. The interrelation of these aspects suggests rational examination of the situation and an accompanying moral commitment are important to acting consistently.

3. Methodology

3.1 Research Design

The present study adopts a quantitative methodology to assess the relationship between green marketing practices and sustainable purchase intention. The quantitative approach is appropriate for this study as it allows for the systematic measurement of variables and the statistical testing of hypothesized relationships between constructs (Creswell, 2014). It also uses numerical data and standardized measurement tools, which can make the study objective, reproducible, and generalizable to the sample. The methodological approach of the study was grounded in a positivistic model: from this perspective, the external world is seen as objectively real and measurable through observation and statistics. This is in accordance with the objective of the research study to evaluate relationships between the variables environmental awareness, trust in green claims, social norms, perceived consumer effectiveness, and purchase intention, and supported through the application of deductive reasoning in which hypotheses from previously developed theories, such as the Theory of Planned Behavior (TPB) and the VBN theory,

are tested against research data (Ajzen, 1991; Stern, 2000). This study uses a cross-sectional survey research design. Cross-sectional surveys are commonly used in consumer behavior and marketing studies because they are time and cost efficient to collect data regarding an individual's attitude, perception and behavioral intention in a sample (Malhotra, 2010). Cross-sectional studies are the most appropriate means of identifying associations between variables. They cannot inform of causal relations or show how variables change over time. However, for the exploratory and explanatory purpose of the study a cross-sectional design was considered the most appropriate approach. The model proposes that the four independent variables of environmental concern, trust in green claims, social influence and perceived consumer effectiveness are directly related to the dependent variable of sustainable purchase intention, as well as their potential interactions which are also shown in the model. Consumer behavior is influenced by a variety of psychological, social, and cognitive factors (Joshi and Rahman, 2015).

3.2 Data Collection

Data were collected using a structured questionnaire, which has been distributed using an online survey tool. Surveys are increasingly common in academic research, as they are relatively accessible, inexpensive and suitable for large, common populations (Evans & Mathur, 2018). Online data collection is also widely used due to its affordability and ease of management, and reduced risk of data entry errors. Based on the previous studies, a sample size of 300 is adequate for multivariate statistical techniques such as regression and factor analysis which require a sufficient sample size to produce reliable and valid results (Hair et al., 2010). Other general statistical rules were also taken into consideration, such as the number of samples needed for measurement items in the questionnaire, which should be at least 5 to 10 times the number of measurement items. Convenience sampling was used to determine participants. Convenience sampling is a non-probability sampling technique used for recruiting respondents who are most accessible to the research. Convenience sampling has criticisms regarding generalizability. However, it is a commonly used method in exploratory research when time and other resources are limited (Etikan et al., 2016). This method was appropriate for the analysis in this study because the goal was to detect relationships rather than to generalize to the population. The target population for the sample was consumers who have had prior use and experience with green products. This was to ensure that the respondents possessed a level of knowledge and experience adequate enough to provide quality insights into the sustainable consumption behavior of individuals. Screening questions were included at the start of the survey to ensure respondents were familiar with green products/solutions. Data were collected over a period of time, and respondents were recruited for the survey through different online platforms, such as social media, emails, and forums. Participation was voluntary and respondents were assured that their responses would remain confidential and anonymous as part of an effort to help ensure unbiased and candid responses. Ethical issues including informed consent, maintaining confidentiality and participants' right to withdraw from the study at any stage were adhered to (Bryman, 2016).

3.3 Measurement

Constructs were measured through a multiple item scale questionnaire: a questionnaire adapted from the scales already validated and existent in the literature. The use of existent and validated scales to measure the constructs strengthens the reliability and validity of the scales, which shows that they are measuring the real construct (Hair et al., 2010). All items were given on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Likert scales are a common tool for creating survey measures, due to their implementation simplicity as well as straightforward interpretation (Likert, 1932). It enables the quantification of subjective constructs and lends itself to statistical data analysis.

