

From Social Pressure to Sustainable Action: Examining Eco-Anxiety, Personal Values, and Green Purchase Intention in Pakistan



Sana Batool ^a Muhammad Rizwan ^b Faiza Anwar ^c

Abstract: *The present study is based on the concept of social influence (SI) and eco-anxiety (EA) and their effect on green purchase intention in the energy-efficient home appliances sector. To support the related literature, five hypotheses were formulated and tested. Primary data on consumers' experiences with EEHA and their intentions to buy EEHA in the future were collected through a structured questionnaire. The data were collected by purposive sampling from all four provinces, namely, Punjab, Sindh, Khyber Pakhtunkhwa, and Balochistan, and the federal capital, Islamabad, to ensure maximum representation in terms of socioeconomic status, geographical location, and cultural background. The proposed model was analyzed using Smart PLS 4 through partial least square structural equation modeling (PLS-SEM). The structural model results indicated that personal values mediate social influence, eco-anxiety, and green purchase intention for EEHA. Personal values emerge as the strongest predictor of GPI. EA and SI both positively and significantly influence personal values (PV). EA and SI demonstrate a positive and direct impact on GPI, indicating partial mediation through PV. The model describes a significant difference in both personal values and green purchase intention (GPI). The results emphasize the emotional, social, and moral drivers that have a significant impact when combined to characterize sustainable consumption behavior. The current paper is relevant to the growing literature on eco-anxiety and green consumerism in developing economies. The findings could be useful in informing marketers and policymakers who encourage EEHA in Pakistan.*

Keywords: Green Purchase Intention (GPI), Eco-Anxiety (EA), Social Influence (SI), Personal Values (PV), Energy Efficient Home Appliances (EEHA)

Introduction

Since environmental concerns, including climate change, global warming, and pollution, have become the concern of all people worldwide, consumers have started paying attention to sustainable lifestyles and acquiring environmentally friendly products (Sharma et al., 2022). The Sustainable Development Goals (SDGs) of the UN include Global Goal 12, which aims to promote responsible consumption and production and to reduce toxic waste by 2030. The increased environmental degradation demands the immediate attention of all interested parties. Therefore, consumers are growing more attentive and concerned about the products and services they use and prefer those goods and services that are environmentally friendly (Roy & Nayak, 2022). Consumers all over the world are becoming more aware and conscious of sustainability, particularly in certain scenarios. It caused a fast and bright shift in marketing approaches that should correspond to the altering consumer behavior (Kumar & Yadav, 2021). This has attracted the interest of scholars in order to learn more about the dynamics influencing green consumer behavior. Most of the researchers have discovered that the green purchasing intention influences the consumers' green purchasing behavior (Vazifehdoust et al., 2013).

^a PhD Scholar, Institute of Business Management and Administrative Sciences (IBMAS), The Islamia University of Bahawalpur, Punjab, Pakistan/Lecturer, Government Sadiq College Women University (GSCWU), Bahawalpur, Punjab, Pakistan.

^b Lecturer, Institute of Business Management and Administrative Sciences (IBMAS), The Islamia University of Bahawalpur, Bahawalpur, Punjab, Pakistan.

^c Lecturer, Department of Management Sciences, Government Sadiq College Women University, Bahawalpur, Punjab, Pakistan.

The fact that, over the years, global climate change has gained more and more recognition has led to the realization that energy consumption needs to be tackled to ensure the reduction of environmental degradation (Nguyen et al., 2017). Air pollution and global environmental degradation are identified as the main causes of the numerous annual deaths, and it is expected to continue climbing by 2040 as eco-friendly household appliances become scarcer (World Health Organization, 2022). Energy consumption has been shown to significantly affect the environment. The energy industry is one of the major players in this ecological situation (Rahman & Nguyen-Viet, 2023). Therefore, it is a requirement to balance the amount of energy used in environmental damage caused by its excessive use (Neves & Oliveira, 2021).

The key ways to achieve the global objectives and to increase energy efficiency are to consume less energy, which can be achieved through the promotion and acceleration of the use of energy-efficient appliances (Rezaei & Ghofranfarid, 2018). To reduce the CO₂ emissions and fossil fuel consumption, better energy efficiency is required (Mills & Schleich, 2014). Tan et al. (2017) found that customers would be able to reduce the adverse environmental impact of energy consumption through purchasing energy-efficient products. Buying products that use less energy is also healthy for the environment and economy. A recent study found that 70 percent of the carbon emissions come from household appliances, though 50 percent of the carbon emissions come from televisions, air conditioners, and refrigerators (Wang et al., 2017). The use of energy-saving products will play a great role in ensuring environmental sustainability and energy conservation. It is the most viable, fastest, cheapest, and safest option for tackling environmental degradation and climate change (Sorrell, 2015; Zhou & Yang, 2016).

The present study examines factors influencing the purchasing behavior of energy-efficient household appliances (EEHA) in Pakistan. The current study employs VBN theory with constructs of social influence, eco-anxiety, personal values, and consumers' green purchase intentions to buy EEHA (Moslehpour et al., 2023). Furthermore, the VBN theory applied in this study reveals the influence of social influence on green purchase intention. Social influence should be considered when examining consumers' intentions toward making ecologically sustainable purchases (Caniëls et al., 2021).

The study explores the impact of social influence on green purchase intentions, hence allowing us to shed light on the pattern of sustainable consumption that is required in addressing the global environmental problems. Even though specialists believe that the demand for ecologically friendly items is growing among consumers, the psychological processes that shape or hinder the intentions to purchase green products need to be addressed (Konuk & Otterbring, 2024; Sharma et al., 2023). Few researchers have tried to understand the changing aspects of customer purchase intention from a social perspective, regardless of evidence that peers, social networking, and society have a substantial impact on individual customers' intentions to make green purchases (Elshaer et al., 2024).

According to Islam et al. (2024), personal values are the potential mediating variable to investigate the green purchase intention. Addressing this gap can illuminate how values transform social and psychological drivers into actual buying decisions, offering a more nuanced understanding of consumer green behavior (Husain et al., 2022). The predominant focus of contemporary studies on contextual, social, or cognitive variables often neglects affective elements that could significantly influence consumer green behavior (Kautish & Sharma, 2019). By addressing this gap, the present study emphasizes understanding the role of eco-anxiety and its potential impact on enhancing green buying intentions (Sharma et al., 2023). Eco-anxiety, which describes how the consumer feels about the degradation of the environment, might possibly drive or restrain green purchases (Kautish & Sharma, 2019). This study contributes to the understanding of green consumer behavior by proposing and evaluating affective (eco-anxiety), social (social influence), and antecedents into a unified mediated framework based on VBN theory, enhancing VBN by illustrating the progression from emotion to value activation to purchase intention.

