



Inspecting the Consequences of the Green Marketing Utensils and Tools to Check the Purchase Intention of the Young Adults through the Moderating Role of Green Conscious Attitude: An Empirical Study

<sup>1\*</sup>Dr. Muhammad Bilal Ahmad

<sup>2</sup>Shafq Zulfiqar

<sup>3</sup>Dr. Fatima Shaukat

<sup>4</sup>Dr. Fizza Rizvi

<sup>1\*</sup>Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan,

<sup>2</sup>Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan

<sup>3</sup>Lecturer, DMAS, UE Business School, University of Education, Lahore, Pakistan

<sup>4</sup>Assistant Professor, Hailey College of Commerce, University of the Punjab, Lahore, Pakistan

<sup>1\*</sup>[bilalahmad@puhcbf.edu.pk](mailto:bilalahmad@puhcbf.edu.pk)

Abstract

Environmental concerns have intensified global interest in eco-friendly practices and the development of green products. Although young consumers worldwide are increasingly inclined toward sustainable goods, evidence from developing countries like Pakistan shows a comparatively lower level of responsiveness. This highlights the need to examine the factors that influence their green purchasing behavior. This study examines the factors influencing young consumers’ intentions to purchase green products, with a focus on Generation Z (ages 13–28) and Generation Alpha (born 2010 and later). Data were collected from 251 respondents via online and printed questionnaires and analyzed using SPSS and SmartPLS. The findings indicate that green marketing tools are significantly associated with young consumers’ ecological concerns, and this relationship is strongly mediated by green-conscious attitudes. Authenticity, legitimacy, and transparency in green production further reinforce purchase intentions. This research underscores the pivotal roles of producers, marketers, and policymakers in fostering sustainable consumption through quality, affordable alternatives, and supportive incentives. Additionally, it advocates integrating environmental sustainability into educational curricula to cultivate long-term eco-friendly behaviors.

**Keywords:** Green Conscious, Green marketing tools, Generation Alpha. Green Environment Awareness, Generation Z, Purchase Intention

Article Details:

Received on 15 June 2025

Accepted on 10 July 2025

Published on 12 July 2025

Corresponding Authors\*:

Dr. Muhammad Bilal Ahmad

## INTRODUCTION

### BACKGROUND OF THE STUDY

In recent years, rising environmental concerns have significantly increased awareness of green marketing, particularly among young consumers. Green marketing refers to strategies that promote eco-friendly products, sustainable practices, and responsible consumer behavior (Polonsky, 1994). As a result, businesses are increasingly adopting green marketing practices to attract environmentally conscious customers and enhance their corporate social responsibility (Keller, 2016).

Environmental issues have thus become a critical area of focus not only for multinational corporations but also for governments, regulatory bodies, educational institutions, researchers, and other stakeholders. This trend has gained momentum over the past few decades, driven by mounting evidence of ecological degradation. Although the concept of green marketing emerged in the early 1970s, eco-friendly products gained wider popularity in the 1990s due to their perceived benefits (Ansar, 2013). Today, consumers are gradually paying more attention to environmentally responsible practices, influencing how businesses operate (Chen & Chang, 2013; Lopez & Peters, 2025).

Many firms and multinational companies now recognize that green products can enhance their competitive edge. The marketplace itself is evolving: traditional models are being updated as firms incorporate sustainability into their offerings (Peattie & Crane, 2005). Notably, young consumers are increasingly aware of environmental challenges and consider sustainability in their purchasing decisions (Lacka, 2014; Wang & Zaman, 2025). Their intentions to buy green products are shaped by factors such as ecological concern, perceived value, brand expectations, and social influences (Pathak, 2016). Research also suggests that many young consumers are willing to pay a premium to support environmental protection (Marc, 2025; Lobo, 2019; Vermeir & Verbeke, 2008).

Environmental concerns are escalating globally, increasing the need for sustainable consumption patterns. This places considerable pressure on consumers' eco-literacy as a driver of environmentally responsible decisions (Moustafa, 2007; Roussel & Audi, 2024). While prior research confirms that green awareness can foster pro-environmental attitudes (Granzin & Olsen, 1991), its influence on actual purchasing behavior remains inconsistent, particularly among young or educated consumers (Taghian, 2007; Marc, 2024).

In Pakistan, a key barrier is the lack of awareness among both consumers and manufacturers, resulting in heightened waste and pollution that adversely impact public health. Combined with resistance to change, this gap contributes significantly to environmental degradation. Although companies are increasingly embracing green marketing, there is still limited understanding of how these strategies shape young consumers' purchasing behaviors (Jamel & Zhang, 2024; Aldaihani, 2024). Factors such as trust in green claims, perceived product quality, willingness to pay a premium, and social influence all affect how green marketing influences consumer choices (Ottman et al., 2006; Ramanust, 2023; Wang & Li, 2024).

Air pollution represents a major environmental and health threat in Pakistan. In urban centers like Lahore, motorized traffic accounts for approximately 83% of air pollution (United Nations, 2023), while in Karachi, vehicular emissions contribute around 70% (Fatima et al., 2023). Poor fuel quality, aging vehicles, and limited public transportation exacerbate these issues, underlining the urgency of adopting sustainable practices. Most studies on green marketing and consumer behavior have been conducted

in developed countries such as the U.S. and Europe, where consumers are highly responsive to eco-friendly marketing and actively purchase green products (Haque et al., 2023; Wang & Manopimoke, 2023; Batool et al., 2025; Audi, 2025). By contrast, there is limited research in developing economies like Pakistan, especially on young consumers' awareness and behavior regarding green products (Yue & Nor, 2024).

While global studies highlight the importance of environmental trust and corporate responsibility (Chen & Chang, 2013; Babu et al., 2024), little is known about how young consumers in Pakistan form their attitudes and intentions toward green products. Although many young people express concern for sustainability, this does not always translate into consistent green purchasing behavior (Dilanthi, 2024; Mehdi et al., 2025). Awareness alone is insufficient; consumers also need motivation and engagement through effective policies and educational programs (Yue & Nor, 2024; Arshi et al., 2025).

Additionally, Pakistan's diverse cultural, economic, and regional contexts create unique challenges that influence consumer behavior (Lavuri et al., 2021). This highlights the importance of tailoring green marketing strategies to local traditions and market conditions.

This study aims to fill these gaps by investigating the specific factors that shape young consumers' green purchase intentions in Pakistan. By understanding these drivers, marketers and policymakers can design targeted interventions that align with consumer needs and promote more sustainable lifestyles. Therefore, the study aims to inspect the consequences of the green marketing utensils and tools to check the purchase intention of the young adults through the moderating role of green consciousness attitude.

## LITERATURE REVIEW

### GREEN MARKETING AND ITS TOOLS

If we want to encounter humanoid sustainable brand positioning desires organizations need to emphasize green marketing. According to Begum, "Green marketing involves promoting goods and amenities which are existing as ecologically responsible replacements." It comprises eco-labeling, sustainable wrapping, green promotion, and commercial societal accountability measures aimed at motivating environmentally friendly shopping habits and safeguarding the future of the environment (Polonsky, 1994). The outcomes designate that acquisition purchase intention of green products, ecological accountability, and the supposed interactive mechanism control pointedly and confidently positively affect the stimulation of green ingesting behavior. Conversely, self-efficacy has an unimportant unintended influence, suggesting that although customers identify the prominence of green products, their self-assurance in production supportable sustainable selections leftovers comparatively little. Regardless of a mounting concentration in eco-friendly spending, main barriers such as high prices, some degree of imperfect product accessibility, and absence of awareness remain to delay the widespread acceptance of ecological goods (Anbukarasi, 2017; Audi et al., 2025)

Green marketing as an administration process elaborates on recognized, come to be a title and achieving customer necessities and requirements while contributing financial, cost-effective, and green ecological, ecological reflections (Ali & Audi, 2016; Nazir et al., 2024; Audi et al., 2025). The Western Marketing Association (Shoaib & Develi, 2023) labeled that green advertising, promotion, growth, and advancement of eco-friendly imports have given in response a promising influence in the conservation of the green atmosphere. Eco-friendly marketing includes innovation, environmentally friendly,

maintainable construction methods, ecological wrapping, includes unbelievable marketing and directing approaches.