This study identifies five main constructs:

Environmental Awareness: the degree to which consumers are informed about and understand environmental problems, and their potential impact. Items gauge their knowledge and understanding of issues concerning climate change, air pollution, water pollution, waste, and resource depletion, as well as their interest or concern regarding sustainability. Higher levels of environmental consciousness are expected to promote sustainable purchase intentions (Joshi & Rahman, 2015).

Trust in Green Claims: trust is an important aspect of green marketing because of potential greenwashing. Trust measures the degree to which consumers see the company's environmental claims as credible, transparent, and trustworthy. These items measure confidence in labeling, certification, and claims made by product marketing (Chen, 2010).

Social Influence: social influence includes social relationships and social norms. This includes family, friends, acquaintances and general society. In the consumer behavior context, the influence of these social factors on purchase is explained by consumer behavior literature. Social influence is most relevant in cultures that are collectivist, where social approval of behavior is the norm (Ajzen, 1991).

Perceived Consumer Effectiveness (PCE): PCE is the view that individual behavior can help to protect the environment. Consumers with a high PCE are more likely to engage in pro-environmental behaviors. They assume that their actions will contribute to improving the state of the environment (Ellen et al., 1991).

Purchase Intention: the dependent variable is a self-reported likelihood of buying green products in the future. This variable is an example of a behavioral intention, which is the most immediate predictor of behavior according to Ajzen (1991).

In order to test for the reliability of the measurement instrument, it was first pilot tested on a smaller group of subjects and any data collected was then used to revise the questions for clarity and correctness. Reliability was computed using Cronbach's alpha, and a coefficient greater than 0.70 was considered an acceptable level of internal consistency (Nunnally, 1978). Construct validity, which tests whether items load onto their expected constructs, was assessed using factor analysis.

3.4 Data Analysis

To test the research hypotheses, examine the relationships between the study variables, and analyze the data, the statistical program, the Statistical Package for the Social Sciences (SPSS), was used. The analysis was carried out in stages. The first step was data cleaning and preparation, including checking for missing values, outliers, and inconsistencies in responses. Descriptive statistics were then used to describe the demographic characteristics of the sample, including age, gender, education level, and income. Statistics like these are relevant to the interpretation of the study's results and how representative the study's sample is. Correlation analysis was performed to examine the relationships among the constructs, giving Pearson's correlation coefficient as a measure of correlation between constructs, such as environmental awareness and purchase intention. It is mainly a means to find relationships rather than establish causation (Hair et al., 2010). Multiple regression analysis was further utilized to investigate these associations, such that the relationship between a single dependent variable and multiple independent variables could be assessed while controlling for the effects of other variables in the model. Thus, it is possible to rank factors, according to their importance, with respect to the sustainable purchase intention; that is, factors which show the highest predictive power in the regression model are also the most important ones. To defend the measurement model, a factor analysis was performed. The EFA was used to see whether the items had indeed clustered together in the way that was expected. Some indicators to help test construct validity and prevent measurement error can include the factor loadings, eigenvalues, and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1974). This last measure evaluates the suitability of the dataset to be included in the factor analysis. Furthermore, we tested the reliability of the measurement scales by computing Cronbach's alpha coefficient for each of the constructs, which should be greater than the recommended cut-off value of 0.70 (Nunnally, 1978). Thus, the use of these statistical analysis methods improves the study's validity and reliability, and the combination of descriptive statistics, correlation analysis, regression analysis, and factor analysis enables a thorough analysis of the relationship between the variables. This approach ensures that the findings are rooted in the data.

4. Results and Discussion

This section presents the findings of the study and a thorough discussion of the results and how they align with the existing literature and theoretical frameworks. The discussion focuses on the most important drivers of green products purchase intention, such as environmental awareness, green claims

trust, social influence and perceived consumer effectiveness. The findings can also be discussed under the umbrella of the Theory of Planned Behavior (TPB) and Value-Belief-Norm (VBN) theory. Theoretical and practical implications are discussed, including consumers' green purchasing intentions and attitudinal green purchasing behavior and how these do not lead to the actual purchasing behavior despite the positive attitude towards sustainability.