Literature Review

Theoretical Background

A theory is a collection of connected propositions and justifications for understanding a certain phenomenon or pattern of behavior. The present study is anchored in an integrated theoretical framework that draws upon the VBN theory to explain theoretically how social influence and eco-anxiety affect green purchase intention in the energy-efficient home appliances (EEHAs) industry.

The Value Belief Norm Theory(VBN)

In 2010, Stern built upon the Norm Activation Theory (NAM) by combining two theories, namely, the Values theory and the New Environmental Paradigm theory, to develop the VBN theory (Stern, 2010). According to VBN, strongly held personal values motivate pro-environmental behavior, which shapes environmental beliefs and activates personal norms (Stern, 2000). The current study is based on the VBN theory, which holds that individual values motivate pro-environmental behavior and are triggered by social and psychological stimuli. Following the VBN theory, social influence and eco-anxiety, as external and emotional stimuli, are conceptualized to influence an individual's values, which, in turn, lead to green purchase intention. The present study extends the VBN theory in green marketing perspectives to an emerging economy by positioning personal values as a mediating mechanism.

Proposed hypothesis and Model

This section reviews the literature related to social influence, eco-anxiety, personal values and green purchase intention. The study's hypotheses are formulated from this review.

Social Influence and Green Purchase Intention

Dewi et al. (2022) stated that social influencing factors, such as the frequency of discussion and learning from friends and family, positively influence purchasing green products. Moreover, peer support and social influence are driven by societal social norms (Shehawy, 2023). Purchase intention results from understanding how people's intentions shape behavior under specific circumstances and influence desires (Brewer & Sebby, 2021; Jabeen et al., 2023). In a competitive market, purchase intention is used to understand consumers' buying decisions regarding green products (Jabeen et al., 2023). "Green purchase intention refers to the intention of the consumer to buy environmentally friendly products that can satisfy his or her needs" (Aulina & Yuliati, 2017). Other research has identified several determinants of green purchasing, such as cultural, social, and psychological considerations. Social influence enhances customers' green purchase intentions by engaging and bonding with a more extensive social network with similar concerns about the impacts of consumption and environmental choices (Ahmed et al., 2017).

H1: Social influence positively affects green purchase intention

Eco-Anxiety and Green Purchase Intention

Eco-anxiety heightens these convictions and could result in more positive attitudes towards sustainable behaviors. Consumers who internalize green ideals are therefore likely to look for goods and services that support their environmental concerns (Kurth & Pihkala, 2022). Kerse & Kerse (2025) fully concentrated on the idea of eco-anxiety and investigated how pro-environmental behavior affects mental health. Green purchase intention can also be defined as the tendency to use the goods or services of the companies that do not harm the environment, on the environment (Ahmed et al., 2023). The consumer's intention to buy is a key component of marketing strategy. For the protection of environmental sustainability, natural resources and green purchases are necessary (Zafar et al., 2021). It draws attention to the initiatives to support the SDGs (Sustainable Development Goals) and lessen the negative effects of consumerism on the ecosystem (Gulzar et al., 2024). Previous research examined that eco-anxiety causes a change in readiness in consumption behavior (Hogg et al., 2024). Researchers identified a potential correlation between eco-anxiety

and willingness to adopt more sustainable behavior in terms of low-carbon products. People who exhibit higher levels of honesty, emotionality and openness, for instance, are more likely to participate in sustainable behavior and improve green purchases (Balaskas, 2024). According to Heeren et al. (2023), people who experience higher EA tend to adopt pro-environmental beliefs, which subsequently result in more environmentally friendly behavior and choices. Ogunbode et al. (2022) examined the possible impact of EA on the behavior of a large multicultural sample of 12246 consumers, from 32 countries and discovered that young consumers adopt more environmentally friendly habits, such as conserving electricity at home. A study conducted in Italy and Vietnam found that people who are anxious about climate change are more likely to adopt sustainable behaviors such as using less energy or purchasing eco-friendly goods (Nguyen et al., 2025).

H2: *Eco-anxiety (EI) positively affects green purchase intention*

Personal Values and Green Purchase Intention

Value is a person's enduring belief that a particular course of action is better for them personally as well as morally (Cheung & To, 2019). This directs a person's attitude toward things and shapes their actions. According to Eibel-Spanyl and Hofmeister (2013), value has the power to influence consumer preferences and provide markets with important insights into product positioning and messaging. They can forecast the actions and attitudes of people or customers. Several studies conducted previously revealed the results that altruism and biospheric values have a direct or indirect impact on GPI (Yadav, 2016; Wang et al., 2023; Akbar et al., 2023). The dimensions of personal value emphasize the variety of reasons why people embrace sustainable activities, highlighting the necessity of taking into account the several aspects of human values when analyzing environmental behavior for purchasing intention (Geiger & Keller, 2017). A personal value, altruism, which is considered selflessness and concern for others, has been positively impacted on green purchase intention (Panda et al., 2020). Biospheric value significantly influences the pro-environmental purchase intention (Caniels et al., 2021). This suggests that people who have strong biospheric values are more likely to make environmentally conscious choices (Schuitema & Groot, 2014; Wei et al., 2022). Previous studies showed people's motivation to purchase eco-friendly products might be influenced by egoistic values based on things like status, image enhancement or personal rewards (Pop et al., 2020).

H3: *Personal values positively affect green purchase intention*

Role of Personal Values as Mediator between Social Influence and Green Purchase Intention

Social influence is when people alter their thoughts, feelings or behaviors due to the response of their society or environment (Turner, 1991). It has been noted several times that people can twist or modify their thoughts and behaviors to ensure that they prove to the other groups or society (Chen-Yu & Seock, 2002). There are various schools of thought pertaining to social influence in literature. Recent works in developed nations of the individualistic culture hypothesized that social influence affects green purchase behavior significantly (Salazar et al., 2013). According to Schwartz (1992) and Steg et al. (2014), people's personal values influence how they interpret social cues, which in turn influences their intention to make green purchases. Previous research shows that values like biospheric orientation and altruism greatly improve sustainable purchasing (Karp, 1996; de Groot & Steg, 2008). Nonetheless, there is evidence linking social impact to environmentally friendly behavior (Han et al., 2017; Liu & Wu, 2021). There is not much research on how personal values mediate the connection between social influence and the intention to make green purchases. For these reasons, we develop formal hypotheses regarding how personal values mediate the relationship between social influence and green purchase intention.