Green marketing involves promoting goods or facilities that have an environmental profile that is better or less harmful than their alternatives (Bhasin, 2024). Many companies have adopted green advertising to promote their goods and facilities in alignment with reducing their impact on the environment (Begum, 2024). The primary objective of eco-friendly promotion is to reduce the ecological burden caused by products or services by incorporating environmentally friendly practices in every step of their development, production, and promotion. (MDPI, 2023)

Green marketing ensures the simultaneous achievement of consumer, company, and environmental goals during every stage of product development, including making, pricing, marketing, and distribution. Customers' needs are met, businesses accomplish their objectives, and the strategy aligns with environmental and ecological sustainability (Dangelico, 2017)

## **ECO-FRIENDLY PROMOTION**

Eco-friendly promotion mentions to promotion movements must weight on inspiring ecologically welcoming goods in addition to performing toward produce alertness in support cheer sustainability. According to (Shoaib & Develi, 2023), Green promotion includes numerous elements of the marketing transport network mix—publicizing, community associations, sales advertising, and digital broadcasting—to transport communications around ecological accountability. It not singles connects a product's supportable observations but also teaches customers about the environmental benefits of their buying choices. (Kotler, 2016)

Integrating green promotion can also heighten brand reputation, customer belief, and competitive improvement. Businesses that efficiently interconnect their ecological energies tend to grow durable associations with ecologically mindful customers (C. N., 2011) Green public relations plans can also decrease uncertainty regarding approximately company's ecological entitlements while balancing with clarity and third-party guarantees. (Gangadharbatla, 2014)

Green marketing is healthy defendable, as it highlights chief eventual for compassionate ecological decisions, nourishing consumer height of burdens, achievement of the main thing about competitive advantages which is supreme main important for to some extent corporation, stimulating company communal accountability, attaining cost investments, fulfilling with standards, guaranteeing sustainability, nurturing worldwide prominence, motivation transformation, and industrial improving mutual possessions (Babu et al., 2024).

## **GREEN ADVERTISING**

The Communication expressed in Green Advertising necessity be place consideration on the direction of upcoming ecological and wellbeing assistance of the consumers. The symbol or courageous stroke on manufactured goods concentration on present-day ecological benefits. (Burbano, 2011). The manufactured goods comprise structures similar to life-saving healthiness welfares and concentrated productions to fascinate clients, in promotion goods must highlight undesirable consequences and highpoint optimistic consequences (Karstic et al., 2021). In promotion, not usage, false structures do not overstress the possessions. The manufacturers of the mass-produced goods need to display uniqueness and accuracy around the goods that it is right that their manufactured goods have structures of green and offer several benefits to the consumers.



A daring trial in green advertising is the danger of greenwashing, where businesses lay it on thick or falsify their conservational ecological entitlements. Deceptive green ads can in consequence to customer criticism and hurt. (Delmas, 2011). Ethical green promotion necessity puts your faith in on clear as crystal, evidence-based entitlements, and preferably encompasses third-party guarantees to provide publicized eco-assistances. (Delmas, 2011) Businesses' knowledge and application of ecological welcoming goods characteristics and structures, dropping the damaging influence of artificial goods decreases contamination, preserves resources, applies defensible follow-up and maintenance a good, healthy ecosystem. Eco-labeling encourages the proof of identity of green goods, ecological presentation, ecological claims that include wrapping of the goods and chattels built by a suitable professional, and also inspires customers to purchase ecologically welcoming goods. (Mokha, 2018)

Corporations are shifting in the direction of the innovative idea of branding, eco-branding assists clients to discriminate these goods from further non-green goods, these foods offer contour maintainable forthcoming for subsequent peer groups. (Mokha, 2018). Green script, clear green philosophies, opinions, and guarantee logos clue to optimistic approaches in the direction of the advertisement and generate a respectable appearance of a specific brand. Commerce's information and spread over information about ecological welcoming goods characteristics and structures, dropping the damaging influence of artificial goods decreases contamination, preserves resources, applies defensible follows and maintains a in good healthy ecosystem. The company essentially to usage ordinary images that convey thoughtfulness of the clientele, also generates a sensitive joining with consumers and develops influences with the trademark and with the customers. (karstic, kotic-stancovic, & cvijovic, 2021)

Recently mounting and the raising trends of the social media are cumulative quickly with the quick rate about 13 fresh operators per second if we explore it the universal social media consumers has increased to 4.62 billion, having resources on social media allows more chances for young producers to gain huge trends and support the green promotion of their products. Through online social platforms like Insta, YT, TikTok, etc., take a broad-minded, progressive extensive to virtual social stages, connections through frequent digital procedures movements to accomplish their customers' necessities and requirements (Li, Chiu, Ho, & So, 2024).

*H1: Green marketing tools influence young customers' Purchase Intention.*

*H2: Green marketing tools influence the Green Conscious Attitude.*

## **MEDIA DEVICES**

Media devices are an important driver in the announcement of information, which has a remarkable, noteworthy, significant, as well as vital impact on the buying target of customers (Lavuri, Jusuf, & Gunardi, 2021).

Incorporation of media devices—such as smart mobiles, tablets, supercomputers, and smart televisions—has converted the method of green advertising memos are connected and used by many people. These products act as controlling networks over and done with which businesses can supply simultaneous, collaborating, and modified ecological comfort to a wide-ranging audience, improving consciousness and contribution in an ecological manner. (Kartajaya, 2021). Digital media devices as tools for green communication of Modern media devices permit green dealers to engage digital stages such as social media, mobile apps, websites, and video streaming services to spread environmental messages. Through these channels, brands can stimulate eco-friendly goods,

Segment sustainability information, inspire customer connection in green inventiveness, and Consumption of the augmented reality (AR) or QR codes for clarity (e.g., tracking carbon footprint). These procedures make green marketing additional engaging, appealing, and cooperative, permitting customers to right of entry on-demand facts and make knowledgeable green selections (Peattie K. &, 2009)

Smart mobile devices permit for two way communication, permitting customers to speech thoughts, share eco-conscious involvements, and request superior commercial accountability. Businesses can usage analytics from these strategies to modify green content, growing its efficiency and importance (Mangold, 2009).

## **GREEN ENVIRONMENTAL AWARENESS**

Green environmental awareness refers to the information, self-importance, and performance of persons or the social order's progress in response to mounting apprehensions about ecological deprivation, environmental change, and sustainability change. It shows a vital title role in molding both communal rule and customer conduct (Bamberg, 2007). As ecological concerns deepen globally, efforts towards goal to stimulate ecological habits, such as reducing discarded waste, preserving energy, and supporting green industries. Organizations, management, supervisors, administrations, and NGOs utilize movements, exercise, and mass media to upsurge awareness and encourage pro-environmental movements (Kollmuss, 2002).