4.1 Environmental Awareness

The results of the research show the existence of a meaningful and positive relationship between environmental knowledge and the intention to purchase sustainable products. Awareness of environmental issues such as climate change, pollution, and depletion of natural resources positively influences the intention to adopt a sustainable purchasing behavior. This adds to previous research that identifies environmental knowledge as a meaningful predictor of pro-environmental behavior (see Joshi & Rahman, 2015). This finding can be explained from the TPB and VBN perspectives. TPB posits environmental knowledge as a precursor of positive attitudes toward green product, which subsequently fosters behavioral intention (Ajzen, 1991). When environmentally concerned consumers are aware of the environmental consequences of their consumption behaviors, they are more likely to also positively evaluate sustainable products. The VBN framework identifies consumers' awareness of the environmental consequences as a relevant antecedent for the activation of personal norms and the responsibility for pro-environmental behavior (Stern, 2000). In sum, awareness is not only knowledge, but also motivation as these consumers, who are aware of environmental problems, are the ones most likely to be internalizing them into their consumption decisions. This shows the importance of education and consciousness-raising in order to improve a sustainable consumption pattern. Governments, NGOs and private companies might also educate the public about environmental issues and the advantages of green products and practices. However, it should be noted that environmental awareness does not necessarily translate into purchase intention, or even purchase behavior. This is known as the attitude-behavior gap where consumers' awareness does not correspond with their actual behavior (Kollmuss and Agyeman, 2002). Therefore, increasing awareness about the thinking and risks of a behavior is important, but needs to be complemented with affordable products, access to them, and trust.

4.2 Trust in Green Claims

The most important factor influencing sustainable purchase intention is trust in green marketing claims. When consumers trust marketing claims to be credible, transparent, and reliable regarding a product's sustainability, they are more likely to be willing to purchase sustainable products. When consumers are doubtful of the green claims, the probability of purchase intention is lower. As the problem of greenwashing, the practice whereby companies exaggerate the environmental benefits of their products, becomes more popular, consumers are subsequently more distrustful, and trust is a major influencer of green purchasing behavior (Delmas & Burbano, 2011). When consumers are doubtful about environmental claims, they consume less sustainably, even if they are environmentally concerned. Trust could theoretically be assigned to both cognitive and affective systems of decision-making, but within TPB's framework it serves mainly to influence the consumer's attitude towards green products by influencing their belief in the effectiveness and credibility of the green product (Ajzen, 1991). In addition, trust can improve perceived behavioral control by reducing uncertainty and perceived risk associated with purchasing green products. These findings are consistent with earlier studies that indicate source credibility is a critical factor in green marketing (Chen, 2010), with transparency, third-party certification, and effective communication of environmental benefits improving consumer trust. To help in this regard, eco-labels and certifications from trusted organizations may serve as signals to consumers. This is closely linked to reputation, whereby frequent demonstrations of environmentally and ethically responsible practices inspire consumer trust, implying that green marketing should form a part of the wider corporate sustainability agenda, rather than being treated purely as a tool to promote products and services.

4.3 Social Influence

The results confirm the importance of social influences on sustainable purchase intention. They indicate that people are more likely to engage in sustainable behavior when their family, friends, and social networks support this intention. This finding validates the idea that consumption behavior is intertwined within a social web, and not an isolated affair. In the TPB model, the social influence construct consists of subjective norms defined as the perceived social pressure to perform or not perform the behavior (Ajzen, 1991). Therefore, consumers are more likely to accept strong purchase intentions for green products when they believe that other people in their social environment want them to do so. This is especially likely in collectivist cultures where social pressure and group norms are likely to play an important role. The findings are also in line with social influence theory, which states that people's behavior is influenced by other people's behavior (Cialdini et al., 1990). Some of the mechanisms behind social influence are observational learning, peer pressure, and social comparison, all of which may affect sustainable consumption. As an example, people may be motivated to buy green products in order to conform to the actions of other people or society at large. The role of social influence in consumer access to green products is increased by social media through the rapid dissemination of information and social norms about sustainability practices. Green products can also be promoted through influencers and opinion leaders, whose views shape consumer perceptions and consumer behavior. However, not everyone is equally susceptible to the influence of social norms and there are variations in individuals and cultures. While some might be swayed by social pressure, others may prioritize their attitudes and beliefs instead. It indicates the need for marketing strategies that account for the diversity of consumer motivations.