H4: *Personal values mediate the relationship between social influence and green purchase intention.*

Role of Personal Values as Mediator between Eco-Anxiety and Green Purchase Intention

Eco-anxiety (EA), defined as "anxiety or worry about environmental issues and climate change, is increasingly recognized as a factor influencing pro-environmental behavior. There is a complicated but usually beneficial

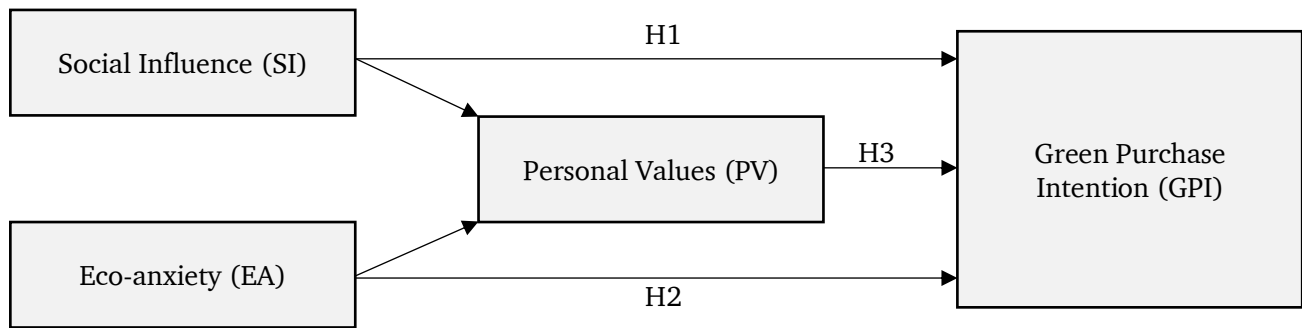
association between climate action and environmentally conscious behavior(Higginbotham et al., 2022). People are typically inspired to take climate action by eco-anxiety. The psychosomatic effects of warming in the environment are growing and distressing all types of mental and social health in society (Yasir et al., 2023). Eco-grief and eco-guilt are two emotional responses to climate change. It has imperative indicators of pro-ecological behavior and affects the intentions of people to take climate action (Faisal et al., 2022). Green purchases refer to the products that can reduce the degradation of natural resources, discharge fewer pollutants, use no or fewer toxic substances, and reduce waste during the process of production (Li et al., 2024). Eco-anxiety heightens the perception of threats and moral apprehension regarding environmental degradation; this might stimulate biospheric and altruistic values, reinforcing environmental self-identity or personal norms, which subsequently enhance Green Purchase Intention. Sharma et al.(2023) explicitly advocate exploring mediators (e.g., values, guilt, identity) in the eco-anxiety–green intention relationship. Empirical evidence shows that personal values often mediate the link between psychological antecedents and pro-environmental behaviors. However, little is known about how personal values mediate the relationship between eco-anxiety and the intention to engage in green purchasing. Therefore, this paper hypothesizes formal mediation by personal values in the green brand image–green purchase intention relationship.

H5: Personal values mediate the relationship between eco-anxiety and green purchase intention

Conceptual Framework

Figure 1

Conceptual Framework



Research Methodology

Sampling Frame & Data Collection Methods

The important constructs of the current study were measured using a structured questionnaire with already developed scales. The data were collected using an online questionnaire, the link of which was revealed and was available in social networks, and the authors' contact network, within the period between November and January 2026. The question was about whether the respondent had been using EEHA or not, and whether he or she wanted to purchase EEHA in the future. In case the respondent has replied that he/she has already purchased EEHA or has the intention to purchase the same in the near future, the respondent answered the rest of the questionnaire. The scales in this study were adjusted to those in previous studies that proved a satisfactory reliability. These measures were regularly used in several earlier studies. In this study, a 5-point Likert scale was employed. All items were measured using a 5-point Likert scale, where 1 denoted “strongly disagree” and 5 denoted “strongly agree”. The scale is generally justified in the social science and behavioral research because it is reliable, valid and understandable to the respondents. The sample population for this study consisted of 384 people who had already purchased or planned to purchase at least one energy-efficient home appliance (EEHA). It had 95.75 million customers in the country (Statista 2023). Therefore, the estimated number of potential respondents for this study is 95.75 million. These four cities are chosen among all the provinces/ states of the country, which are Karachi, Lahore, Peshawar and Quetta and are also the capitals of these provinces. Choosing respondents in such cities will not only help in getting different

respondents who represent the whole of Pakistan, but also get results that can be generalized to Pakistan. The purposive sampling approach was chosen because it was assumed that this approach is the most effective in the current study.

Table 1

Sections	Variables	No.of items	Reliability	Sources of scale
A	Personal Information	5		Self-construct
B	Purchase of EEHAs	1		Self –construct
C	Social Influence	3	0.868	(Varshneya et al., 2017)
D	Personal Values	8	0.84	(Steg, Dreijerink, & Abrahamse, 2005)
E	Eco-Anxiety	6	0.92	(Hogg, Stanley, O'Brien, Wilson, & Watsford, 2021)
F	Green-purchase intention	5	0.85	(Maichum et al., 2017)

Analysis and Results

The Smart PLS version 4.0 is utilized to analyze the collected data.

Respondent profile

Table 2

Demographic Variables	Items	Frequency	%age
Gender	Male	130	33.9
	Female	254	66.1
Age	21–25 years	71	18.5
	26–30 years	78	20.3
	31–35 years	83	21.6
	36–40 years	72	18.8
	Above 40 years	80	20.8
Income	Below 15000	56	14.6
	15000-30000	0	0.0
	30001-45000	55	14.3
	45001-60000	43	11.2
	60001-75000	57	14.8
	Above 75000	173	45.1
City	Karachi	66	17.2
	Lahore	95	24.7
	Islamabad	51	13.3
	Quetta	52	13.5
	Peshawar	62	16.1
	Others	58	15.1
Education	Matriculation	2	0.5
	Intermediate	12	3.1
	Bachelor	94	24.5
	Master	131	34.1
	MS/M.Phil.	98	25.5
	PhD	47	12.2
Work Experience	< 5 years	25	7.2
	< 10 years	75	21.7
	< 15 years	98	28.3
	< 20 years	71	20.5
	Above 20 years	77	22.3

Measurement Model

We tested both convergent validity and discriminant validity to verify that the measurement model is accurate and the constructs under study reflect what they are supposed to measure.

