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Sustainable Choices: Understanding Gen Z's Attitude and Intentions towards Green Products

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Abstract
The increasing environmental challenges have heightened the need for sustainable consumer behavior, making it essential to understand the psychological and behavioral factors that drive green purchasing decisions. This study explores the interrelationship between environmental concerns, expectations of green products, awareness of consequences, ascription of responsibility, personal norms, attitude, and purchase intention toward eco-friendly products. A survey was conducted among consumers aged (above 18 years and Generation Z) and well-educated consumers (higher education) to assess their attitudes to green image, green value, and purchase intention. Descriptive research design and primary research using a structured questionnaire were directed to management students. A total of 273 valid responses were collected. The analysis using PLS-SEM was executed to empirically test the model. The study employs a quantitative approach, analyzing data from a diverse sample to assess the impact of these factors on green purchasing behavior. Findings reveal that environmental concern and awareness of consequences significantly influence personal norms and attitudes, which, in turn, mediate purchase intention. The results provide valuable insights for policymakers, marketers, and businesses aiming to promote sustainable products and encourage responsible consumption. This study contributes to the growing body of literature on green consumer behavior and offers practical recommendations for fostering environmental sustainability in the marketplace.

Key Words: Green Products, Norm Activation Model, Perceived Green Image Theory, Generation Z, Purchase Intention

INTRODUCTION
In 2015, all United Nations member states introduced 2030 sustainable development goals. As a part of the UN -India is committed to achieving the goals encompass environmental, social and economic aspects. Currently, India banned single-used plastics on 1st July, 2022 as a part of reducing pollution but in India, only 60% of plastic waste is collected, leaving the remaining 40% (about 10,376 tons) uncollected (Ministry of Environment, Forest and Climate Change, 2022). Still, India does not properly manage or recycle menstrual waste which leading its accumulation in landfills and contributes to micro-plastic pollution (Amesho, et al. 2023). Pollution not only affected urban cities but equally affected rural areas (Tariq & Mushtaq, 2023). India's second most important problem is air pollution, which harms people's health (Jiang, 2023). Due to pollution, the life expectancy of about 40% of Indians has reduced in the last nine years. India faced the severity of air pollution as per the World Air Quality Report 2022.

To solve the above problem and protect the natural environment which turns into ethical consumption or green consumerism (Halder, et al. 2020). Green consumerism is applied to the situation in which consumers actively purchase a product that protects the natural environment (Iqbal, et al. 2023). Initially, the developed nation adopted the green consumerism concept and heightened awareness of environmental issues (Haba, Bredillet & Dastane, 2023). Nowadays trends are gaining momentum, and green consumerism also spills over to developing countries (Mesagan & Vo, 2023).

Developing countries' emphasis on green consumption which adopts eco-friendly products is on the rise as it provides the opportunity to preserve and protect the degrading quality of the natural environment and contribute to environmental sustainability (Reddy, et al. 2023). By focusing on sustainable products, India directly contributes to sustainable development goals such as poverty reduction, clean scarcity, biodiversity loss and carbon emissions (Shakoor & Ahmed, 2023).

Therefore, to promote green products, producers must focus on consumer preference and their decision-making for purchasing green products (Mishra & Kulshreshtha, 2023). Not only Consumer preference is useful for formulating suitable strategies for developing the green market but also consumers' fluctuating preferences for the product and its consumption growth rate (Khachatryan, et al. 2023). So the main objective of this study is to understand the consumer's behavior toward buying green products in the context of Generation Z in a developing nation, i.e India. To tackle this issue, investigate consumer adoptability of sustainability practices, attitudes and purchase intention for green products.

Researchers studying green consumer behavior often draw from various theoretical perspectives that consider multiple contexts. One such theoretical viewpoint centers on the significance of consumers' moral obligation to take actions that contribute to the well-being of others. This perspective explores the ethical dimensions of consumer choices and their potential positive impacts on the environment, emphasizing the role of moral considerations in shaping green behaviors. The present research is based on the Norm Activation Theory (NAT) developed by Schwartz in 1977 and the Perceived Green Image Theory (PGIT) which is the extended framework of the Theory of Planned Behavior(TPB). NAT, incorporates the concept of a personal norm that occurs when a consumer possesses an awareness of the consequences associated with a particular behavior and experiences a sense of responsibility for their actions. PGIT incorporates the concept of a green reputation or green image of a company. Perceived Green Image Theory (PGIT) to understand the consumer's behavior toward purchasing green products. This integrated model explores the Awareness of the Consequences, Ascription of responsibility, Environmental Concern, Personal Norms and Expectations of Green Products impact customer attitudes toward green products and purchase intention towards green products. This study understands the factors determining the green buying behavior of Generation Z consumers in the context of a developing nation. This research is useful to marketers in planning, strategies and solving their green products regarding problems and governments for policy formation and implementation.

LITERATURE REVIEW

This research is based on the two frameworks, one is Schwartz (1977) and Schwartz and Howard (1981) created and expanded the Norm Activation model (NAM), to explain altruistic and environmentally friendly behavior. and another Perceived Green Image Theory (PGIT) which is the extended version of the Theory of Planned Behavior (TPB) a psychological theory proposed by Azjen in 1985.

According to Gifford and Nilsson (2014), the pivotal variables of the Norm Activation model encompass personal norm, awareness of consequences and ascription of responsibility. The central tenet of this theory posits that the personal norm, considered a fundamental NAM variable (Lauper et al., 2016), directly influences green behavior (Turaga et al., 2010; Bamberg et al., 2007). Defined as an individual's belief regarding the rightness or wrongness of a specific behavior (Bamberg et al., 2007), the personal

norm must be activated to be relevant for concrete behavior (Klöckner, 2013). In this research, the presumed activators of the personal norm include awareness of consequences and ascription of responsibility.
Perceived Green Image Theory (PGIT), antecedents of green purchase intention theory are attitudes toward Green Products means Positive feelings and beliefs about eco-friendly items (Ajzen, 1985). Environmental Concern means awareness and concern about environmental issues (Ajzen, 1985). Subjective Norms refer to how an individual perceives other people's attitudes towards a specific behavior which is not about what others think but is based on our perception (Ajzen, 1985). Green Purchase Intention refers to the desire or intention to buy environmentally friendly products directly influencing green purchasing behavior (Ajzen, 1985).