4.4 Perceived Consumer Effectiveness

Furthermore, perceived consumer effectiveness (PCE) has a positive and important impact on green purchase intention. Consumers believe that they can positively influence the environment by purchasing green products and their behavioral intention to undertake a green purchase is heightened. This indicates the importance of empowerment for performing sustainably. The concept of PCE is closely related to the VBN theory of environmentalism which stresses the role of personal norms and moral obligations in promoting pro-environmental behaviors (Stern, 2000). When consumers believe their actions affect the environment positively and meaningfully, they are more likely to experience a moral obligation to act in an environmentally responsible way. Within the TPB, PCE is similar to perceived behavioral control, the extent to which someone feels they are able to perform a behavior (Ajzen, 1991). For example, higher PCE leads to stronger behavioral intentions because the individual feels they have more control over behavioral engagement and the outcomes from behaviors. These findings replicate past results that have consistently shown that PCE is positively related to sustainable behaviors (Ellen et al., 1991). Individuals with high PCE are more likely to engage in pro-environmental behaviors including recycling, energy conservation, and green purchasing. On the other hand, individuals scoring low on PCE might feel that their actions are worthless and therefore not engage with sustainability. Findings suggest that there are important implications for marketers and policymakers. These may be more successful if they try to make consumers feel more efficacious directly through communication about collective impact and try to show the specific environmental benefits of green consumption behavior to reinforce individual consumer agency beliefs.

4.5 Barriers to Green Purchasing

Even though a positive attitude towards sustainability was clear, the study revealed a number of barriers to green purchasing behavior which maintained the attitude-behavior gap in sustainability consumption. This paper presented a number of factors which inhibited green purchasing behavior. The high price of green products is one of the most meaningful barriers for participants. Most participants believe that green products are more expensive than conventional products which may lead to non-purchase by consumers motivated by price (Gleim et al., 2013). These results suggest that economic factors can outweigh environmental considerations in decision-making processes. The third major barrier is the lack of availability for green products. This refers to when a consumer wants to buy a green

product but is unable to because the product is not available. This can be problematic in developing countries where eco-friendly products are not widely available (Joshi & Rahman, 2015). The following barrier to consumers buying green is information, as sustainable products are not being identified and set apart by consumers because of a lack of reliable information about environmental attributes. This problem is compounded by the complexity of the different eco-labels and sustainability certifications that may be difficult to understand. Distrust in product claims only compounds the problem. As previously stated, the loss of consumer trust in the business community due to greenwashing makes it more difficult to convince consumers of the accuracy of environmental claims that corporations make (Delmas & Burbano, 2011). Habitual purchasing and convenience may also act as barriers to green consumption, as consumers may be aware of sustainable options but not actively seek them out. Green consumption is also partially dependent on the availability, cost, and convenience of sustainable options in consumers' daily lives.