A green lifestyle focuses on adopting habits oriented toward environmental sustainability to decrease one's influence on the atmosphere, day by day. Examples of green lifestyle practices are cutting down energy use, choosing sustainable modes of transportation, selecting organic or locally sourced food, recycling and reusing resources, and eliminating single-use plastics. At the heart of green living is people becoming aware of the impact of their daily activities and making choices that support environmental protection. (Kollmuss and Agyeman, 2002) said that environmental knowledge, values, and attitudes are key factors influencing pro-environmental actions that are crucial for achieving sustainable lifestyles. Green living remains an emerging concept in Pakistan, mostly caused by insufficient knowledge, few choices, and financial difficulties. (Khan, 2020)

## **GREEN ENVIRONMENTAL AWARENESS THROUGH ADVERTISING AND THE INTERNET**

Green environment correspondingly contains some sorts of promotion which include public broadcasting, newsprint with include advertising broadsheet, YouTube is a very operational method of stimulating your goods, lessens ecological harm, and highlights the environmental supports of the promoted products or services. Numerous people use Recyclable goods as substitutes for conventional goods. (Mokha, 2018). In Green advertising, establishments, administrations struggle to encourage an image of open and implicit attentiveness of ecological enjoyableness, industrialized level, and product level, and make provocation on the acquisition of products, objective choices hip attentions of consumers. (Karstic, Kostic-Stancovic, & Cvijovic, 2021) Otherwise, normal environmental happenings that lead to boosting the interior gratification, which consequently make people additional enthusiastic towards purchasing green, environmentally friendly, or sustainable goods. Purchasing biological or biologically friendly foods, environmentally friendly makeups, accepting supportable eco-friendly performs, purchasing environmental and ecological medications, assisting clients' lifetime expectancy and healthiness welfare in numerous stages of life. Environmental advertising helps the companies to raise

Pakistan's heightened awareness of green environmental issues reflects the nation's increasing threat from climate change and environmental challenges. Different research initiatives have analyzed patterns of environmental awareness and identified key drivers of green behaviours among people in Pakistan. (ResearchGate, 2024)

A recent study investigated how ecological influences the association amongst eco-friendly ecological consciousness or supportable suggestions among Pakistani consumers. It was revealed that eco-friendly ecological consciousness or strong intellect of responsibility were both important determinants of environmental attachment, although green awareness alone did not have a strong impact on eco-friendly behavior among consumers. Developing a strong feeling of attachment towards the environment likely plays an important part in encouraging people to make environmentally friendly choices. (ResearchGate, 2024)

There is a growing recognition in the education field that environmental education should be actively integrated into teacher preparation. The study suggested that introducing environmental education in teacher training will contribute to raising the level of environmental awareness among individuals. This research also revealed that promoting environmental education within teacher training contributes to accomplishing major international goals and supports efforts to build a greener Pakistan (Sultan et al., 2020).

Research among university students identified a extensive variety of awareness or commitment towards maintainable ingesting and eco-friendly behavior. It was concluded that increasing awareness alone is insufficient; effective strategies are needed to motivate young people to take concrete steps toward sustainable consumption.

Moreover, research on consumer purchasing behavior revealed that environmental concerns, knowledge about green products, price, and brand perceptions are major influencers when it comes to choosing products that are more environmentally friendly. Improving consumer awareness and considerations of costs are key to inspiring individuals to make more sustainable purchases. (Insight, 2023)

Environmental awareness fosters responsible practices and promotes environmentally friendly actions by people and society as a whole. With environmental problems like climate change, deforestation, and air and water pollution becoming ever more serious worldwide, cultivating awareness becomes vital for encouraging the adoption of green habits such as using environmentally friendly goods, recycling, conserving energy, and practicing sustainable consumption. Most developing countries, including Pakistan, are facing low levels of environmental awareness within rural and underprivileged populations, even while environmental problems intensify. (Shahzad, 2020)

**H<sub>3</sub>:** *Green Environment Awareness moderates the affiliation between Green Marketing Tools and the Purchase Intention.*

## **GREEN CONSCIOUS ATTITUDE**

Having a green conscious attitude means being alert, dedicated, and driven to act in ways that support the preservation of the environment and promote sustainability. It results from individuals incorporating information about the environment, their own beliefs, what they see in their communities, and a sense of attachment to the natural world. People with a green conscious attitude are much more likely to engage in environmentally friendly actions like reducing energy consumption, reducing waste, selecting eco-friendly products, and promoting sustainable causes. Research shows that attitude generally has a stronger impact on pro-environmental behavior as compared to knowledge (Ajzen, 1991).

Those individuals who commit to environmental values and regard environmental protection as their responsibility usually follow through with environmentally friendly behaviors, regardless of what incentives might be offered. Consumer purpose toward the purchase of eco-friendly goods is greatly influenced by people's green consciousness, especially among younger and better-educated buyers (Yadav, 2016).

Green behavior is still often inconsistent, even with positive environmental attitudes, as price, availability, and perceived feasibility can hinder sustainability choices (Carrington, 2010). Developing countries like Pakistan need to encourage green attitudes urgently since rampant pollution, shortage of water resources, and deforestation necessitate immediate changes in the ways people live and act. An obvious, clear movement amongst young customers is the mounting assessment of manufactured goods' sustainability and corporations' guarantee to green promotion procedures (Dilanthi, 2024). On the other hand, regardless of this attentiveness, several individuals remain uncertain about the acquisition of green products, and green buying purposes are not completely well-known (Yue & Nor, 2024). Consciousness or awareness single-handedly is not sufficient; customers' necessity also needs to be encouraged and involved in sustainable consumption. An absence of sustainable expansion curricula in these areas additionally hampers consumer attention in green eating (Yue & Nor, 2024). It is vital to discover why people, regardless of some knowledge, are not enthusiastically acquiring green goods. In Pakistan, there are many cultures that exist, people are from different backgrounds and are from different regions, numerous traditional, monetary, political, and environmental factors that influence green customer conduct (Lavuri, Jusuf, & Gunardi, 2021). There is a need for dealers, vendors, merchants, or manufacturers to be duty-bound to modify their green marketing schemes that match traditional modifications in numerous regions in Pakistan.

**H<sub>4</sub>:** *Green Conscious Attitude mediates the connection between Purchase Intention and Green Publicizing Utensils.*

**H<sub>5</sub>:** *Green Conscious Attitude Influence on Purchase Objective.*

## **THEORY OF PLANNED BEHAVIOR**

The Theory of Planned Behavior (TPB) posits that individuals' intentions and subsequent behaviors are shaped by three core factors: attitudes toward the behavior, subjective norms, and perceived behavioral control (Ajzen, 1991).

Attitude toward the behaviour reflects a person's positive or negative evaluation of performing the behaviour. In the context of green purchasing, this encompasses consumers' beliefs that buying eco-friendly products is beneficial and aligns with their personal values and ethical standards.

Subjective norms refer to the perceived social pressures to perform or not perform the behavior. For young consumers, these may include the influence of family, friends, or broader societal expectations that encourage environmentally responsible consumption.

Perceived behavioral control involves the perceived ease or difficulty of performing the behavior, which is linked to past experiences and anticipated obstacles. In green purchasing, this relates to whether consumers believe eco-friendly products are accessible and affordable, thereby affecting their ability to make such purchases.

Previous studies have employed these constructs that include attitudes, subjective norms, and perceived behavioural control to predict sustainable behaviours, recognizing that intentions often depend on factors beyond an individual's direct control (Sukresna &



Mikina, 2024). Applying TPB thus provides a robust framework to understand the drivers and barriers that shape young consumers’ intentions to purchase green products.