Environmental Concern

Environmental concern means the level of awareness, interest and care regarding environmental issues and the health of the natural world (Simanjuntak, et al. 2023). Environmental concern encompasses attitudes, feelings, beliefs and behavior associated with environmental protection, conservation and sustainability (Zeng, Zhong & Naz, 2023). Kim & Lee, (2023) studied the impact of environmental consciousness on the purchase of eco-friendly products in Korea and reported environmental interest did not significantly affect the purchase intention of eco-friendly products. (Ahmad & Thyagaraj, 2015) study on the influence of environmental values and purchase intention for green products in India demonstrated a positive influence on consumers' attitudes toward green brands. Li, Yang, Zhang, Li, & Chen, (2021) conducted a study in China that reported environmental concern had a partial mediating effect on environmental value and green product purchase intention. Some studies suggest that individuals with greater environmental concerns have a strong inclination to purchase green products and eco-friendly products (Malik, & Singhal, 2017; Barbarossa & De Pelsmacker, 2016).
H1: Environmental concerns positively influence the consumer's attitude towards green products.

Expectations of Green Products:

Customer expectations of green products are shaped by many factors like prior experience, product attributes, marketing communication, labeling, brand reputation, word-of-mouth communication and social influence which fluctuate consumers' evaluations and purchase decisions (Zhang & Dong, 2020). Special expectations regarding green products expectations are performance, quality, affordability and social responsibility (Zhang et al, 2022). Ansu-Mensah, (2021) study conducted among university students in Ghana examined the effect of green product awareness and their intention to purchase environmentally friendly products reported green perceived quality had an almost significant positive impact on purchase intention which was driven by price, high value and extraordinary quality. Another study conducted by Zhuang, Luo & Riaz (2021) reported that green perceived value, attitude and green trust positively impact green purchase intention. Markets play a crucial role in managing customer expectations through transparent communication, credible information provision and product innovation for maintaining sustainability standards (Al Ali. et al, 2019).
H2: Expectations of green products positively influence the consumer's attitude towards green products.

Awareness of the Consequences

During the initial phases of activation, an individual's personal norm is likely to be prompted by an awareness of the potential repercussions of not engaging in pro-environmental behavior. This awareness of consequences occurs when a person recognizes the negative impacts on others or valued entities resulting from a lack of altruistic behavior. Often conceptualized as a person's instrumental attitude,

assessed from a utilitarian standpoint, awareness of consequences involves evaluating the difference between the benefits and costs associated with the outcomes of one's behavior (Tonglet, Phillips, & Read, 2004; Wan et al., 2017). In essence, it reflects a person's consideration of the potential negative effects on others or valued entities as a motivating factor for adhering to pro-environmental actions. Environmental awareness of the consequences influences consumers' purchase decisions for green products (Olasiuk & Bhardwaj, 2019). The consumers with a high level of environmental concern are more willing to buy green products (Duong, et al. 2022). Consumer interest in environmental well-being becomes a driving force behind their intention to choose green products (Kim & Lee, 2023; Lavuri, et al. 2023; Saifulina, et al. 2023).

H3: Awareness of the consequences has significant positive influence on personal norm.

H4: Awareness of the consequences has significant positive influence on ascription of responsibility.

Ascription of Responsibility

Ascription of responsibility refers to the attribution or assignment of responsibility for a particular action, outcome, or situation (Su, Yang & Swanson, 2023). The norm activation model suggests awareness of consequences leads to increased ascription of responsibility means customers who perceive the negative consequences of their purchase will feel more responsible, leading stronger moral obligation to choose ethically or sustainably (Joo, Lee & Hwang, 2022). Consumers who believe their actions can make a difference are more likely to be influenced by their ascription of responsibility (Chwialkowska et al., 2020). Many studies suggest that emphasizing personal responsibility can be more effective in promoting sustainable choices than framing that focuses on collective responsibility (Sheng et al., 2023; Lagomarsino et al., 2020).

H5: Ascription of responsibility has significant positive influence on personal norm.

Personal Norms

Within the Norm Activation model, personal norm holds a central role, characterized as a sense of moral duty guiding individuals to either engage in or abstain from specific actions (Schwartz, 1977). This term, personal norm, denotes self-imposed expectations derived from internalized values, personalities, and habits, shaping how individuals perceive their moral obligation to behave in particular activities and situations (Zhang et al, 2022). Zhuang, Luo & Riaz (2021) reported green perceived value, attitude and green trust positively significantly impact green purchase intention. Another study Chauhan et al, (2021) focused on online purchasing of green products and demonstrated that social influence and perceived usefulness critically determine of consumer's online green product purchase intention. Many studies have confirmed a positive connection between personal norms and the purchase of green products intention (Palomino Rivera et al., 2017). Individuals who hold strong personal norms regarding environmental responsibility are more likely to have a positive intention to use eco-friendly products (Palomino Rivera, et al. 2016).

H6: Personal norms positively influence the consumer's attitude towards green products.