Figure 1
Measurement model

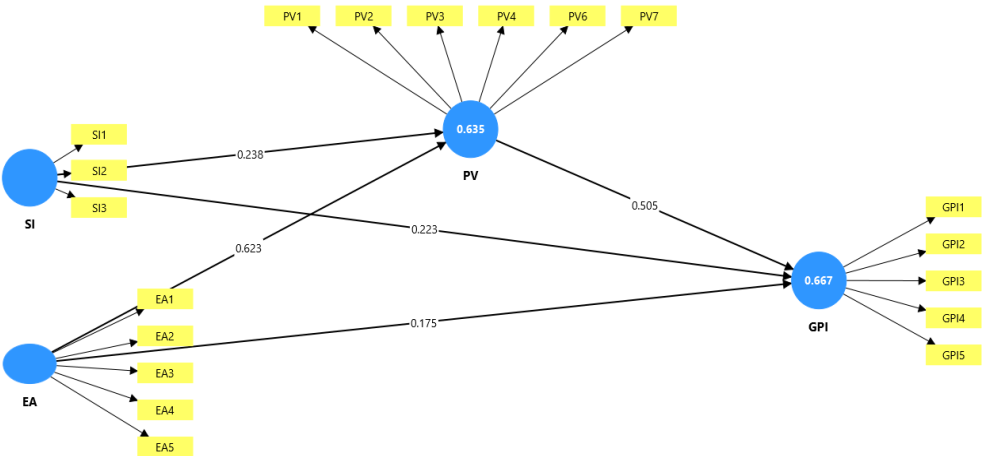


Table 3
Reliability & Validity of Constructs

	Cronbach Alpha	CR	AVE
EA	0.94	0.943	0.806
GPI	0.948	0.949	0.828
PV	0.949	0.95	0.979
SI	0.873	0.881	0.797

Abbreviations: EA eco-anxiety, SI social influence, PV personal values, green purchase intention, GPI

Reliability and Convergent validity of constructs

Internal consistency reliability was measured using Cronbach's Alpha and Composite Reliability (CR). In the present study, all Cronbach's Alpha values are above 070, indicating high internal consistency. A CR value above 070 indicates high construct reliability. An AVE above 0.50 indicates that every construct explains more than half of its indicators, thus demonstrating convergent validity for all constructs. These results prove that the measurement model has very high reliability and convergent validity. (Hair et al., 2022).

Discriminant Validity

Table 4
Discriminant Validity (Fornell–Larcker)

Constructs	EA	GPI	PV	SI
EA	0.898			
GPI	0.71	0.91		
PV	0.776	0.783	0.893	
SI	0.641	0.658	0.637	0.893

Abbreviations: EA eco-anxiety, SI social influence, PV personal values, green purchase intention, GPI

Discriminant validity describes the level at which a given latent construct is unique among the other constructs (Hair et al., 2014). The most popular method of establishing the discriminant validity is the Fornell and Larcker (1981) criteria. As per the Fornell and Larcker criterion, the measurements of all constructs ought to exceed the variance among constructs. Table 2 shows that for each construct, the square root of AVE is greater than inter-construct correlations, confirming discriminant validity according to Fornell–Larcker criterion.

Table 5
Discriminant Validity (HTMT)

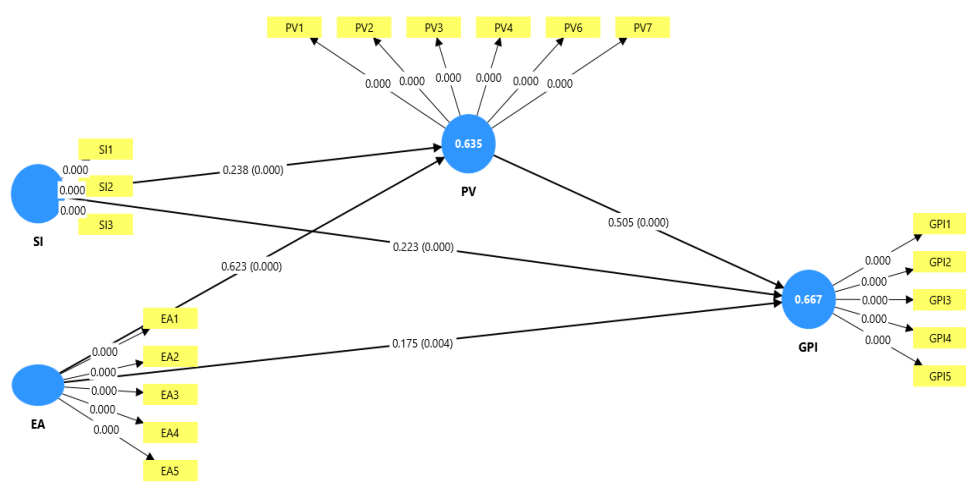
Construct Pair	HTMT
EA-GPI	0.749
EA-PV	0.818
PV-GPI	0.825
SI-GPI	0.719

Abbreviations: EA eco-anxiety, SI social influence, PV personal values, green purchase intention, GPI

Besides the Fornell and Larcker criteria, in this study, there was also an addition. used heterotrait-monotrait (HTMT) ratio to test the discriminant validity of correlations (Henseler et al., 2015). We used a predefined HTMT measure with threshold discriminant validity. If the value of HTMT is greater than the preset limit, it means the absence of discriminant validity. Kline (2011) states that the values of the HTMT should not be higher than 0.85. All HTMT values in the present study were below 0.85, confirming discriminant validity (Henseler et al., 2015)

Structural Model

Figure 2
Structural Model



The structural model demonstrates strong explanatory power and theoretical coherence. Social influence and eco-anxiety significantly influence personal values, which in turn strongly predict green purchase intention. The presence of both direct and indirect effects confirms the partial mediating role of personal values, highlighting the importance of internal value formation in translating external social and emotional stimuli into green consumption behavior.

Table 6
Structural Path Coefficients

Path	β	p-value	Decision
SI→PV	0.238	0.000	Supported
EA→PV	0.623	0.000	Supported
PV→GPI	0.505	0.000	Supported
SI→GPI	0.223	0.000	Supported
EA→GPI	0.175	0.004	Supported

Our study formulated five hypotheses. The results are outlined in Table 5 and Figure 2. Thus, Hypothesis 1 was supported, indicating that social influence is positively related to green purchase intention ($\beta = 0.223$, $p = 0.000$). In this sense, social influence directly affects green purchase intention; hence, social approval and

normative pressure play an essential role in influencing green buying decisions. Similarly, Hypothesis 2, which stated a positive relationship between eco-anxiety and Green Purchase Intention ($\beta = 0.175$, $p = 0.004$), is supported. Eco-anxiety positively but weakly directly influences green purchase intention. In other words, emotional concern is not a strong motivating factor toward green purchasing unless internalized into individual values. However, Hypothesis 3 posited a positive relationship between Personal Values and Green Purchase Intention. H3 was supported ($\beta = 0.505$, $p = 0.000$). Personal values play a strong and positive role in green purchase intention. This suggests that high levels of environmental and moral values will lead to a higher intention to purchase green products. Hypothesis 4 further suggested that personal values significantly mediate the relationship between social influence and green purchase intention. This indicates that social norms, peer pressure, and other social expectations are essential in shaping people's values toward pro-environmental behavior ($\beta = 0.238$, $p < 0.001$). H4 is supported. **Hypothesis 5** suggests a significant mediating role of Personal values between eco-anxiety and green purchase intention. It is the greatest predictor of the model H5 is supported ($\beta = 0.623$, $p = 0.000$). This implies that fear and emotional worry about environmental degradation are strong incentives to make people use pro-environmental moral values. All the hypothesized paths attest positive and significant statistical values that support the fact that both eco-anxiety and social influence contribute to the green purchase intention directly and indirectly. Personal values become one of the primary mechanisms of converting emotional and social motivators into sustainable consumption intentions.