RESEARCH MODEL

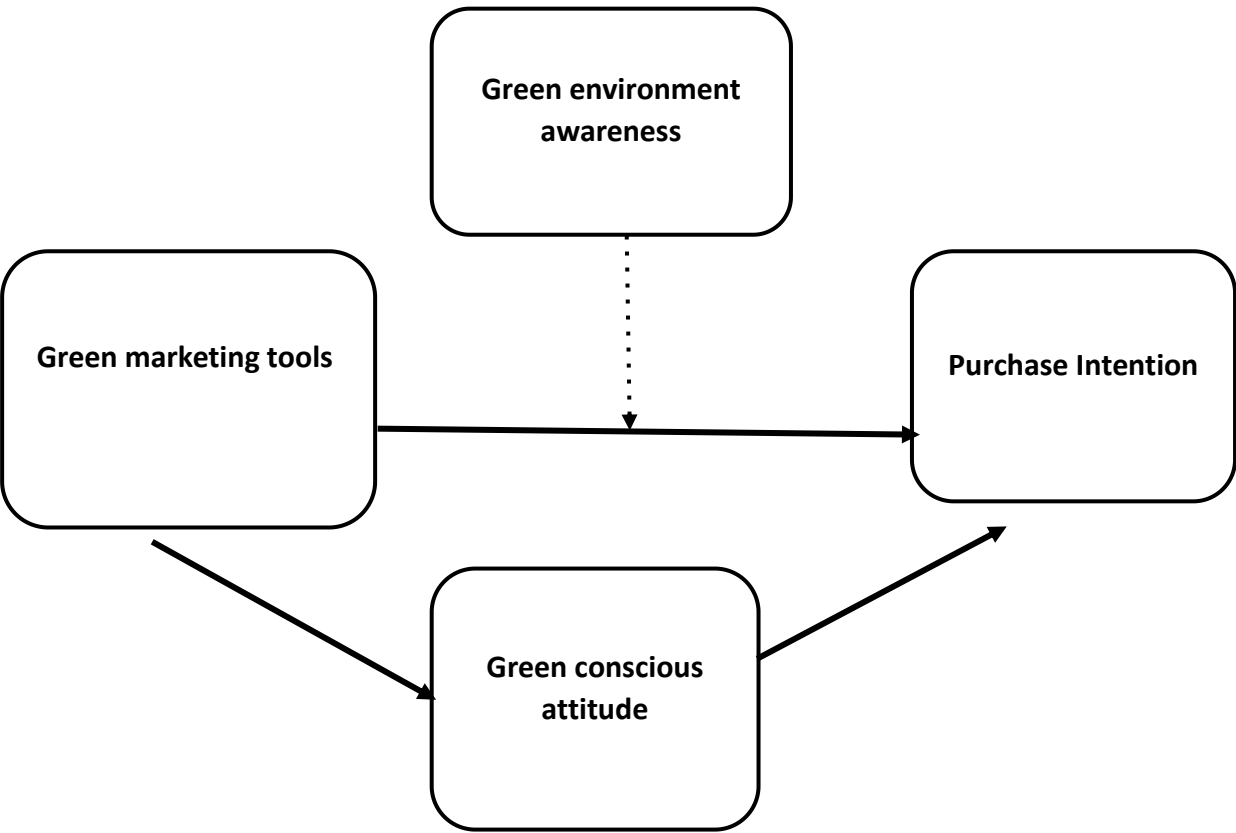


FIGURE 1: CONCEPTUAL MODEL

TABLE 1

Hypothesis	Statement
H1	Green Marketing Tools Influence Purchase Intention.
H2	Green Marketing Tools influence the Green Conscious Attitude
H3	Green Environment Awareness moderates the association among Green Marketing Tools using Purchase Intention.
H4	Green Conscious Attitude mediates the connection between Green Marketing Tools and Purchase Intention.
H5	Green Conscious Attitude Influence upon Purchase Intention.

METHODOLOGY

RESEARCH DESIGN

The use of a quantitative research design here is fitting since it allows for the study of numbers and the identification of patterns, relationships, and trends among the variables. With quantitative research, it is possible to find and generalize patterns from the statistics collected (Creswell, 2015). It uses both types of approaches: descriptive and explanatory. Descriptive research can capture the general awareness and buying trends relating to eco-friendly products, whereas explanatory research looks into the connection between knowing more about the environment and being more likely to buy sustainably. For collection, we decided to use a survey-based approach, since it is generally employed in quantitative research to gather data effectively and in a structured way (Saunders, 2019).



**SAMPLING TECHNIQUE**

Convenience sampling was chosen because it is affordable and straightforward to carry out. Most respondents were university students and young consumers, believed to be key players in fostering sustainable consumption. They represent a readily available and enthusiastic group to include in our research since they were eager to participate.

**TARGET POPULATION**

The participants were students and young adults ranging from 18 years old to onward. Information was together consuming together online surveys through Google Forms and face-to-face surveys. Using both online and offline methods allowed us to connect with a wider range of participants and boost the number of responses received. The entire 251 replies remained considered intended for analysis after all the necessary quality checks. A portion of the sample was selected via a probability method to ensure that participants from all age groups were represented. The collected information focused on examining how green preferences and practices shape the concept of “greenery” and their impact on purchase decisions.

**SAMPLE SIZE**

The study involved 251 young consumers, which was an appropriate sample size for the 18-item questionnaire designed to examine the relationships among eco-friendly advertising, environmental awareness, green-conscious attitudes, and purchase intentions. Data were collected using two methods: Google Forms for online responses and printed questionnaires for offline submissions, ensuring broad participation in the study.

**DATA COLLECTION AND PROCEDURE**

Data were collected using a questionnaire developed in Google Forms. To maximize accessibility, the questionnaire was also customized, printed, and distributed in hard copy form for participants to complete manually. Data collection spanned 20 days and resulted in 251 valid responses.

The questionnaire consisted of five sections. The first captured demographic variables such as gender, age, and education level. The remaining sections assessed key constructs: environmental awareness (4 items, serving as a moderator), purchase intention (3 items, as the dependent variable), green-conscious attitude (4 items, acting as a mediator), and green marketing (4 items, as the independent variable). Participants rated all items on a 5-point Likert scale.

Specifically, the questionnaire included item codes for green marketing tools (GMT1–GMT4), green-conscious attitude (GCA1–GCA4), environmental awareness (EA1–EA4), and purchase intention (PI1–PI3). Data analysis was conducted using SPSS, SmartPLS, Microsoft Word, and Excel.

**NUMERICAL ANALYSIS**

**TABLE 2: GENDER DISTRIBUTION**

	Frequency	Percent
Male	119	47.4
Female	132	52.6
Total	251	100%

**TABLE 3: OLDNESS STUDY**

Age		Rate	Percentage
Valid	18 to 20	39	15.5



20 to 25	151	60.2
25 to further	61	24.3
Entire	251	100%

TABLE 4 EDUCATIONAL BACKGROUND  
Study

		Frequency	Percent
Valid	Bachelors	119	47.4
	Masters	119	47.4
	PHD	13	5.2
	Total	251	100.0

TABLE 5: DESCRIPTIVE STATISTICS

	N	Smallest	Extreme	Mean	The value of Std. Deviation	The value for Skewness	
	Numbers	Numbers	Numbers	Numbers	Numbers	Numbers	Numbers
EA1	251	1	5	4.08	.849	-1.100	.154
EA2	251	1	5	3.92	.964	-.730	.154
EA3	251	1	5	4.17	.837	-1.191	.154
EA4	251	1	5	3.85	.738	-1.616	.154
PI1	251	1	5	3.94	.654	-1.577	.154
PI2	251	1	5	4.16	.740	-.972	.154
PI3	251	1	5	4.21	.789	-1.181	.154
GCA1	251	1	5	4.21	.784	-.942	.154
GCA2	251	1	5	4.10	.809	-.998	.154
GCA3	251	1	5	4.13	.800	-1.274	.154
GCA4	251	1	5	4.18	.731	-1.105	.154
GMT1	251	1	5	4.11	.785	-1.042	.154
GMT2	251	1	5	4.04	.866	-1.343	.154
GMT3	251	1	5	4.16	.791	-.984	.154
GMT4	251	1	5	4.09	.782	-.921	.154
Valid N (list-wise)	251						

MEAN VALUE

The mean rate of wholly is between 4.02 and 4.21. If values are far from the mean, then the outliers are identified. (Field, 2018)