5. Implications

5.1 Theoretical Implications

The study contributes to the green marketing and sustainable consumer behavior literature in several ways. Firstly, the study contributes to the literature by integrating several theories (TPB theory, Value-Belief-Norm (VBN) theory) to determine their predictive power of sustainable purchase intention. Although these two theories have been separately used to study the phenomenon, this paper extends previous research by convincingly showing that both theories can be necessary to understand consumers' decision-making process (Ajzen, 1991; Stern, 2000), responding to calls for combining theoretical approaches to investigate sustainability issues (Han, 2015) by considering both a rational and an ethical aspect. This complements the TPB with respect to cognitive evaluations, social pressures, and perceived personal control, and the VBN model with respect to internalized values and personal norms. This supports the idea that a more complex constellation of psychological motives influences green consumer behavior, in addition to rational deliberation, also including moral motivations and feelings of moral obligation towards the environment. Second, this study adds to previous research by combining central psychological variables: environmental concern, trust, and perceived consumer effectiveness, under the umbrella of behavioral intentions. Previous research has focused on individual variables testing their effects separately, while this research shows the relationship among those variables and their combined influence. The TPB and VBN constructs are bridged by environmental concern, which has an impact not only on attitude but also on the activation of moral norms (Joshi & Rahman, 2015). Trust in green claims has been recognized as an important mediating variable between marketing stimuli and consumer responses forming the construct of green brand credibility. Third, the paper adds to the literature on the attitude-behavior gap in sustainable consumption, the observation that consumers express strong environmental concerns but do not translate these into purchase behavior (Kollmuss & Agyeman, 2002). The revelation of enabling factors and barriers, such as awareness, social influence, perceived effectiveness, price, availability and scepticism, contributes to a tighter definition of this gap. The study also contributes to the theoretical models of the gap by stating that behavioral intentions are a function of motivation and context. The theory supports the role of social and cultural dimensions in shaping consumer choices with the strong role for social norms being highly supportive of the subjective norms construct of TPB theory and the need to consider collective social dynamics in sustainability research (Cialdini et al., 1990). It also suggests the need to examine the applicability of a theoretical perspective in different cultural contexts where social influence may vary. Furthermore, future research may test the model by including new predictor and response variables that represent emotions, habits, situational factors, etc., enabling a richer understanding of the model's applicability and predictive power. Furthermore, longitudinal designs may be applied, which would allow researchers to examine the temporal change in consumer behavior, unlike the cross-sectional design.

5.2 Managerial Implications

The results of study provide valuable insights to organizations which are seeking to formulate and implement effective green marketing strategy. Due to increasing consumer demand towards sustainable

products and services, organizations should develop green marketing strategy which effectively meets their consumers' needs with respect to their expectations and behavior. The most important implication for managers is the need of an honest message in green marketing. Due to the strong impact of trust on the green purchase intention, the green claims should be truthful, verifiable and easily communicated to the public. However, because of frequent false green claims and allegations, consumers appear to be skeptical about green claims and skepticism of authenticity can jeopardize brand reputation (Delmas & Burbano, 2011). Companies can improve their authenticity and reduce green washing by increasing transparency, providing more information about life cycle and obtaining third-party certification. Clear and honest communication can create long-term trust and build relationships with consumers. Another important implication of this research is as consumers' environmental knowledge can help explain the antecedent model of consumers' green purchase intentions, it should also be encouraged so that consumers' green purchasing behavior can be improved. To promote consumers' environmental knowledge, businesses can include consumer education programs in their marketing mix. These could include information about the environmental impacts arising from the manufacture and use of their products, sustainability efforts undertaken by firms, and the role played by consumers' purchases in environmental protection (Ottman, 2017). Education could help consumers cut through the clutter and make informed decisions about financial products.

Another method of promoting green consumption is the use of social influence. Studies have shown peer and social influence to play a major role in consumer behavior, making use of social marketing techniques an option for firms. Engaging with influencers, opinion leaders, community organizations and the like can help raise awareness about sustainability issues and create positive social norms around green consumption. Social media in particular can be effective for influencing consumers and promoting sustainable behavior. Campaigns stressing collective action and responsibility can underscore the role of social norms in shaping people's behavioral choices (White et al., 2019). Increasing the accessibility and affordability of green products is vital to closing the intention-behavior gap, as high prices and limited availability are often regarded as barriers to green purchases. To this effect management might focus on reducing production costs by optimizing the production process or using the advantages of economies of scale. Alternatively, expanding distribution channels and making green products available on mainstream markets expands the potential target group (Gleim et al., 2013). Pricing strategies can cater to potential customers, too. Discount campaigns or rebates can be a way to reach price-sensitive customers. Likewise, the perceived consumer effectiveness can be increased by communicating the impact of individual behavior. In other words, marketing messages that stress the contribution of green consumption behavior to an overall important goal can help individuals to make more sustainable consumption decisions. An example of this can be seen in marketing communications stressing the contribution of small-scale efforts to the overall environmental benefit (Ellen et al., 1991). In the end, for green marketing to be a long-term success, sustainability must be embedded at the core of the business rather than be a sideline. This means a genuine commitment to sustainable sourcing, production, and supply chain management. Companies that align their business model with sustainability principles are likely to gain credibility and sustainable competitive advantage