Table 7
Coefficient of Determination (R^2)

Endogenous construct	R2	Interpretation
Personal Values (PV)	0.635	Substantial
Green Purchase Intention (GPI)	0.667	Substantial

“ R^2 indicates the proportion of variance in an endogenous variable that is explained by its predictor constructs.”An R^2 value of 0.635 indicates that 63.5% of the variance in Personal Values is explained by Social Influence and Eco-Anxiety. According to“PLS-SEM guidelines, this represents a substantial level of explanatory power”.Social Influence and Eco-Anxiety together are strong predictors of Personal Values. This demonstrates that values are not arbitrary; they are defined by the social norms and emotional concern.

Table 8
Mediation Effects

Indirect Path	Indirect Type	Mediation Type
EA→PV→GPI	0.315	Partial Mediation
SI→PV→GPI	0.12	Partial Mediation

The personal values completely mediate the influences of the indirect effects of social influence and eco-anxiety on the green purchase intention. It means that personal values are an important psychological process through which social and emotional elements can influence decisions concerning green purchasing.

Discussion

To ensure sustainable development, it is important to change the mindset toward environmental concerns and, consequently, to change individual attitudes and behavior. In the current study, we investigated the interest of people toward energy-efficient home appliances, exploring their preferences for ecological home appliance products. We examined whether social influence and eco-anxiety, when mediated by personal values, had a predictive effect on GPI. The study summarized the literature on GPI, personal values (PV), eco-anxiety (EA), and social influence (SI) incorporated into a managerial framework. Based on the findings from the study and data analysis, it was concluded that the hypothesized relationships are significant. The

presence of a valid and reliable indicator shows that it is an efficient and precise instrument for assessing the variables. Based on test results, social influence and eco anxiety have positive and significant results on GPI. The findings indicate that social influence has a positive, substantial impact on personal values. This observation implies that personal value systems by people concerning environmental responsibility are highly influenced by their social context, including peers, family and community, as well as by the wider societal standards (Fröberg et al., 2024). This aligns with previous research emphasizing the importance of internal factors, such as environmental values and beliefs, in promoting sustainable consumer behavior (Xiao et al., 2023).

The conclusion also favors the assumption that social pressure and approval processes are very important in changing external environmental expectations to internalized personal values (Jain, 2019). The positive effect of eco-anxiety on personal values is significant and strong; it is the most significant antecedent of personal values in the model. This implies that emotional reactions to the degradation of the environment, including worry, fear, and concern about environmental disasters, are strong driving factors in the formation of values (Wolfe & Tubi, 2019). This observation makes it possible to underline the positive contribution of eco-anxiety, meaning that it does not simply cause distress or avoidance but can provoke more significant moral thought and value reorientation towards environmental protection (Lombardi et al., 2024).

People who have greater eco-anxiety seem more disposed to have robust pro-environmental values, which are then utilized to inform their consumption choices. This observation supports the key role of values as a proximate force behind sustainable consumption behavior. Although awareness and feelings might trigger concern, it is the internalization of such concerns in consistent personal values that is converted to concrete purchase intentions. The power of this connection points to the fact that value-based motivations are more persistent and powerful than situational or informational factors. There is also a direct and significant impact of eco-anxiety on green purchase intention. This implies that in addition to the influence on individual values, eco-anxiety has an independent effect on consumers to practice green purchasing as a problem-solving or coping mechanism to environmental issues (Pinho, 2025).

This finding implies that the consumer can employ green purchasing as a means of eliminating emotional anxiety linked to environmental dangers. Acquisition of environmentally friendly products can offer a feeling of control, responsibility, or moral reprieve in the context of perceived ecological threat levels of the products.

Theoretical contribution

This research thus contributes to the literature by presenting a cognitive mechanism through which social influence and eco-anxiety affect the green purchasing intention of EEHA, which indicates the mediating role of personal values. These findings will also contribute to the literature on the combination of constructs, which have been very little studied but are very relevant to eliciting green intrinsic motivation and green purchase intention. Only a few earlier studies related to the green context have included these constructs in their investigations. However, in those studies, these constructs were used within the general pro-environmental domain, suggesting that values act not only as antecedents but also as mediators, which indeed refines how the process of forming values would occur within sustainability-based environments. The more powerful path that eco-anxiety has on personal values indicates that the emotional distress over environmental degradation is an effective stimulator of internal value adjustment, the effect of which may be even greater than that of social pressure.

As a result, eco-anxiety has become more accessible psychologically and has become a variable other than attitudinal. This nuance addresses an important gap in sustainability research, where mediation is frequently taken for granted. The findings suggest that green purchase intention is influenced by both reflective (value-driven) and reactive (direct emotional/social) processes, which agree with dual-process theories of decision-making. This supports a shift in sustainability research from surface-level predictors (e.g., awareness) to profound psychological measures that can better clarify actual purchase intentions. Thus, the study

contributes to the improvement of the knowledge about green purchase intentions and awareness of different incentives to purchase energy-efficient home appliances.

Managerial Implications

Customers are more worried about the product's actual environmental impact. The emergence of green electronic alliances in Pakistan has been well-received by both consumers and retailers. Pakistani consumers' desire for EEHA continues to be a focus for green electronic marketers. The study provides useful information for governments and marketers to boost consumer demand for environmentally friendly EEHA products. The present study suggests that, due to intrinsic motivation, environmental consciousness arises. To protect the environment, advertisement and promotional messages must include people's moral obligations and moral messages about environmental deterioration. To enhance company revenue and achieve business goals, management must comprehend consumer intentions, demand for EEHA, and market trends.

This research would be beneficial for home appliance manufacturers by gaining some knowledge that would help them to customize their products to encourage consumers to buy energy-efficient home appliances. Government subsidies and commodity tax refunds inspire the purchase of EEHA appliances by making them seem less expensive, which in turn makes consumers more encouraged to make a purchase, which in turn increases their purchase attitude. Incentives like these, therefore, must be encouraged by governments to retain and cooperate with manufacturers of home appliances to remind consumers that ultimately such appliances would help save more funds on electricity as opposed to traditional appliances that do not prove to be energy efficient. When individuals in the surrounding area use green products, they will be encouraged to buy and consume the products as well. When a consumer is informed of the environmental problems and has a concern about cutting carbon emissions, saving and protecting the environment, he or she will be willing to purchase such products. The consumers also need to be informed and convinced of their important roles in mitigating carbon emissions. Provided consumers consider themselves as social and environmentally responsible people, they will not only consume sustainable products themselves, but will also encourage others to consume the same in their social environment.