STANDARD DEVIATION

The values 0.736 to 0.966 which tell that the answers are group around the mean. If the standard deviation is greater than two,  $SD \geq 2$  then its mean that the data is broadly spread, more probability of the outliers. (Tabachnick, 2019)

SKEWNESS

An optimistic skewness tell that a lengthier right tail, if the it is left tail then it means that it is negative skewness and if the Skewness is  $> 0$  (Wallnau, 2020) if the data of skewness is

equal to zero skew =0 then it mean that the data is perfectly or flawlessly symmetric it means that statistics is ordinarily dispersed. (Field, 2018) If the Skewness < 0, then it is negatively skewed, and it is longer and has a left tail. (Tabachnick, 2019)

MEASUREMENT MODEL

TABLE 6: MEASUREMENT MODEL ASSESSMENT: RELIABILITY AND VALIDITY

	Value Cronbach's alpha	of Value Composite reliability (rho_a)	of Value Composite reliability (rho_c)	of Value variance extracted (AVE)
GMT	.786	.799	.862	.611
GCA	.692	.713	.828	.617
GEA	.803	.806	.871	.628
PI	.646	.662	.808	.585

The measurement model is adequate. Nevertheless, all constructs have good composite reliability rho\_c must be superior to 0.8, and AVE must be less than the value 0.5. Purchase Intention ( $\alpha = 0.646$ ) has an alpha value that is slightly below the threshold but still not unacceptably low ( $\alpha > 0.7$ ). Rhoc (rho\_c) Composite reliability > 0.8 in all constructs → Very good! Mostly, rho\_a values are acceptable as well. The convergent validity measures are the AVE. It shows you how much variance of the construct is captured instead of the noise. Above 0.5 is considered good. In our case, Good convergent validity means all AVE values are above 0.5. (Hult, 2019)

TABLE 7: DISCRIMINANT VALIDITY(FORNELL LARCKER CRITERION)

	Value of the GMT	Value of GCA	Value of GEA	Value of PI
GMT	0.782			
GCA	0.442	0.786		
GEA	0.697	0.481	0.792	
PI	0.578	0.506	0.717	0.765

If the diagonal matrix is higher than the figures that are in the row and the values that are in the column of that construct, it establishes the discriminant validity.

Green Marketing Tools:  $\sqrt{AVE} = 0.782 > \text{correlations } (0.442, 0.697, 0.578) \rightarrow$  Green Conscious Attitude:  $\sqrt{AVE} = 0.786 > \text{correlations } (0.442, 0.481, 0.506) \rightarrow$  Green Environment Awareness:  $\sqrt{AVE} = 0.792 > \text{correlations } (0.697, 0.481, 0.717) \rightarrow$  correlations (0.578, 0.506, 0.717) (for the AVE analysis → is insufficient to prove purchase intention. Since all constructs are statistically significant, it is established that there is discriminant validity.

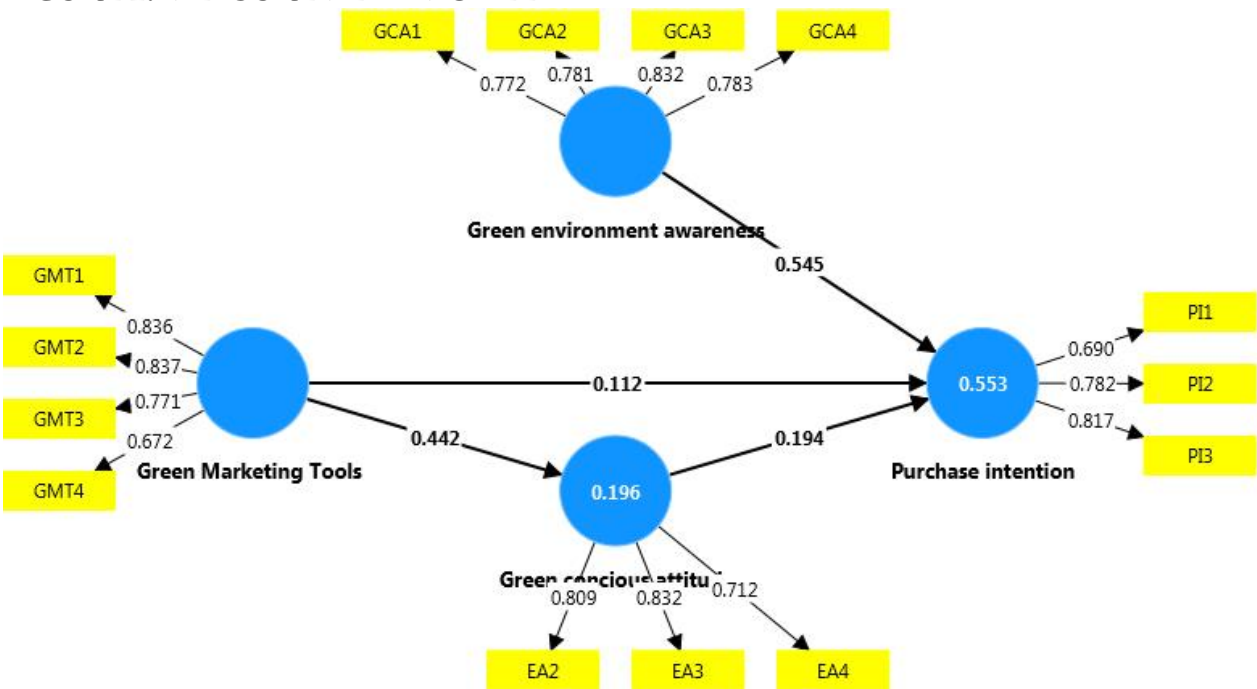
TABLE 8: DISCRIMINANT VALIDITY (HETEROTRAIT-MONOTRAIT RATIO HTMT)

	GMT	GCA	GEA	PI
GMT				
GCA	0.598			
GEA	0.871	0.638		
PI	0.793	0.742	0.978	

HTMT must be less than 0.90 for respectable rationality of discriminant (Ringle, 2015) or the value of price must be less than 0.90, Satisfactory discriminant rationality (Gold, 2001). So, if we notice that the table that is above all numerical numbers should be less than 0.90.



FIGURE 2: MEASUREMENT MODEL



According to the model, GMT direct influence upon purchase intention of only 0.112. Therefore, single green marketing is not a major reason for individuals to buy products. On the other hand, green marketing slightly impacts forming a green conscious attitude (0.442), and this influence is linked to weak to moderate purchase intention (0.194). This shows that if a person becomes pro-environment thanks to green marketing, they are a bit more likely to pick eco-friendly goods. The factor with the biggest impact on purchase intention is green environment awareness, as its path coefficient is 0.545. It recommends that individuals who are conscious and deeply anxious about the atmosphere are far additional likely to purchase environmentally friendly products.