6. Conclusion

This study, therefore, seeks to contribute to a better understanding of the role of strategy on green purchase intention through the lens of green marketing. It adopts the Theory of Planned Behavior (TPB) and Value-Belief-Norm (VBN) theory as theoretical bases to explore how green marketing affects the green product evaluation and selection process among consumers in the green market. The findings support the notion that sustainable purchase intention is a cognitive social construct that is influenced by moral and cognitive antecedents. Environmental knowledge is another factor affecting sustainable consumption. Consumers with higher environmental knowledge and awareness of environmental problems and their consequences tend to have a more positive attitude toward green products and a greater intention to buy such products (Joshi & Rahman, 2015). The model places a strong emphasis on knowledge and awareness, but acknowledges that knowledge does not always change behavior in the

absence of other reinforcing factors. Another important factor is the credibility of green marketing claims: in a greenwashing scenario, the credibility and transparency of claims and environmental benefits represents another important factor influencing consumer purchase decisions (Delmas & Burbano, 2011). Consumers are prone to purchase from brands they consider trustworthy and environmentally friendly, making authenticity in sustainability messaging a priority for companies looking to gain consumer trust. Another important factor of consumer behavior is social influence. This research revealed that subjective norms, defined as expectations and actions from peers, family and social networks, have a substantial effect on sustainable purchase intention (Ajzen, 1991). The results support the idea that consumption does not happen in an individual vacuum, which is only more the case today with the proliferation of social media tools making social influence a more obtainable strategy in the marketer's toolkit. Perceived consumer effectiveness (PCE), defined as the belief that an individual's purchasing behavior can contribute to the implementation of environmental protection, is another critical determinant of green consumption (Ellen et al., 1991). Such self-efficacy can increase motivation and strengthen the relationship between intention and behavior, making it an important variable in consumer education and communication.

In addition, other barriers remain. These include the relatively high cost of green products, limited supply of green products, lack of credible information, and perceived greenwashing, which are all factors contributing to the attitude-behavior gap in sustainable purchasing behavior and have been highlighted by previous literature (Kollmuss & Agyeman, 2002). These barriers suggest that while consumers may express a willingness to support sustainability, practical constraints can limit their ability to align their behavior with their intentions. This suggests that in organizational settings, approaches for shifting consumption towards sustainability should not solely focus on improving environmental knowledge and building trust in environmental claims, but also on tackling structural barriers such as access to and affordability of sustainable goods and services. Additionally, using social influence and increasing the consumers' sense of effectiveness may be a valuable strategy. More generally, as environmental issues become increasingly prioritized, companies and organizations that fail to make the necessary adjustments to accommodate consumers' changing tastes will likely see themselves becoming less relevant in the market. Organizations that successfully align their business and sustainability strategies can gain advantages including a strong brand, increased customer loyalty, and improved organizational performance (Porter & Kramer, 2011). The theoretical contributions of this research are twofold. First, this study contributes to the literature through the integration of several theoretical perspectives that develop a holistic understanding of sustainable consumer behavior. Second, this study lays the groundwork for future study by identifying variables of interest and relationships to explore. Further research on the role of culture in green consumption could examine its influence depending on different social and economic settings. Longitudinal research designs may allow researchers to closely observe consumers' attitudes and behaviors towards green consumption over time to provide a better understanding of the dynamics of sustainable consumption behavior. This is part of a larger effort within businesses, policymakers, and consumers to generate sustainable consumption strategies. Green marketing potentially contributes to green consumption, although psychological aspects and practical barriers to green consumption must be properly assessed and addressed. Addressing issues that revolve around awareness, trust, social influence, or access may help create a more responsible and sustainable marketplace.