Attitude

The Theory of Planned Behavior (Ajzen, 1991) showed that attitudes toward environmental sustainability plays a crucial role in shaping consumers' intention to purchase eco-friendly alternatives. Positive attitudes towards sustainability are likely to lead to higher intentions to buy green products (Chen, Chen & Tung, 2018). Consumers who prioritize environmental concerns and perceive green products as

aligned with their values are more likely to express intention to purchase such products (Kim et al., 2019). Consumers may express higher intentions to purchase green products if they perceive them to have positive environmental impacts and superior quality compared to conventional alternatives (Wijekoon, & Sabri, 2021). Many studies explored the relationship between green perceived value, attitudes and purchase intention regarding green food products (Woo & Kim, 2019).

H7: Attitude has a significant positive effect on green product purchase intention.

H8: Attitudes towards green products have a mediating relationship between various factors of consumer attitude and purchase intention for green products.

Purchase Intention

Purchase intention refers to the consumer's willingness and likelihood to purchase environmentally friendly and sustainable products (Ali & Ahmad, 2016). Consumers with positive attitudes toward green products, who perceive social pressure to buy and are more likely to exhibit purchase intention (Bong & Jin, 2017). Many studies show a positive association with environmental concerns, perceived effectiveness, positive attitude, subjective norms and perceived quality and performance (Latip & Sharkawi, 2021; Xie & Madni, 2023). There is a negative association between price sensitivity and intention to purchase green products. consumers are more likely to pay a premium for green products in specific categories like energy-efficient appliances (Kreczmańska-Gigol & Gigol, 2022).

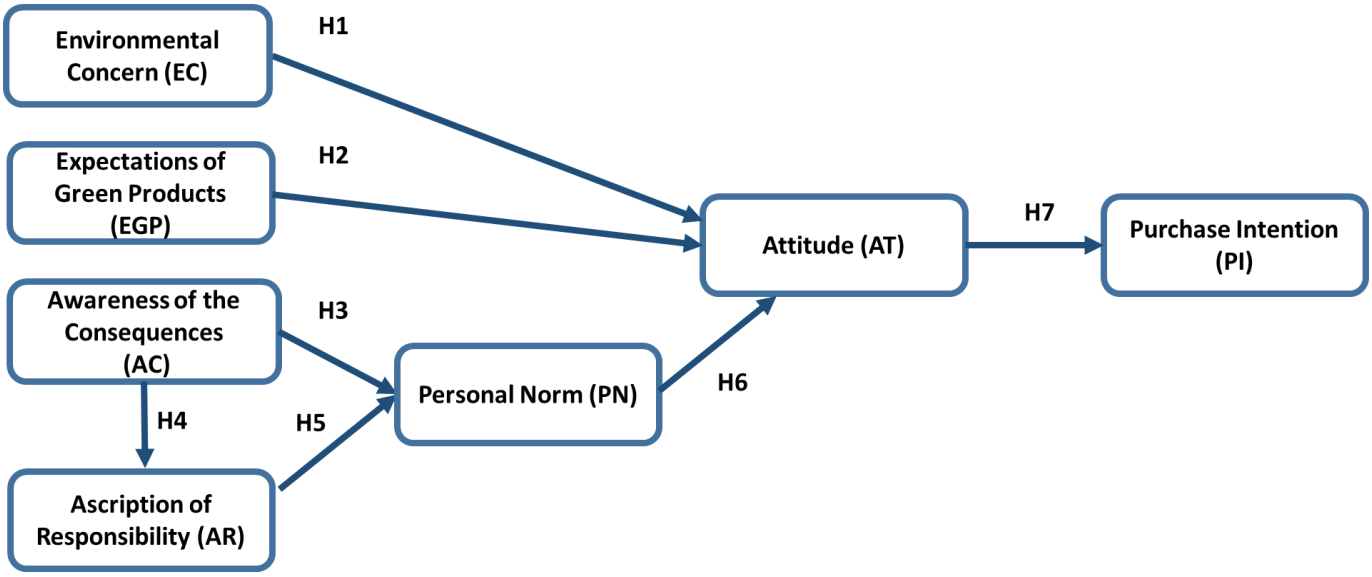
RESEARCH METHODOLOGY

The ideal sample for this study consists of adults (above 18 years) and well-educated consumers (higher education). The green context under investigation is very difficult to understand and comprehend for minors because of its conceptual clarity. For this purpose, adults have attributed a greater ability to compare and evaluate green products. Indeed, as evidenced in the environmental literature, higher educated people can easily understand the topic with specific consideration as compared to less educated. Therefore, we collected data from a sample of highly educated management consumers. The study used non-probability convenience sampling methods.

The data were collected from the students of a management institute of higher education in Gujarat through the online questionnaire survey. Before sending the questionnaire, a pilot study was conducted to check the stability and validity of the questionnaire. After considering the suggestion from the pilot survey, some wordings were refined in the questionnaire to make it more understandable.

The questionnaire was sent to the students using the institute group administrative approach in December 2024. The total population of management students 400 questionnaires were distributed among the target population using the group administration approach. For populations under 1,000, it is recommended to use a minimum ratio of 30 percent (300 individuals) to ensure the representativeness of the sample (Neuman, 2007). After two weeks, a reminder email was sent as a follow-up. A total of 310 responses were returned, but only 273 valid responses were considered in the study excluding incomplete responses and extreme outliers. Received 273 responses which indicates a good response rate of 68.25%; as per (Holtom, 2008), the average response rate of 52.7% was acceptable when the respondents were individuals. The majority of the respondents were female (56 per cent) with males constituting (44 per cent) of the sample. With regards to the average age of the respondents was 22 years old. As to annual family income (in Rupees), 57 per cent of the respondents' income is less than 2,50,000, 25 per cent of respondents' income belongs to 2,50,000 to 5,00,000, only 12 per cent and 6 per cent respondents' received 5,00,000 to 10,00,000 and above 10,00,000 incomes respectively.