TABLE 9: TOTAL EFFECTS, MEAN, STDEV, T VALUES, P VALUES

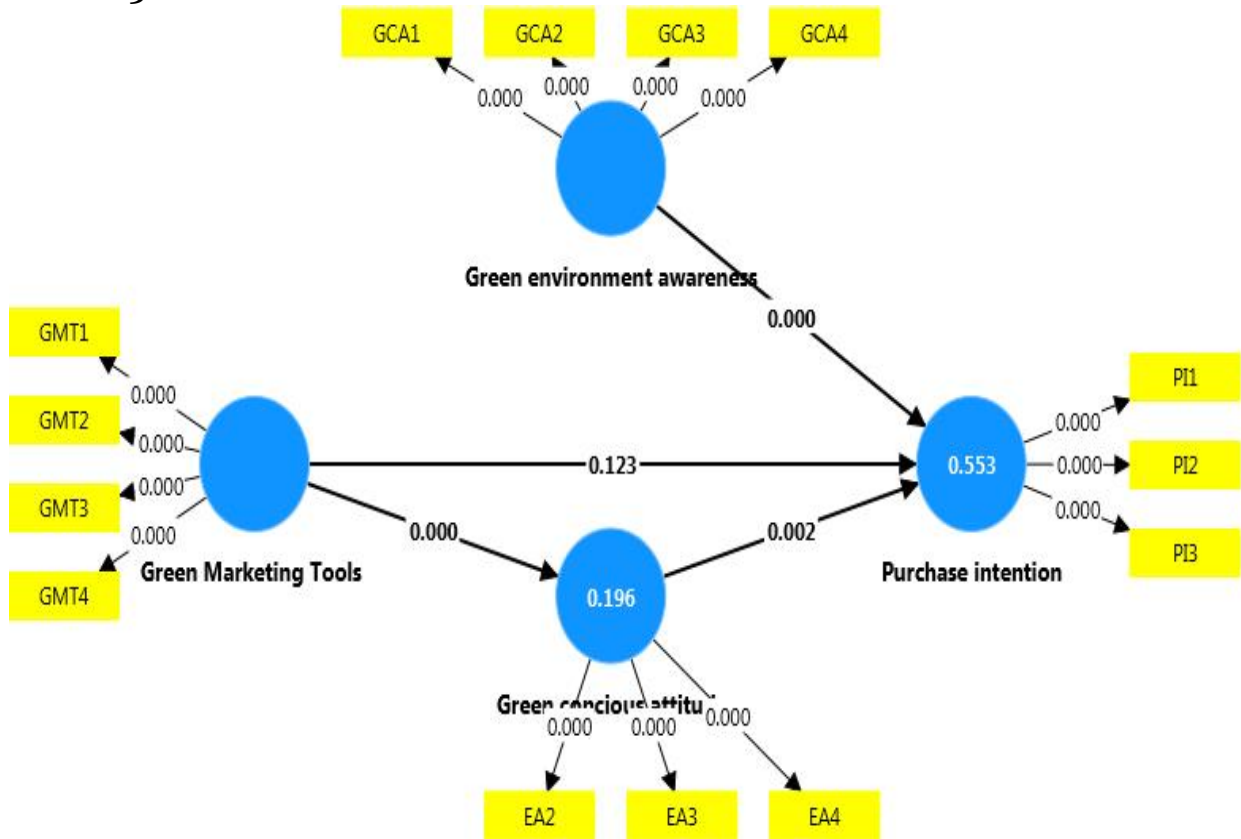
	O	M	STDEV	T statistics	P
GMT -> GCA	.442	.440	.087	5.081	.000
GMT -> PI	.198	.201	.082	2.415	.016
GCA -> PI	.194	.197	.061	3.170	.002
GEA-> PI	.545	.540	.081	6.774	.000

It has been confirmed through statistics that Green Marketing Tools positively influence consumers' attitudes about the environment ( $\beta = 0.442$ ,  $t = 5.081$ ,  $p = 0.000$ ). It agrees with previous studies that mention that businesses tend to encourage their customers to care more about the environment when they show green values (Joshi, 2015).

The direct link from Green Marketing Tools to intention to buy is significant, too, but the connection is not very strong ( $\beta = 0.198$ ,  $t = 2.415$ ,  $p = 0.016$ ). As a result, green marketing campaigns may change a shopper's intended purchase, though the impact is not very strong. Research studies earlier pointed to the same result: that the influence of marketing is stronger when it aligns with customers' values (Katsikeas, 2011).

Being aware of green environmental issues is the main factor that drives individuals need to buying ecological goods (path coefficient = 0.544). This supports earlier literature that proves awareness is a major influence on taking care of the environment (Kumar, 2021). All the relationships offered in the above table are highly significant p less than 0.05 and having an awareness of environmental problems makes the biggest impact on wanting to buy green products. Using green marketing tools can shape a person’s thinking in positive ways which then affects what they want to buy. Green marketing turns out to be valuable, but to get significant results, both public awareness and their attitude need to rise.

FIGURE 3: MEASUREMENT MODEL FOR MEDIATION



In the diagram, every connection between variables is statistically significant. Even though green marketing tools and purchase intention have a strong relationship, the impact is not particularly big. It means that using green marketing helps influence people slightly, but effectively, to opt for environmentally friendly items, as is proved by Leonidou et al. (2011). Green marketing tools have a very meaningful relationship with a green conscious attitude ( $p = 0.000$ ), showing that they influence positive thoughts about the environment. Joshi and Rahman (2015) report that green marketing can help consumers become more eco-conscious.

All outer loadings for GMT1 to GMT4, EA2 to EA4, and PI1 to PI3 have a value of P 0.000, representing that the measures for each variable are dependable and trustworthy. This is consistent with Hair et al.’s (2014) views on how strong and valuable the measurement model is.

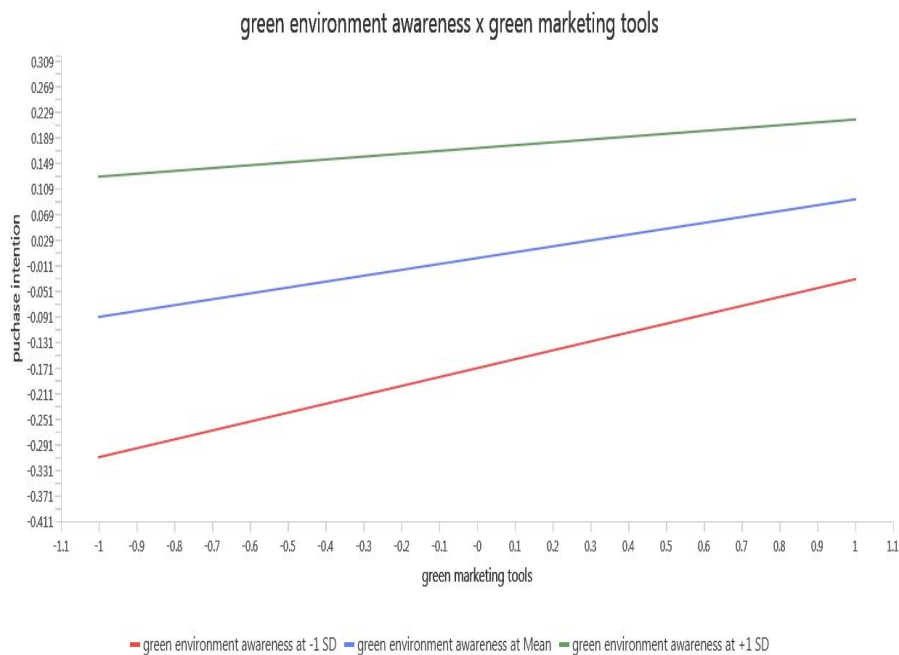


FIGURE 4

According to the interaction plot, awareness of the environment plays a role in influencing the influence towards green marketing on the buying objective. With the rise of green marketing tools, people who are aware of the environment increasingly want to purchase the product. Therefore, it follows previous studies in showing that people who keep green issues in mind are additional likely to be convinced through green publicising, so green environment awareness is beneficial for the success of green marketing.

Having green environmental awareness impacts the link between green marketing and the choice to buy a product. The graph uses an x-axis for green marketing tools and a y-axis to show buy-related attitudes. You can observe the effect of green environment awareness by looking at the relationship between these variables. Being standard deviation beneath the value of the M( mean),, moderator (green environment awareness) is lower. Meanwhile, at the standard deviation overhead of the M ( mean), it becomes higher.

According to the graph, someone's intention to purchase depends on their level of green environment awareness. According to the blue line, green marketing tools have a moderate effect on a person's willingness to purchase the product. High awareness of the environment is related to a stronger bond between people. Therefore, when people become more aware of the green environment, green marketing tools have a greater impact on their desire to buy.