Limitation, Recommendation, and Future Research Directions

Several recommendations were made for marketers, managers, and policymakers across various sectors. First, in order to innovate and create more eco-friendly goods, businesses should give research and development top priority that complements consumers' sustainability beliefs. Utilizing recyclable materials and implementing energy-efficient technology to reduce carbon emissions over the course of the product's lifecycle. Secondly, companies should spend money on effective communication channels like social media, eco-friendly certification and collaborations with environmental organizations, and to educate customers on the advantages of environmentally friendly products, emphasizing how they improve both the environment and human health. Thirdly, the companies need to think about the pricing options that can encourage consumers to use green products, including providing them with competitive prices or discounts on eco-friendly variations.

Last but not least, the promotion of cooperation and collaborations among business, government and non-profit organizations can help in developing industry-wide guidelines and standards regarding sustainable production practices so that the increasing demand for environmentally friendly products by consumers can be satisfied and the environment can be reformed at the global level.

This research paper was done in Pakistan, and the analysis findings can only be applied in Pakistan. Nonetheless, gathering research information in other nations, including Western nations, and using it to study the disparities in regions or nations will be of immense value to investigate the green purchase intentions of energy-efficient household appliances since they differ across areas and nations. The type of products that were considered to be energy efficient in the household was not identified in this study. Hence, product

classification requires further studies to improve the most appropriate market segmentation strategy. Further studies are required to build on this model by adding more mediators, including sustainability-consciousness, green self-identity, green brand image, and also examining moderators like brand trust, environmental knowledge, and cultural orientation. It is suggested that longitudinal and experimental designs should be used to determine the causal directionality and the consistency of eco-anxiety effects in the long run. Generalizability would be increased by cross-cultural validation and multi-group analysis, whereas future research ought to go beyond intention to investigate actual green purchasing behavior and intention to pay a premium. The distinction between functional and dysfunctional eco-anxiety and the evaluation of non-linear effects could also add theoretical knowledge.

Conclusion

"Energy efficiency" is one of the most essential principles in meeting the long-term vision of leading the transition to a climate-neutral economy by 2050. Therefore, it is very relevant to adopt a sustainable practice approach in the residential sector concerning environmental protection and the sustainable use of resources. In this regard, the present study looks into the direct and mediating effects that may exist regarding people's intention toward energy-efficient home appliances. To that effect, the study identifies the various significant determinants influencing consumers' purchase intention towards EEHAs, which include social influences, eco-anxiety, personal values, and green purchasing intention, based on a literature review.

Purchase intention for green appliances can be interpreted as a sign of a possible purchase behavior, particularly at the point in the process where consumers rank and assess significant brands while taking into account the impact of unforeseen circumstances, other people's opinion, and their expectations related to buying green products. Additionally, as values have a direct impact on people's beliefs, which in turn shape personal standards that encourage pro-environmental activity, consumer beliefs and values are empirically assessed. The best approach to protecting the environment is to internalize producer and consumer actions that can negatively affect the environment. These approaches are in the form of environmental standards.

Besides, it shows that it has become more advantageous for consumers to believe that consumption of eco-friendly products is very rewarding compared to the use of conventional products, therefore stimulating green purchase intention due to perceived benefits being an essential motivating factor for consumer trust.

Eco-anxiety is a driver of consumers to participate in green purchasing by itself as a problem or a coping initiative in response to environmental issues. This implies that consumers can use green purchasing as a means of alleviating emotional discomfort that comes with environmental threats. Buyers can find a feeling of control, responsibility, or moral respite in the buying of eco-friendly products against perceived ecological risks. Eco-anxiety and its associations with pro-environmental behavior have important implications for how best to communicate the climate crisis humanity is experiencing. Literature thus far reflects a multifaceted role for eco-anxiety. We conclude that social influence, eco-anxiety, and personal values significantly influence green purchase intention. We found that all factors positively influence the green intention of customers concerning EEHA.

References

- Ahmed, R. R., Streimikiene, D., Qadir, H., & Streimikis, J. (2023). Effect of green marketing mix, green customer value, and attitude on green purchase intention: evidence from the USA. *Environmental Science and Pollution Research*, 30(5), 11473–11495. <https://doi.org/10.1007/S11356-022-22944-7>
- Ansu-Mensah, P. (2021). Green product awareness effect on green purchase intentions of university students': an emerging market's perspective. *Future Business Journal*, 7(1). <https://doi.org/10.1186/S43093-021-00094-5>
- Aulina, L., & Yuliati, E. (2017). *The Effects of Green Brand Positioning, Green Brand Knowledge, and Attitude towards Green Brand on Green Products Purchase Intention*. <https://doi.org/10.2991/ICBMR-17.2017.50>
- Ayesha Sultana Ahmed et al., A. S. A. et al. . (2017). Purchase Behaviour of Women Consumers Towards Energy Efficient Household Products. *International Journal of Economics, Commerce and Research*, 7(5), 7–12. <https://doi.org/10.24247/IJECRDEC20172>
- Bagozzi, R. P., Wong, N., Abe, S., & Bergami, M. (2000). Cultural and Situational Contingencies and the Theory of Reasoned Action: Application to Fast Food Restaurant Consumption. *Journal of Consumer Psychology*, 9(2), 97–106. https://doi.org/10.1207/S15327663JCP0902_4
- Balaskas, S. (2024). HEXACO Traits, Emotions, and Social Media in Shaping Climate Action and Sustainable Consumption: The Mediating Role of Climate Change Worry. *Psychology International*, 6(4), 937–976. <https://doi.org/10.3390/PSYCHOLINT6040060>
- Brewer, P., & Sebby, A. G. (2021). The effect of online restaurant menus on consumers' purchase intentions during the COVID-19 pandemic. *International Journal of Hospitality Management*, 94, 102777. <https://doi.org/10.1016/J.IJHM.2020.102777>
- Caniëls, M. C. J., Lambrechts, W., Platje, J. (Joost), Motylska-Kuźma, A., & Fortuński, B. (2021). Impressing my friends: The role of social value in green purchasing attitude for youthful consumers. *Journal of Cleaner Production*, 303, 126993. <https://doi.org/10.1016/J.JCLEPRO.2021.126993>
- Chen-Yu, J. H., & Seock, Y. K. (2002). Adolescents' clothing purchase motivations, information sources, and store selection criteria: A comparison of male/female and impulse/nonimpulse shoppers. *Family and Consumer Sciences Research Journal*, 31(1), 50–77. <https://doi.org/10.1177/1077727X02031001003>
- Elshaer, I. A., Alrawad, M., Lutfi, A., & Azazz, A. M. S. (2024). Social commerce and buying intention post COVID-19: Evidence from a hybrid approach based on SEM – fsQCA. *Journal of Retailing and Consumer Services*, 76, 103548. <https://doi.org/10.1016/J.JRETCONSER.2023.103548>
- Fröberg, E., Kolesova, S., & Rosengren, S. (2024). Does the Label Fit the Channel? How “Bricks” and “Clicks” Influence Demand for Environmental and Social Sustainability Labels. *Journal of Service Research*, 27(1), 124–140. <https://doi.org/10.1177/10946705231198027>
- Gulzar, Y., Eksili, N., Koksai, K., Celik Caylak, P., Mir, M. S., & Soomro, A. B. (2024). Who Is Buying Green Products? The Roles of Sustainability Consciousness, Environmental Attitude, and Ecotourism Experience in Green Purchasing Intention at Tourism Destinations. *Sustainability 2024*, Vol. 16, 16(18). <https://doi.org/10.3390/SU16187875>
- Haldorai, K., Kim, W. G., Agmapisarn, C., & Li, J. (Justin). (2023). Who we are and what we do: The relevance of green organizational identity in understanding environmental performance. *International Journal of Hospitality Management*, 114. <https://doi.org/10.1016/J.IJHM.2023.103574>
- Haltinner, K., Ladino, J., & Sarathchandra, D. (2021). Feeling skeptical: Worry, dread, and support for environmental policy among climate change skeptics. *Emotion, Space and Society*, 39, 100790. <https://doi.org/10.1016/j.emospa.2021.100790>
- Heeren, A., Mouguiama-Daouda, C., & McNally, R. J. (2023). A network approach to climate change anxiety and its key related features. *Journal of Anxiety Disorders*, 93, 102625. <https://doi.org/10.1016/J.JANXDIS.2022.102625>
- Higginbotham, M., MacDonald, D., & Killingsworth, M. (2022). Eco-anxiety in the digital age: The impact of