Figure – 1 Propose Research Model



Measures

The scales were adopted from relevant previous researchers and the first draft of the questionnaire was prepared. The measurement of the construct of environmental concerns, the expectation of green products, awareness of consequences, ascription of responsibility, personal norms, attitude and purchase intention were based on the validated measurement of previous literature available on pro-environmental behavior. Five items measuring awareness of consequences, five items of the ascription of responsibility and six items of the personal norm were adopted from Han and Hwang, (2016), Shin et al. (2018) and Shin and Hancer (2016). Environmental concern was measured on the seven-point Likert scale adopting four items from Kilbourne & Pickett, (2008). Willingness to pay was measured using four items from Jang (2011) and Kang (2012). Personal norms were measured using six items from Khare (2015). Five-item scale adopted from Tseng and Hung's (2013) was used to measure expectations of green products. Five items were operationalized to measure attitudes toward green products purchased based on Mostafa (2006, 2008). Finally, purchase intention was assessed using five-item scales adopted from Paul et al. (2016). As these scales were initially developed in another cultural context, the scales were cautiously revised and reproduced. To do the same, three professionals dealing in sustainable products and two professors teaching marketing were given the questionnaire to evaluate the content and face validity. They also assessed each item for specificity, representativeness, and precision. The suggestions given by them were objectively incorporated. Responses on all the scale items were recorded on a seven-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree).

RESULTS AND DISCUSSION

Descriptive Statistics

Out of 273 respondents, 56 per cent were female. The medial age of the respondents was 22 years. 57 per cent of the respondents has income less than Rs. 2,50,000 per year, 25 per cent of respondents has income between Rs. 2,50,000 and Rs. 5,00,000 per year, 12 per cent respondents has income between Rs. 5,00,000 and Rs. 10,00,000 per year while 6 per cent respondents has income over Rs. 10,00,000 per year.

Purification of Scales

Churchill (1979) suggested that removing items with corrected –item-total-correlation (CITC) scores is essential before conducting exploratory factor analysis. Cristobal et al. (2007) proposed a cut-off point of 0.30 to remove an item. Based on the analysis, it was found that the CITC score of the all the items were above the cut-off point so no item were removed at this stage.

Internal Consistency Reliability

Composite Reliability (CR) and Cronbach's Alpha are indicators of internal consistency reliability. They assess the extent to which the observed indicators reliably measure their underlying latent constructs. Values above 0.7 are considered acceptable for both CR and Cronbach's Alpha. A commonly accepted standard for interpreting internal consistency using Cronbach's alpha is: >0.90 = Excellent, <0.90 and >= 0.80 = Very good, <0.80 and >= 0.70 = Good, <0.70 and >= 0.60 = Acceptable, <0.60 and >= 0.50 = Poor, <0.50 = Not acceptable (Cronbach, 1951; Nunnally, 1978). Below table 1 enumerates the values as per Cronbach's α for each item ranging from 0.803 (Personal Norm) to 0.878 (Environmental Concern). So, it represents an acceptable level of reliability for each construct. Average Variance Extracted (AVE) assesses the amount of variance captured by the latent construct relative to the variance due to measurement error. AVE values above 0.5 are typically considered satisfactory. So, it represents an acceptable level of reliability for each construct.

Table 1: Internal Consistency Reliability and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AC	0.854	0.856	0.895	0.632
AR	0.886	0.886	0.916	0.686
AT	0.876	0.876	0.910	0.668
EC	0.878	0.880	0.916	0.732
EGP	0.856	0.863	0.897	0.635
PI	0.858	0.858	0.898	0.638
PN	0.803	0.832	0.859	0.510

Discriminant validity indicates the extent to which each latent construct is distinct from others in the model. This is often assessed by comparing the square root of the AVE for each construct with the correlations between constructs. If the square root of the AVE for each construct is greater than its correlations with other constructs, discriminant validity is supported. Below Table 2 enumerates the values as per Fornell and Larcker criterion; the discriminant validity was established in the model as the root of AVE of all the constructs was higher than its correlation with all the other constructs. Alternatively, the discriminant validity was also measured using the Heterotrait-Monotrait ratio (HTMT); the discriminant validity was achieved as all the HTMT ratios were lower than 0.85. (Hair et al., 2017)

Table 2: Fornell-Larcker Criterion for Discriminant Validity

	AC	AR	AT	EC	EGP	PI	PN
AC							

AR	0.883						
AT	0.886	0.812					
EC	0.729	0.742	0.770				
EGP	0.722	0.787	0.791	0.791			
PI	0.868	0.893	0.834	0.745	0.730		
PN	0.833	0.796	0.829	0.946	0.889	0.828	

Table 3: HTMT Ratio for Discriminant Validity

	Heterotrait-monotrait ratio (HTMT)		Heterotrait-monotrait ratio (HTMT)
AR <-> AC	0.883	PI <-> AR	0.893
AT <-> AC	0.886	PI <-> AT	0.834
AT <-> AR	0.812	PI <-> EC	0.745
EC <-> AC	0.729	PI <-> EGP	0.730
EC <-> AR	0.742	PN <-> AC	0.833
EC <-> AT	0.770	PN <-> AR	0.796
EGP <-> AC	0.722	PN <-> AT	0.829
EGP <-> AR	0.787	PN <-> EC	0.946
EGP <-> AT	0.791	PN <-> EGP	0.889
EGP <-> EC	0.791	PN <-> PI	0.828
PI <-> AC	0.868	PI <-> AR	0.893

Exploratory Factor Analysis (EFA)

As the measuring tool used in the study was compiled from preceding studies, modified and used in a different context, the principal phase in the data analysis was to evaluate the factor structure, initial validity & discriminant validity of this measuring instrument using exploratory factor analysis (EFA). Checking Sampling Adequacy and identity of the correlation matrix are prior requirements to perform exploratory factor analysis. Kaiser-Meyer-Olkin (KMO) value is 0.917, which is > 0.6, which signifies that the sample is adequate for factor analysis. Moreover, the value of Bartlett's test of Sphericity is < 0.05, indicating that the present correlation matrix is not an identity matrix. Prior conditions to run factor analysis are satisfied.