TABLE 10: HYPOTHESIS TESTING TABLE

Hypothesis	P-Value	Results
H1	0.012	Supported
H2	0.000	Supported
H3	0.474	Not Supported
H4	0.012	Supported
H5	0.004	Supported

## LIMITATIONS AND FUTURE RESEARCH

This study examined green marketing (GM) and the purchase intentions (PI) of young consumers. However, several important limitations should be acknowledged. First, the relatively small sample size limits the generalizability of the findings, as it primarily reflects data drawn from a single university, town, or narrow age group. Consequently, the results may not extend to consumers younger than 22 years old or other demographic profiles (Haque et al., 2023).

Another key limitation is the reliance on self-reported questionnaires. While common in consumer behavior research, self-reported measures are prone to social desirability bias—respondents may provide answers that seem socially acceptable or environmentally responsible rather than accurately reflecting their actual purchasing habits (Schlegelmilch & Robertson, 2022). This underscores the persistent gap between stated intentions and real-world behavior, frequently highlighted in green consumption studies (Suki et al., 2023).

Additionally, conducting this research within a single cultural or geographic context restricts its applicability to other regions or countries, where environmental awareness and green product availability may differ markedly (Yue & Nor, 2024). Time also poses a constraint. Consumer attitudes, especially among younger generations who are heavily influenced by social and digital media trends, can change rapidly. Thus, cross-sectional findings from one point in time cannot reliably predict future behaviors (Lavuri et al., 2021). Moreover, much of the existing literature continues to emphasize purchase intention over actual purchase behavior, despite evidence that intentions capture only part of the complex factors driving real consumer decisions (Wang & Mattila, 2021). This risks offering an incomplete picture of consumer conduct.

Future research could address these limitations by adopting longitudinal designs that track changes in attitudes and behaviors over extended periods, thereby yielding more robust insights into evolving consumer trends (Nguyen et al., 2022). Comparative studies across cohorts—such as Generation Z, Millennials, and older consumers—could help clarify whether age or generational traits influence green purchasing decisions (Ali et al., 2023). Additionally, employing observational or experimental methods in real shopping environments could reduce biases inherent in self-reported data (Gupta & Ogden, 2022). Future work might also incorporate variables such as environmental knowledge, trust in eco-labels, peer influence, social media exposure, and brand loyalty, all of which have been shown to significantly shape green purchase decisions (Rahman et al., 2023; Babu et al., 2024). Exploring these factors would deepen our understanding of what drives young consumers to select eco-friendly products behaviours

## REFERENCES

- Ajzen, I. (1992). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Aldaihani, F. M. (2024). Harnessing the green purchase intention of Generation Z consumers through green marketing strategies. Kuwait.
- Ali, A., & Audi, M. (2016). The Impact of Income Inequality, Environmental Degradation and Globalization on Life Expectancy in Pakistan: An Empirical Analysis. *International Journal of Economics and Empirical Research (IJEER)*, 4(4), 182–193.



- Ali, R., Ahmed, M., & Kim, J. (2023). Generational differences in sustainable consumption: A comparative study of Gen Z and Millennials. *Journal of Consumer Behaviour*, 22(1), 34-49.
- Anbukarasi, D. D. (2017). An analytical study on consumers' awareness towards green fast moving consumer goods in Coimbatore district.
- Ansar, N. (2013). Impact of green marketing on consumer purchase intention. *ME, PNEC, National University of Science & Technology*.
- Arshi, A., Ali, A., & Audi, M. (2025). Evaluating the Impact of Sustainability Reporting on Financial Performance: The Mediating Role of ESG Performance and the Moderating Role of Firm Size. *Bulletin of Business and Economics (BBE)*, 14(2), 42-54.
- Asha, P. (2016). Consumer awareness towards green products.
- Audi, M. (2025). Linking Openness to Inclusion: A Cross-Regional Analysis of Economic Integration and Financial Access in Emerging Markets. *Journal of Business and Economic Options*, 8(2), 31-38.
- Audi, M., Khalil, A., Poulin, M., & Ali, A. (2025). Different Dimensions of Globalization and CO<sub>2</sub> Emission Nexus: Application of Environmental Kuznets Curve for Worldwide Perspective. *International Journal of Energy Economics and Policy*, 15(3), 553.
- Audi, M., Poulin, M., Ahmad, K., & Ali, A. (2025). Modeling disaggregate globalization to carbon emissions in BRICS: A panel quantile regression analysis. *Sustainability*, 17(6), 2638.
- Babu, M. A., Ejaz, F., Nasir, A., Md, S., Jaman, S., Fodor, Z. J., & Hossain, M. B. (2024). The behavior of students in relation to green marketing as green consumers: A reasoned action approach (RAA). *Journal of Infrastructure, Policy and Development*, 1-18.
- Bamberg, S., & Möser, G. (2007). Twenty years after Hines, Hungerford, and Tomera: A new meta-analysis of psycho-social determinants of pro-environmental behaviour. *Journal of Environmental Psychology*, 27(1), 14-25.
- Batool, A., Ali, A., & Audi, M. (2025). Assessing the Impact of Sustainability Initiatives on Greenhouse Gas Emissions in Sweden and Finland. *Annual Methodological Archive Research Review*, 3(6), 150-176.
- Begum, S. (2024). Impact of green marketing practices on consumer purchase awareness and buying decision. *ResearchGate*.
- Bhasin, A. (2024). The untold stories of green marketing: Combating greenwashing and promoting genuine sustainability. *International Journal of Research and Innovation in Social Science (IJRISS)*.
- Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64-87.
- C. N., K. C. (2011). "Greening" the marketing mix: Do firms do it and does it pay off? *Journal of the Academy of Marketing Science*, 41(2), 151-170.
- Carrington, M. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behavior of ethically minded consumers. *Journal of Business Ethics*, 97(1), 139-158.
- Chin, W. D. (1998). The partial least squares approach for structural equation modeling. In G. A. Marcoulides (Ed.).
- Cohen, J. (n.d.). *Statistical power analysis for the behavioral sciences*.
- Creswell, J. W. (2015). *Research design: Qualitative, quantitative, and mixed methods approaches*.

- Dangelico, R. M. (2017). Green marketing and consumer behavior: An analytical literature review. *Business and Economic Research*, 14(2), 81.
- Delmas, M. A. (2011). The drivers of greenwashing. *California Management Review*, 54(1), 64–87.
- Dilanthi, R. R. (2024). Purchase intentions of the university students toward. *International Journal of Education and Research*, 1–18.
- Faiza, & Ali. (2012). Effect of corporate philanthropy. Delhi: Hailey.
- Fatima, M., Butt, I., Minallah, M. N., & Atta, A. (2023). Assessment of air pollution and its association with pollution health: Geo-statistical association of Pakistan.
- Field, A. (2018). *Discovering statistics using IBM SPSS statistics*.
- G. E., & L. (2004). *Journal of Environmental Management*, 69(1).
- Gangadharbatla, H., & Smith, S. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. *Journal of Business Ethics*, 125(4), 693–707.
- Gold, A. H. (2001). Knowledge management: An organizational capabilities perspective.
- Gupta, S., & Ogden, D. T. (2022). To buy or not to buy: The roles of ethical concern and environmental awareness in purchase decisions. *Journal of Business Research*, 143, 556–567.
- Haque, A., Mamun, A., Shahabuddin, A., Rahman, S., & Sharif, K. (2023). Green marketing and consumer responses: Insights from developing markets. *International Journal of Emerging Markets*, 18(3), 411–429.
- Hult, G. T. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications.
- Insight, R. (2023). A multi-dimensional exploration of university students' sustainable consumption and eco-friendly behavior.
- Jamel, M., & Zhang, C. (2024). Green finance, financial technology, and environmental innovation impact on CO<sub>2</sub> emissions in developed countries. *Journal of Energy and Environmental Policy Options*, 7(3), 43–51.
- Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behavior and future research directions. *International Strategic Management Review*.
- Karstic, J., Kostic-Stancovic, M., & Cvijovic, J. (2021). Green advertising and its impact on environmentally friendly consumption choices: A review. *Industrija*, 49.
- Kartajaya, H., & Kotler, P. (2021). *Marketing 5.0: Technology for humanity*. Wiley.
- Katsikeas, C. S. (2011). Greening the marketing mix: Do greeners lead to greener? *International Journal of Business and Social Science*, 2(3), 1–25.
- Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson.
- Khan, R. E. (2020). Challenges to promoting green consumer behavior in Pakistan. *Pakistan Development Review*.
- Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behavior? *Environmental Education Research*, 8(3), 239–260.
- Kosyak, A., & Popov, S. (2020). Analyzing Consumer Preferences for Green Products and Environmental Impact. *Journal of Energy and Environmental Policy Options*, 3(4), 134–140.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson.
- Kumar, P. S. (2021). Green marketing: A path for awareness and sustainable development. *Environmental Science and Pollution Research*, 28, 1–10.