7. Limitations and Future Research

Despite the important contributions to understanding the green marketing-sustainable consumer behavior relationship, caution should be exercised when interpreting the findings. These limitations must be taken into consideration and will be addressed further in the context of the implications for future research. The first limitation of this study is related to self-reported data. The survey method and use of structured questionnaires in particular require the respondents to self-report their attitudes, perceptions, and behavioral intentions, which may be affected by biases associated with social desirability and response consistency (Podsakoff et al., 2003). Participants may also respond with pro-environmental

attitudes and willingness to buy green products to look socially desirable. This leads to self-reports that do not correlate very well with behavior, which means that self-reports are not able to overcome the well-known attitude-behavior gap in environmental sustainability (Kollmuss & Agyeman, 2002; Steg & Vlek, 2009). Future studies should get around this limitation of self-reported behavior by using objective measures, such as recorded purchase behavior or experimental research, to test for sustainable consumption behavior. One more limitation is related to the methodology. Although convenience sampling is very practical, accessible, and cost effective, it does not guarantee generalizability (Etikan et al., 2016). However, this sample would not be too generalizable to the entire population since it may be biased towards individuals who would be easier to reach, or are already interested in the subject of sustainability. It is likely that those results would not fully capture the attitudes and behaviors of consumers in socio-economically or culturally different groups.

Additionally, due to the cross-sectional design of the study, it is unable to identify the causality of the identified relationships or measure changes in behavior over time. The analysis does not examine how the identified relationships may evolve over time or the potential influence of external factors, such as changes in market conditions or environmental policies, on consumer behavior (Creswell, 2014). Longitudinal research could be valuable for understanding how and when sustainable purchase intentions develop, as well as whether the relationships change over time. Furthermore, the study only considers four factors, namely environmental concern, trust, social influence, and perceived consumer effectiveness, that may affect consumer behavior. Other factors such as emotional, habitual, risk, and product attributes may also affect consumer behavior to some extent (White et al., 2019). Future research should build on this conceptual framework by including other constructs to develop a more thorough understanding of sustainable consumption. Another limitation could be that cultural and regional differences are not taken into account. Attitudes toward sustainability and green products are very different in various cultures and regions. The values, norms, and economy of the respective societies can influence these attitudes (Hofstede, 2001), meaning that the generalizability of the present study's results is limited to the German study population. Therefore, further cross-cultural research could address the role of culture in shaping sustainable consumer behavior. Based on these limitations, a number of suggestions can be made for future research. A more representative and diverse sample of respondents could be used, such as one making use of probability sampling methods where possible. A mixed-method approach which combines quantitative surveys with qualitative methods such as interviews or focus groups could provide more subtle data on consumer motivations and behaviors towards ethical purchasing.

Third, experimental studies can identify a causal relationship between independent and dependent variables. Furthermore, controlled experiments can investigate the efficacy of green marketing strategies, such as eco-label, price discount, and message framing, in influencing consumer behavior. Because, with such methods, researchers would no longer only have to correlate the relationship between different variables. Finally, questions could arise on sustainable consumption behavior and new trends in this domain, such as the impact of digital technology and social media or the emergence of a circular economy. Since consumer behavior is continuously changing in response to the transformations of technology and the environment, research on this topic remains relevant. Thus, the study contributes to the literature on green marketing and sustainable consumer behavior. Future research can adopt more advanced and qualitative methods to further expand

References

1. Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
2. Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665–683.
3. Belz, F. M., & Peattie, K. (2012). *Sustainability marketing: A global perspective*. Wiley.
4. Brundtland Commission. (1987). *Our common future*. Oxford University Press.