The principal component method was used as the extraction method and Varimax as the rotation method. A noteworthy finding was that the five factors from the EFA were the same.

CONFIRMATORY FACTOR ANALYSIS (CFA)

The study applied confirmation factor analysis (CFA) to confirm the extracted factors and model fit. The model fit indexes for the overall model, as shown in Table 4, are all within the acceptable limits suggested by Bagozzi and Yi (1988); Hair et al. (1998), Baumgartner and Homburg (1996), Doll et al. (1994).

Table 4: Model fit

Measure	Estimate	Threshold	Interpretation	Sources
GFI	0.824	>0.80 = Acceptable	Good fit	Hair et al., 2010

AGFI	0.789	>0.70 = Acceptable	Moderate fit	Hair et al., 2010
PGFI	0.686	>0.50	Closer to the other fit	Schreiber et al., 2006
SRMR	0.057	<0.08	Acceptable fit	Hair et al., 2010
NFI	0.942	>0.8	Good fit	Hu & Bentler, 1999
TLI	0.900	> 0.9	Good fit	Hu & Bentler, 1999
CFI	0.902	>0.9	Good fit	Hu & Bentler, 1999

Multiple indicators were used to evaluate the model's fit. Several commonly adopted indices were selected to evaluate the overall model fit measures and based on the values. Model fit is above 0.9 indicates a good fit (Bentler & Bonnet, 1980). Some studies consider 0.8 as acceptable (Hair et al., 2010). GFI value is 0.824 which is a reasonably good fit. AGFI value is 0.789 moderate fit, indicating the model might be more complex than necessary. PGFI (0.686) is a lower value that points towards potential over complexity in the model. SRMR (0.058) is a very good value, indicating a small discrepancy between observed and predicted data. NFI (0.942) is a reasonably good fit, similar to GFI. TLI (0.900) good fit, but could potentially be improved. CFI (Comparative Fit Index) 0.9 suggests a good fit (Bentler, 1990) and its value is 0.902. so the model fit is acceptable even as per the fit index combination.

PARTIAL LEAST SQUARE - STRUCTURAL EQUATION MODELLING (PLS-SEM)

PLS-SEM is used to test the model empirically. The evaluation of the model is done according to guidelines provided by Sarstedt et al. (2014). As the proposed research model does not involve a formatively measured construct, the evaluation involved two broad stages, i.e., systematic measurement model and evaluation of the structural model.

SYSTEMATIC EVALUATION OF MEASUREMENT MODEL

Internal consistency reliability, convergent validity and discriminant validity are sub-components of the systematic evaluation of the measurement model. Evaluate the strength and significance of relationships between observed variables and their underlying constructs with the help of outer loading. If the loading value exceeds 0.7 it indicates strong relationships and its significance level $p < 0.05$.

Table 5: Outer Loading

Variable	**Construct**	**Outer loadings**
Environmental Concern (EC)	I am very concerned about the environment.	0.874
	I would be willing to reduce my consumption to help protect the environment.	0.855
	Major social changes are necessary to protect the natural environment.	0.864
	Anti-pollution laws should be enforced more strongly.	0.828
Expectations of green products (EGP)	The green products will have a nice appearance.	0.815
	The operation of the green products will be user-friendly.	0.830
	The green products will have good functional performance.	0.830
	The design and operating characteristics of green products will meet the established standards.	0.786