- Lacka, E., & Wang, W. (2014). An empirical investigation of green purchase behavior among the young generation. *Journal of Cleaner Production*, 66, 528–536.
- Lavuri, R. K., Jusuf, E., & Gunardi, A. (2021). Cultural and economic determinants of green purchasing in emerging markets. *Sustainable Development*, 29(6), 1142–1156.
- Li, J., Chiu, D. K., Ho, K. K., & So, S. (2024). The use of social media in sustainable green lifestyle adoption: Social media influencers and value co-creation. Harris Wu.
- Lobo, A., & Greenland, S. (2019). The influence of cultural values on green purchase behavior.
- Lopez, B., & Peters, M. (2025). Ecological Governance and Organisational Resilience: A Structural Model of Environmental Risk in Pandemic Conditions. *Journal of Energy and Environmental Policy Options*, 8(2), 26–36.
- Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357–365.
- Marc, A. (2024). A Discussion on the Role of International Regimes in Mitigating Global Warming and Climate Change. *Journal of Energy and Environmental Policy Options*, 7(2), 36–42.
- Marc, A. (2024). The role of urbanization and trade in driving carbon emissions in Asia. *Journal of Energy and Environmental Policy Options*, 7(3), 23–34.
- Marc, A. (2025). Bridging Equity and Ecology: The Impact of Income Inequality on Green Growth Dynamics. *Journal of Energy and Environmental Policy Options*, 8(2), 60–71.
- MDPI. (2023). Green marketing in the digital age: A systematic literature review. *Sustainability*, 15(16), 12369.
- Mehdi, H., Ali, A., & Audi, M. (2025). Tourism, Sustainability And Growth: An Empirical Investigation Of Long-Run Economic Impacts In Pakistan. *Contemporary Journal of Social Science Review*, 3(1), 1479–1493.
- Mokha, A. K. (2018). Impact of green marketing tools on consumer buying behaviour. *Asian Journal of Management*, 1–8.
- Moustafa, M. M. (2007). *Journal of Consumer Marketing*, 24(2).
- Nazir, M. W., Haq, D. F., Naeem, Z., & Suarez, V. O. (2024). Understanding green marketing strategies effects on consumers' purchase behavior: Insights from Pakistan. *Remittances Review*, 1–20.
- Nguyen, T., Nguyen, B., & Simkin, L. (2022). Longitudinal analysis of eco-friendly consumption: Insights from emerging markets. *Journal of Retailing and Consumer Services*, 65, 102883.
- Parichatnon, S., & Phongpanichanan, C. (2016). Application of the extended theory of planned behavior.
- Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior.
- Peattie, K., & Crane, A. (2005). Green marketing: Legend, myth, farce or prophesy? *Qualitative Market Research*, 8(4), 357–370.
- Peattie, K., & Peattie, S. (2009). Social marketing: A pathway to consumption reduction? *Journal of Business Research*, 62(2), 260–268.
- Polonsky, M. J. (1994). An introduction to green marketing. *Electronic Green Journal*.
- Rahman, I., Park, J., & Chi, C. G. (2023). The influence of eco-label trust and environmental knowledge on green purchase intentions. *Journal of Business Ethics*, 189(1), 73–90.

- Ramanust, S. (2023). Green marketing tools and consumer behavior: Exploring the influence of eco-brands and environmental advertising on purchasing decisions. *Journal of Energy and Environmental Policy Options*, 6(4), 33-42.
- ResearchGate. (2024). Examining the mediating role of environmental attachment.
- Ringle, H., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling.
- Roussel, Y., & Audi, M. (2024). Exploring the Nexus of Economic Expansion, Tourist Inflows, and Environmental Sustainability in Europe. *Journal of Energy and Environmental Policy Options*, 7(1), 28-36.
- Salam, M. S. (2022). Purchase intention for green brands among Pakistani millennials. *Social Responsibility Journal*, 18(3), 469-483.
- Saluy, B., & Nuryanto, W. (2023). Green Competitive Advantage in Indonesia's Chemical Manufacturing. *Journal of Energy and Environmental Policy Options*, 6(4), 1-11.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students*.
- Schlegelmilch, B. B., & Robertson, C. J. (2022). Addressing social desirability bias in green marketing research. *Marketing Intelligence & Planning*, 40(5), 735-749.
- Shahzad, M. F. (2020). Environmental concern and green behavior in Pakistan: The moderating role of environmental knowledge. *Sustainability*, 12(12), 5121.
- Shoaib, M., & Develi, E. İ. (2023). Green marketing and consumer purchase intention. *Journal of Industrial Policy and Technology Management*, 1-20.
- Suki, N. M., Suki, N. M., & Azman, S. (2023). Revisiting green purchase intention: Evidence from social media contexts. *Technological Forecasting and Social Change*, 190, 122315.
- Sukresna, I. M., & Mikina, J. E. (2024). Factors influencing the decision to buy green products. *Media Ekonomi dan Manajemen*, 1-16.
- Sultan, S., Ahmed, S., & Imran, M. (2020). Awareness regarding environmental education: A qualitative study suggesting practical steps in education leading towards green Pakistan. *Global Social Sciences Review*, 5(1), 510-518.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics*.
- Taghian, M., & Shaw, R. N. (2007). A framework for evaluating green marketing strategies. *European Journal of Marketing*, 41(11/12).
- Unit, U. (2023). Emission inventory of Lahore 2023.
- Wallnau, L. B., & Gravetter, F. J. (2020). *Statistics for the behavioral sciences*. Cengage Learning.
- Wang, J., & Li, J. (2024). Green Innovation and Economic Growth Balancing Development and Environmental Protection. *Journal of Energy and Environmental Policy Options*, 7(3), 1-13.
- Wang, L., & Zaman, F. (2025). Sustainability and Power in Transnational Infrastructure: The Environmental Politics of the Belt and Road Initiative. *Journal of Energy and Environmental Policy Options*, 8(2), 37-49.
- Wang, Y., & Mattila, A. S. (2021). The hidden cost of going green: The role of green skepticism and perceived price fairness. *International Journal of Hospitality Management*, 92, 102714.
- Wang, Z., & Manopimoke, P. (2023). Exploring the Interplay Between Supply Chain Dynamics and Organizational Culture in Green Practices Adoption: A Study of Thailand's Hospitality Sector. *Journal of Energy and Environmental Policy Options*, 6(4), 21-32.



- Yadav, R., & Pathak, G. S. (2016). Young consumers' intention towards buying green products in a developing nation: Extending the theory of planned behavior. *Journal of Cleaner Production*, 135, 732–739.
- Yue, B., & Nor, K. M. (2024). Environmental awareness and green consumption among young adults in developing economies. *Sustainability*, 16(4), 1470.