- online environmental narratives on young adults *Frontiers in Psychology*, 1-21. <https://doi.org/10.3389/fpsyg.2022.872544>
- Hogg, T. L., Stanley, S. K., O'Brien, L. V., Wilson, M. S., & Watsford, C. R. (2024). The Hogg Eco-Anxiety Scale: Development and validation of a multidimensional scale. *Global Environmental Change*, 71, 102391. <https://doi.org/10.1016/J.GLOENVCHA.2021.102391>
- Husain, R., Ahmad, A., & Khan, B. M. (2022). The impact of brand equity, status consumption, and brand trust on purchase intention of luxury brands. *Cogent Business and Management*, 9(1). <https://doi.org/10.1080/23311975.2022.2034234>
- Islam, J. U., Thomas, G., & Albishri, N. A. (2024). From status to sustainability: How social influence and sustainability consciousness drive green purchase intentions in luxury restaurants. *Acta Psychologica*, 251, 104595. <https://doi.org/10.1016/J.ACTPSY.2024.104595>
- Jabeen, R., Khan, K. U., Zain, F., & Atlas, F. (2023). Buy green only: Interplay between green marketing, corporate social responsibility and green purchase intention; the mediating role of green brand image. *Business Strategy and Development*, 6(3), 503–518. <https://doi.org/10.1002/BSD2.258>
- Jahari, S. A., Hass, A., Idris, I. B., & Joseph, M. (2022). An integrated framework examining sustainable green behavior among young consumers. *Journal of Consumer Marketing*, 39(4), 333–344. <https://doi.org/10.1108/JCM-04-2021-4593>
- Jain, S. (2019). Factors Affecting Sustainable Luxury Purchase Behavior: A Conceptual Framework. *Journal of International Consumer Marketing*, 31(2), 130–146. <https://doi.org/10.1080/08961530.2018.1498758>
- Kautish, P., & Sharma, R. (2019). RETRACTED: Value orientation, green attitude and green behavioral intentions: an empirical investigation among young consumers. *Young Consumers: Insight and Ideas for Responsible Marketers*, 20(4), 338–358. <https://doi.org/10.1108/YC-11-2018-0881>
- Kerse, Y., & Kerse, G. (2025). The effect of eco-anxiety on pro-environmental behaviors and mental well-being: a parallel mediation model. *BMC Psychology*, 13(1). <https://doi.org/10.1186/S40359-025-03501-6>
- Konuk, F. A., & Otterbring, T. (2024). The dark side of going green: Dark triad traits predict organic consumption through virtue signaling, status signaling, and praise from others. *Journal of Retailing and Consumer Services*, 76, 103531. <https://doi.org/10.1016/J.JRETCONSER.2023.103531>
- Kousar, S., Afzal, M., Ahmed, F., & Bojnec, Š. (2022). Environmental Awareness and Air Quality: The Mediating Role of Environmental Protective Behaviors. *Sustainability* 2022, 14(6). <https://doi.org/10.3390/SU14063138>
- Kumar, S., & Yadav, R. (2021). The impact of shopping motivation on sustainable consumption: A study in the context of green apparel. *Journal of Cleaner Production*, 295, 126239. <https://doi.org/10.1016/J.JCLEPRO.2021.126239>
- Kurth, C., & Pihkala, P. (2022). Eco-anxiety: What it is and why it matters. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/FPSYG.2022.981814>
- Li, J., Hu, L., & Basheer, M. F. (2024). Linking green perceived value and green brand loyalty: a mediated moderation analysis of green brand attachment, green self-image congruity, and green conspicuous consumption. *Environment, Development and Sustainability*, 26(10), 25569–25587. <https://doi.org/10.1007/S10668-023-03696-X>
- Lombardi, A., Califano, G., Caracciolo, F., Del Giudice, T., & Cembalo, L. (2024). Eco-packaging in organic foods: rational decisions or emotional influences? *Organic Agriculture*, 14(2), 125–142. <https://doi.org/10.1007/s13165-023-00442-5>
- López-García, L., Latorre, F., Vecina, M. L., & Díaz-Silveira, C. (2025). What Drives Pro-Environmental Behavior? Investigating the Role of Eco-Worry and Eco-Anxiety in Young Adults. *Sustainability* 2025, 17(10). <https://doi.org/10.3390/SU17104543>
- Mills, B., & Schleich, J. (2014). Household transitions to energy efficient lighting. *Energy Economics*, 46, 151–160. <https://doi.org/10.1016/j.eneco.2014.08.022>