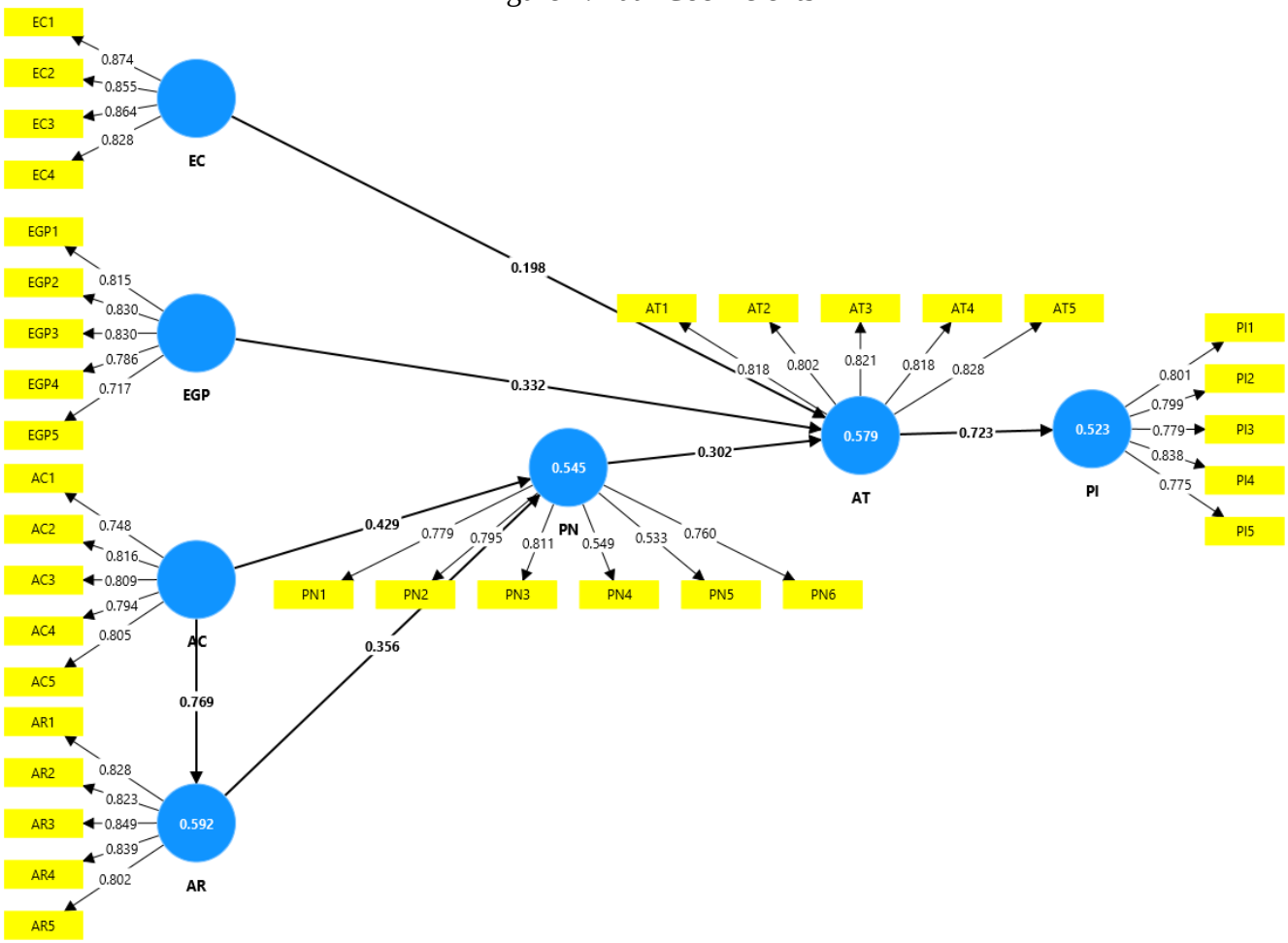
	The green product will have good durability.	0.717
Awareness of the Consequences (AC)	Non-usage of green products can lead to environmental damage.	0.748
	Buying conventional products has an effect on global warming.	0.816
	Green products reduce the amount of waste that goes into landfills.	0.809
	Green Products create a better environment for future generations.	0.794
	Global warming is a problem for society.	0.805
Ascription of Responsibility (AR)	Every citizen must take responsibility for the environment.	0.828
	I feel partly responsible for the environmental problems on our planet.	0.823
	I have the responsibility to ensure the quality of life for future generations.	0.849
	I feel personally responsible for environmental problems resulting from a product I use.	0.839
	I feel joint responsibility for the negative consequences of conventional products.	0.802
Personal Norm (PN)	I feel a strong personal obligation to use energy wisely.	0.779
	I feel a moral obligation to protect the environment.	0.795
	I feel morally committed to protecting the environment.	0.811
	Not buying green products goes against my principles	0.549
	I would feel guilty if I did not green products.	0.533
	I feel it is important that people in general protect the environment.	0.760
Attitude (AT)	I feel that green product's environmental reputation is generally reliable.	0.818
	I feel that green product's environmental performance is generally dependable.	0.802
	I feel that green product's environmental claims are generally trustworthy.	0.821
	I feel that green products are beneficial for the environment.	0.818
	Green products keep promises and responsibilities for environmental protection.	0.828
Purchase Intention (PI)	I will consider buying green products because they are less polluting.	0.801
	I will consider switching to green products for ecological reasons.	0.799
	I intend to buy green products soon.	0.779
	I will try to buy green products in the future.	0.838
	I will make an effort to buy green products shortly.	0.775

Assess internal consistency with composite reliability and its values above 0.7 are good, but some fields might accept slightly lower values. Evaluate convergent validity with AVE and its values above 0.5 (personal norm with lowest value of 0.510) indicate good convergent validity, but some fields might use stricter criteria.

At the third level, discriminant validity is used to verify the level to which a construct is dissimilar from other constructs. Three criteria, i.e., Fornell & Larcker criterion, cross-loading and HTMT ratio, should be checked to evaluate discriminant validity. According to the criteria Fornell & Larcker criterion (Fornell & Larcker, 1981), the analysis confirmed that the square root of each construct's AVE is greater than its maximum significant correlation with any other construct. So, the first criteria of discriminant validity are fulfilled.

On comparing the outer loading of the associated constructs with the outer loading of other constructs, it was found that all indicators' outer loading on the associated construct is more significant than all of its loading on other constructs. Therefore, the cross-loading issue is not there. Hence, the second criteria of discriminant validity are also fulfilled. The Heterotrait-monotrait (HTMT) correlation ratio is another measure of discriminant validity. Analysis revealed that all the values of the HTMT ratio are less than 0.90, which satisfies the third condition of discriminant validity too. So, all three criteria to fulfill the practical, systematic evaluation of the measurement model are satisfactorily accomplished.

Figure 2: Path Coefficients



EVALUATION OF STRUCTURAL MODEL

Collinearity assessment, coefficient of determination (R2 value), Effect size (f2), Stone-Geisser's Q2 and path coefficient and significance are subsection examination tools for assessing the structural model.

The Variance Inflated Factor (VIF) value is investigated to verify the collinearity. According to Diamantopoulos and Siguaw (2006) value of VIF larger than 3 indicates a potential collinearity problem. It is found from the analysis that all the values of the variance Inflated Factor (VIF) are below three, so the model does not have collinearity problems.

The percentage of variance explained by the endogenous variable by the exogenous variable is indicated by the R^2 value. The R^2 value ranges from 0 to 1. (Nakagawa & Schielzeth, 2013). The R^2 value is 0.592 for Ascription of Responsibility, indicating that the exogenous variables explain 59.2 per cent of the endogenous variance. The same is 0.579 for Attitude which signifies a moderate level (57.9 percent) of explanation of the endogenous variable. The R^2 value is 0.523 and 0.545 respectively for purchase intention and personal norm indicating that the exogenous variables explain 52.3 per cent and 54.5 per cent of the endogenous variance respectively.