5. Bryman, A. (2016). *Social Research Methods* (5th ed.). Oxford University Press.
6. Chen, Y. S. (2010). The drivers of green brand equity. *Journal of Business Ethics*, 93(2), 307–319.
7. Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust. *Journal of Business Ethics*, 114(3), 489–500.
8. Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct. *Journal of Personality and Social Psychology*, 58(6), 1015–1026.
9. Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage.
10. Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64–87.
11. Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role? *Journal of Business Research*, 56(6), 465–480.
12. Ellen, P. S., Wiener, J. L., & Cobb-Walgren, C. (1991). Perceived consumer effectiveness. *Journal of Public Policy & Marketing*, 10(2), 102–117.
13. Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Convenience sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1–4.
14. Evans, J. R., & Mathur, A. (2018). Online surveys. *Internet Research*, 28(4), 854–887.
15. Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior*. Addison-Wesley.
16. Gleim, M. R., Smith, J. S., Andrews, D., & Cronin Jr., J. J. (2013). Barriers to green consumption. *Journal of Retailing*, 89(1), 44–61.
17. Griskevicius, V., Tybur, J. M., & Van den Bergh, B. (2010). Going green to be seen. *Journal of Personality and Social Psychology*, 98(3), 392–404.
18. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis*. Pearson.
19. Han, H. (2015). Pro-environmental behavior. *Journal of Sustainable Tourism*, 23(3), 421–435.
20. Hartmann, P., & Apaolaza-Ibáñez, V. (2012). Green energy brands. *Journal of Business Research*, 65(9), 1254–1263.
21. Hofstede, G. (2001). *Culture's consequences*. Sage.
22. Joshi, Y., & Rahman, Z. (2015). Green purchase behaviour. *Management of Environmental Quality*, 26(3), 330–347.
23. Kaiser, H. F. (1974). Factor analysis. *Psychometrika*, 39(1), 31–36.
24. Kilbourne, W. E., & Pickett, G. (2008). Environmental sustainability. *Journal of Business Research*, 61(9), 885–893.
25. Kollmuss, A., & Agyeman, J. (2002). Attitude–behaviour gap. *Environmental Education Research*, 8(3), 239–260.
26. Kotler, P. (2011). Reinventing marketing to manage environmental imperatives. *Journal of Marketing*, 75(4), 132–135.
27. Lee, K. (2008). Opportunities for green marketing. *Marketing Intelligence & Planning*, 26(6), 573–586.
28. Likert, R. (1932). Measurement of attitudes. *Archives of Psychology*, 140, 1–55.
29. Malhotra, N. K. (2010). *Marketing Research*. Pearson.
30. McEachern, M. G., & McClean, P. (2002). Organic purchasing motivations. *British Food Journal*, 104(2), 85–98.
31. Nunnally, J. C. (1978). *Psychometric Theory*. McGraw-Hill.
32. Ottman, J. A. (2017). *The New Rules of Green Marketing*. Routledge.
33. Peattie, K. (2001). Golden goose or wild goose? *Business Strategy and the Environment*, 10(4), 187–199.
34. Peattie, K., & Crane, A. (2005). Green marketing myths. *Qualitative Market Research*, 8(4), 357–370.
35. Polonsky, M. J. (1994). Green marketing introduction. *Electronic Green Journal*, 1(2).

36. Porter, M. E., & Kramer, M. R. (2011). Shared value. *Harvard Business Review*, 89(1–2), 62–77.
37. Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method bias. *Journal of Applied Psychology*, 88(5), 879–903.
38. Roberts, J. A. (1996). Green consumer demographics. *Journal of Business Research*, 36(3), 217–231.
39. Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). Green purchasing decisions. *International Marketing Review*, 13(4), 35–55.
40. Stern, P. C. (2000). Environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424.
41. Tanner, C., & Kast, S. W. (2003). Promoting sustainable consumption. *Psychology & Marketing*, 20(10), 883–902.
42. UNEP. (2020). *Global Environment Outlook*.
43. White, K., Habib, R., & Hardisty, D. J. (2019). Sustainable behavior framework. *Journal of Marketing*, 83(3), 22–49.