- Moslehpour, M., Chau, K. Y., Du, L., Qiu, R., Lin, C. Y., & Batbayar, B. (2023). Predictors of green purchase intention toward eco-innovation and green products: Evidence from Taiwan. *Economic Research-Ekonomska Istrazivanja*, 36(2). <https://doi.org/10.1080/1331677X.2022.2121934>
- Neves, J., & Oliveira, T. (2021). Understanding energy-efficient heating appliance behavior change: The moderating impact of the green self-identity. *Energy*, 225, 120169. <https://doi.org/10.1016/J.ENERGY.2021.120169>
- Ogiemwonyi, O., & Harun, A. Bin. (2021). Green product awareness has the potential to promote green consumer behaviour: Evidence from Kuala-Lumpur. *Israel Journal of Ecology and Evolution*, 67(1–2), 39–50. <https://doi.org/10.1163/22244662-BJA10010>
- Ogunbode, C. A., Doran, R., Hanss, D., Ojala, M., Salmela-Aro, K., van den Broek, K. L., Bhullar, N., Aquino, S. D., Marot, T., Schermer, J. A., Wlodarczyk, A., Lu, S., Jiang, F., Maran, D. A., Yadav, R., Ardi, R., Chegeni, R., Ghanbarian, E., Zand, S., ... Karasu, M. (2022). Climate anxiety, wellbeing and pro-environmental action: correlates of negative emotional responses to climate change in 32 countries. *Journal of Environmental Psychology*, 84, 101887. <https://doi.org/10.1016/J.JENVP.2022.101887>
- Pinho, M. (2025). The role of parental identity in experiencing climate change anxiety and pro-environmental behaviors. *Frontiers in Psychology*, 16, 1579893. <https://doi.org/10.3389/fpsyg.2025.1579893>
- Rahman, S. ur, & Nguyen-Viet, B. (2023). Towards sustainable development: Coupling green marketing strategies and consumer perceptions in addressing greenwashing. *Business Strategy and the Environment*, 32(4), 2420–2433. <https://doi.org/10.1002/BSE.3256>
- Regnoli, G. M., Tiano, G., & De Rosa, B. (2024). Is Climate Change Worry Fostering Young Italian Adults' Psychological Distress? An Italian Exploratory Study on the Mediation Role of Intolerance of Uncertainty and Future Anxiety. *Climate*, 12(8). <https://doi.org/10.3390/cli12080118>
- Rimadias, S. (2025). Key Drivers of AI Utilization for Environmental Sustainability among Indonesia's Educated Gen Z. *Asian Journal of Applied Business and Management*, 4(1), 211–228. <https://doi.org/10.55927/ajabm.v4i1.40>
- Roberts, A., Poortinga, W., & Williams, M. O. (2025). Climate anxiety in the United Kingdom: Associations with environmentally relevant behavioural intentions, and the moderating role of efficacy. *Journal of Environmental Psychology*, 105, 102595. <https://doi.org/10.1016/J.JENVP.2025.102595>
- Rroy, & Nayak. (2022). A Study on Consumers Perception towards Green Products Consumption in the Post Pandemic Scenario in Kamrup District of Assam. *Academy of Marketing Studies Journal*. <https://www.abacademies.org/articles/a-study-on-consumers-perception-towards-green-products-consumption-in-the-post-pandemic-scenario-in-kamrup-district-of-assam-13875.html>
- Salazar, H. A., Oerlemans, L., & Van Stroe-Biezen, S. (2013). Social influence on sustainable consumption: Evidence from a behavioural experiment. *International Journal of Consumer Studies*, 37(2), 172–180. <https://doi.org/10.1111/J.1470-6431.2012.01110.X>
- Sharma, K., Aswal, C., & Paul, J. (2023b). Factors affecting green purchase behavior: A systematic literature review. *Business Strategy and the Environment*, 32(4), 2078–2092. <https://doi.org/10.1002/BSE.3237>
- Shehawy, Y. M. (2023). In green consumption, why consumers do not walk their talk: A cross cultural examination from Saudi Arabia and UK. *Journal of Retailing and Consumer Services*, 75, 103499. <https://doi.org/10.1016/j.jretconser.2023.103499>
- Sorrell, S. (2015). Reducing energy demand: A review of issues, challenges and approaches. *Renewable and Sustainable Energy Reviews*, 47, 74–82. <https://doi.org/10.1016/J.RSER.2015.03.002>
- Stern, P. C. (2000). Toward a coherent theory of environmentally significant behavior. *Journal of Social Issues*, 56(3), 407–424. <https://doi.org/10.1111/0022-4537.00175>
- Tawde, S., Kamath, R., & ShabbirHusain, R. V. (2023). 'Mind will not mind' – Decoding consumers' green intention-green purchase behavior gap via moderated mediation effects of implementation intentions and self-efficacy. *Journal of Cleaner Production*, 383. <https://doi.org/10.1016/j.jclepro.2022.135506>

- Turner, J. C. (1991). (n.d.). *Social influence*. Bristol, USA: Thomson Brooks/Cole Publishing Co.
- Varshneya, G., Pandey, S. K., & Das, G. (2017). Impact of Social Influence and Green Consumption Values on Purchase Intention of Organic Clothing: A Study on Collectivist Developing Economy. *Global Business Review*, 18(2), 478–492. <https://doi.org/10.1177/0972150916668620>
- Vazifehdoust, H., Taleghani, M., Esmailpour, F., Nazari, K., & Khadang, M. (2013). Purchasing green to become greener: Factors influence consumers' green purchasing behavior. *Management Science Letters*, 2489–2500. <https://doi.org/10.5267/J.MSL.2013.08.013>
- Wang, Z., Wang, X., & Guo, D. (2017). Policy implications of the purchasing intentions towards energy-efficient appliances among China's urban residents: Do subsidies work? *Energy Policy*, 102, 430–439. <https://doi.org/10.1016/J.ENPOL.2016.12.049>
- Wayan Weda Asmara Dewi, Avicenna, F., & Prasetyo, A. A. P. S. (2022). The Effect of Social Influence on Green Purchasing Behavior on The Purchase of Love Beauty and Planet Brand Products. *Proceedings Of International Conference On Communication Science*, 2(1), 470–476. <https://doi.org/10.29303/ICCSPROCEEDING.V2I1.120>
- Wolfe, S. E., & Tubi, A. (2019). Terror Management Theory and mortality awareness: A missing link in climate response studies? *Wiley Interdisciplinary Reviews: Climate Change*, 10(2), e566. <https://doi.org/10.1002/wcc.566>
- Xiao, J., Yang, Z., Li, Z., & Chen, Z. (2023). A review of social roles in green consumer behaviour. *International Journal of Consumer Studies*, 47(6), 2033–2070. <https://doi.org/10.1111/ijcs.12865>
- Zafar, A. U., Shen, J., Shahzad, M., & Islam, T. (2021). Relation of impulsive urges and sustainable purchase decisions in the personalized environment of social media. *Sustainable Production and Consumption*, 25, 591–603. <https://doi.org/10.1016/J.SPC.2020.11.020>
- Zhao, L., Lee, S. H., & Copeland, L. R. (2019). Social media and Chinese consumers' environmentally sustainable apparel purchase intentions. *Asia Pacific Journal of Marketing and Logistics*, 31(4), 855–874. <https://doi.org/10.1108/APJML-08-2017-0183>
- Zhou, K., & Yang, S. (2016). Understanding household energy consumption behavior: The contribution of energy big data analytics. *Renewable and Sustainable Energy Reviews*, 56, 810–819. <https://doi.org/10.1016/J.RSER.2015.12.001>