Evaluation of effect size permits the researcher to detect the effect of each independent variable on the dependent variable. It can be measured as a small effect if the value is equal to or more than 0.02; it can be measured as a medium if the value is near 0.15 and the value exceeding 0.35 suggests a significant effect (Selya et al., 2012). Consider effect sizes (f^2) to understand the practical impact of a path coefficient.

Table 6 – f^2

	f-square		f-square
AC -> AR	1.451	EC -> AT	0.028
AC -> PN	0.165	EGP -> AT	0.112
AR -> PN	0.114	PN -> AT	0.056
AT -> PI	1.096		

The model's predictive relevance or power can be identified through Stone-Geisser's Q2 (Geisser, 1974; Stone, 1974). It is found from the analysis that all the values of Q2 are above 0, so the model has good predictive relevance.

The path analysis results reveal that H1 ($\beta = 0.198, p < 0.05$) is supported, so it can be said that environmental concern consumers have a significantly positive attitude toward green products. It means environmentally concerned consumers are building positive attitudes toward green products. H2 ($\beta = 0.332, p < 0.01$) is supported, by a positive significant relationship between expectation of green products and attitude towards green products. It means expectations of green products are building positive attitudes toward saving the environment.

H3 ($\beta = .429, p < 0.01$) is also supported, so it can be said that when a consumer is aware of the undesirable outcomes that can arise as the result of not using green product, it will trigger the personal norm within. Consumers realize that if they will not start using the green product, it can harm oneself, one's family, and the surrounding environment. This realization effectively triggers consumers' personal norms, fostering a sense of environmental responsibility. H4 ($\beta = .769, p < .01$) is supported and the statistically significant positive relationship between awareness of the consequences and ascription of responsibility is found. It means when a consumer is aware of the negative consequences that can arise as the result of not using green product, it will create an ascription of responsibility.

Figure 3: Empirical Model

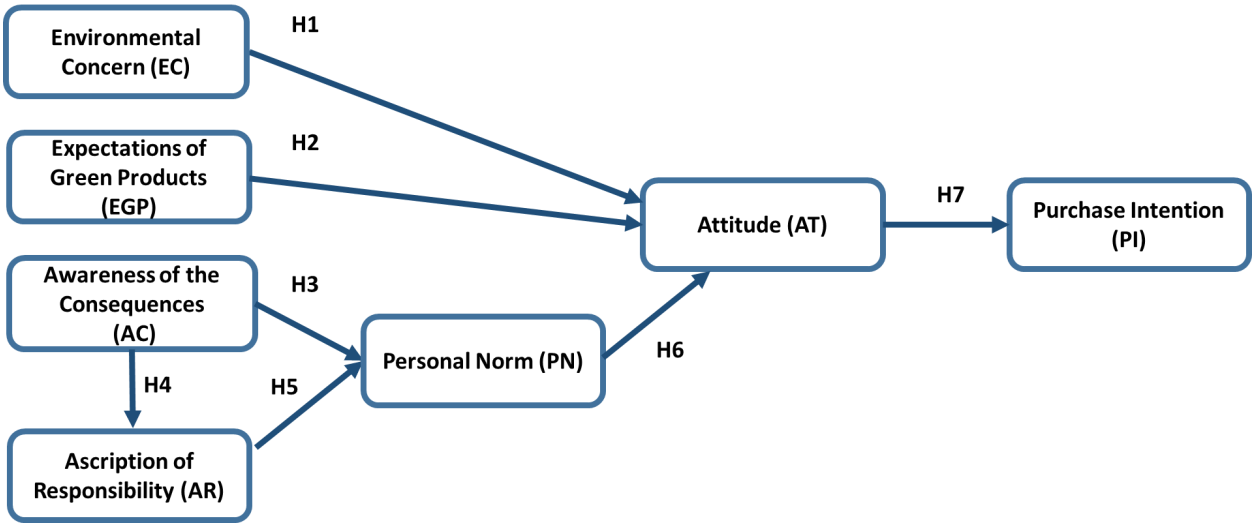


Table 7: Path coefficient significance

Hypotheses	Relationship	Path coefficient values	P Values	Results
H1	Environmental Concern -> Attitude	0.198	0.013	Supported
H2	Expectations of Green Products -> Attitude	0.332	0.000	Supported
H3	Awareness of the Consequences -> Personal Norm	0.429	0.000	Supported
H4	Awareness of the Consequences -> Ascription of Responsibility	0.769	0.000	Supported
H5	Ascription of Responsibility -> Personal Norm	0.356	0.000	Supported
H6	Personal Norm -> Attitude	0.302	0.000	Supported
H7	Attitude -> Purchase Intention	0.723	0.000	Supported

Note: *Significant at 1 percent
Source: *Primary Data*

H5 (β = .356, $p < .01$) is also supported which indicates that when a consumer acknowledges their responsibility in safeguarding the environment, their internalized values become activated as a manifestation of moral duty. This leads consumers to feel accountable for incorporating eco-friendly products into their daily routines, reinforcing their sense of responsibility. H6 ($\beta = 0.302$, $p < .01$) is supported, by a positively significant relationship between the personal norms and value build a strong attitude toward green products. It means positive personal norms towards green products lead to positive attitudes. H7 ($\beta = 0.723$, $p < .01$) is a positively significant relationship between the positive attitude toward green products and the intention to purchase green products. A positive attitude towards green products reflects a consumer's belief in the environmental benefits of those products.

MEDIATION EFFECT

The mediation effect of personal norm and attitude toward green products between various antecedents, i.e. environmental concern, expectations of green products, awareness of the consequences, ascription of responsibility and purchase intention for green products.

Table 8: Moderating Effect

Mediation Effect	Path coefficient values	P Values	Results
Awareness of the Consequences -> Ascription of Responsibility -> Personal Norm -> Attitude	0.083	0.019	Supported
Awareness of the Consequences -> Ascription of Responsibility -> Personal Norm -> Attitude -> PI	0.060	0.022	Supported
Awareness of the Consequences -> Ascription of Responsibility -> Personal Norm	0.274	0.000	Supported
Awareness of the Consequences -> Personal Norm-> Attitude -> Purchase Intention	0.094	0.008	Supported
Environmental Concern -> Attitude -> Purchase Intention	0.143	0.014	Supported
Expectations of Green Products -> Attitude -> Purchase Intention	0.240	0.000	Supported
Ascription of Responsibility -> Personal Norm-> Attitude -> Purchase Intention	0.078	0.016	Supported
Personal Norm -> Attitude -> Purchase Intention	0.219	0.001	Supported
Awareness of the Consequences -> Personal Norm-> Attitude	0.130	0.005	Supported
Ascription of Responsibility -> Personal Norm-> Attitude	0.107	0.014	Supported

Note: *Significant at 5 percent
Source: Primary Data

Table 8 shows that The mediation analysis reveals the intricate relationships between environmental awareness, personal responsibility, personal norms, attitudes, and purchase intentions towards green products. The findings indicate that awareness of environmental consequences significantly influences consumers' sense of responsibility, which in turn strengthens their personal norms regarding sustainable consumption. These norms play a crucial role in shaping a positive attitude towards green products, ultimately leading to a higher intention to purchase them. Notably, while environmental concern does not directly drive purchase intention, it positively influences attitudes, which act as a mediator in fostering green purchase behavior. Additionally, expectations regarding green products, including their quality, functionality, and sustainability, contribute to a favorable attitude, which in turn enhances purchase intention.

The results also highlight the importance of personal norms as a key mediator in multiple pathways, reinforcing both attitudes and purchasing decisions. Consumers who feel a moral responsibility to make environmentally conscious choices are more likely to develop a favorable attitude towards green products, thereby increasing their likelihood of purchasing them. Furthermore, attitude serves as a critical link between various antecedents—such as environmental concern, awareness of consequences, and ascription of responsibility—and the final purchase decision. The norm activation model is strongly supported, as moral obligation and personal responsibility significantly drive consumer behavior towards green products.

Overall, the study emphasizes that consumers' perceptions of their responsibility towards the environment, coupled with their expectations of green products, shape their purchase intentions. As individuals become more aware of the environmental impact of conventional products, they develop stronger personal norms that encourage sustainable consumption. This insight provides valuable guidance for businesses and policymakers aiming to promote green product adoption through targeted

awareness campaigns, responsibility-driven messaging, and enhancements in product quality to align with consumer expectations.

CONCLUSIONS

This research delves into the multifaceted factors shaping consumer attitudes and purchase intentions toward green products, utilizing the Norm Activation Model (NAM) and Perceived Green Image Theory (PGIT) as a foundational framework. The study's findings underscore the significant roles of environmental concern, expectations of green products, awareness of environmental consequences, ascription of responsibility, personal norms, and attitudes in influencing green purchasing behaviors.

The analysis reveals that environmental concern and positive expectations regarding green products are pivotal in fostering favorable consumer attitudes. A heightened awareness of the environmental consequences of one's actions leads to a stronger sense of personal responsibility, which, in turn, cultivates robust personal norms aligned with sustainable consumption. These personal norms are instrumental in shaping positive attitudes toward green products, ultimately enhancing the intention to purchase such products.

Mediation analyses further illuminate the complex interplay among these variables. Notably, the pathway from awareness of consequences to ascription of responsibility, leading to personal norms and subsequently to attitude, significantly influences purchase intentions. Additionally, both environmental concern and expectations of green products indirectly affect purchase intentions through their impact on attitudes.

These insights affirm the applicability of the Norm Activation Model and Perceived Green Image Theory (PGIT) in understanding green purchase behaviors. They suggest that enhancing consumers' environmental awareness and fostering a sense of personal responsibility are crucial steps in cultivating personal norms that drive positive attitudes and intentions toward green products. For practitioners, this implies that strategies aimed at increasing environmental awareness and aligning green products with consumer expectations can effectively promote sustainable consumption behaviors.

PRACTICAL IMPLICATIONS, LIMITATIONS AND FUTURE SCOPE OF RESEARCH

The study yields numerous critical implications for policymakers, government officials, academicians, and researchers. Consumer choices influence the demand for eco-friendly products, which, in turn, affects the production processes, resource consumption, and waste generation. Understanding the factors that drive green purchasing helps policymakers and businesses design strategies to promote sustainable practices, reduce environmental footprints, and work towards a more ecologically responsible society. Consumers increasingly expect businesses to adopt environmentally friendly practices. As, more individuals express a preference for green products, businesses are prompted to adapt and innovate. The study of green purchase behavior is essential for identifying market trends, guiding companies in developing sustainable offerings, and fostering a broader shift towards environmentally conscious consumption patterns. Governments and policymakers rely on insights into consumer behavior to create effective environmental policies. This knowledge is vital for creating a harmonious balance between consumer choices and ecological sustainability in our rapidly evolving world.

Online surveys may introduce a selection bias, as they may not capture the viewpoints of individuals who lack regular internet access or choose not to participate in online surveys. This oversight may neglect valuable insights from a subgroup that could have distinct opinions or behaviors. Additionally, the reliance on self-reported data in online surveys poses a challenge in ensuring the accuracy of responses. Gen Z respondents may be subject to social desirability bias, providing answers that align with perceived

societal expectations rather than reflecting their genuine opinions and behaviors. The opinion of the other section of the society may be missed.

Future researchers can study the actual purchase behavior of consumers rather than purchase intention. Future studies may include some product specific behavior or some environment friendly behavior too. It would also be interesting to study whether Gen Z consumers are aware about the consequences of not using the green products and whether they realize this responsibility or not. The impact of various demographics can also be studied.

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