Purchase Intention of Gen X and Millennials for Eco-Friendly Home Appliances: A Moderated Multi-Group Analysis

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In today's environmentally-conscious era, the demand for eco-friendly products is more critical than ever. However, there is a lack of comprehensive understanding regarding how individuals from various age groups perceive and embrace eco-friendly choices when it comes to making environmentally responsible purchases. This study investigates the impact of generational differences between Gen X and Gen Y (millennials) on environmentally-conscious purchases, specifically focusing on consumers from this study, based on responses from a sample of 234 respondents, seeks to enhance our understanding of consumers' motivations to purchase environment-friendly home appliances. To achieve this goal, the study employs an empirical evaluation of the Theory of Planned Behavior model in conjunction with the construct of environmental concern. The data analysis was carried out using SmartPLS 4. Furthermore, a multi-group analysis (MGA) was conducted to explore the potential moderating effect of generational cohorts on these relationships. The results show that drivers of environmentally responsible purchase intention were more or less equal in both cohorts, demonstrating that generational cohorts do not moderate the relationship between ecologically responsible purchase intention and its antecedents. Given that the Gen X and millennials have greater purchasing power and are the primary decision-makers in families, the study's novelty resides in undertaking a multi-group study between these two crucial generations.

Introduction

Environmentally responsible consumption aims to minimize harmful effects on the natural world (Kumar

human consumption's

et al., 2021). When compared to

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conventional consumption, environmentally responsible consumerism includes a wide range of ecologically conscious acts conducted while purchasing, using, and disposing of consumer goods (Gupta and Agrawal, 2018). Consuming with an eye on environment provides long-term advantages for both individuals and nations throughout the globe (Kumar *et al.*, 2021). Promoting eco-friendly production and consumption practices is essential for the development of a more sustainable future (Rasim *et al.*, 2021).

Prior studies have consistently explored the motivations underpinning the purchase of organic products from a marketing perspective (Arvola *et al.*, 2008; Stoll-Meadows and Davey, 2013; Carfora *et al.*, 2019; and Dhir *et al.*, 2021). However, less research has been conducted on other product categories such as eco-friendly consumer durable goods like electronics and home appliances. Understanding how customers in developing countries relate to eco-friendly household appliances can provide valuable insights into refining marketing strategies, manufacturing practices, and policy formulation.

Given that consumer durables and organic products typically differ on several essential factors such as product cost, lifespan, and end-of-life disposal methods, conclusions drawn from research on organic products should be cautiously applied to consumer durables until contextual validation has taken place. Additionally, due to variations in their economic situations, insights gained from significant research findings in Western nations on generational differences cannot be directly applied to buyers in developing nations without further verification (Agrawal and Gupta, 2018). From an economic standpoint, developed countries have higher per-capita incomes, indicating higher purchasing power and living standards. Conversely, emerging countries such as India have lower per capita incomes and largely depend on basic industries and agriculture.

Conventional home appliances made of non-sustainable materials harm the environment due to their shorter lifespans, higher resource consumption (such as water and electricity), higher repair costs, and increased need for replacements. On the other hand, eco-friendly household appliances with an Energy Star label or other energy efficiency rating are designed to use less energy and significantly reduce annual carbon dioxide emissions, thereby lowering global warming and conserving vital resources like energy and water (Ghose and Chandra, 2020; and Jhanji, 2021). The demand for consumer durable goods may rise further as a result of India's increasing aspirations, rapid urbanization, consistent middle-class expansion, and changing lifestyles (Ghose and Chandra, 2020). Consequently, encouraging the use of ecologically friendly appliances is essential in India to reduce environmental hazards in the future.

The current study also adds to the body of knowledge regarding generational influences on green consumption behavior (Oyenuga *et al.*, 2019; Kapferer and Michaut-Denizeau, 2020; and Cavalcante *et al.*, 2022). One of the primary goals of this study is

to investigate the consumer's green purchase intentions in light of the Generational Cohort Theory (GCT) Inglehart (1977 and 1990) and the Theory of Planned Behavior (TPB) (Ajzen, 1991). It seeks to comprehend if generational disparities exist for these antecedents of environmentally responsible purchase intention. Companies that possess a deeper understanding of the disparities between generations' desire to acquire eco-friendly products could potentially create eco-friendly appliances that cater to the distinct tastes and beliefs of every generation, consequently increasing the appeal of purchasing such products among consumers.

Thus, this study attempts to investigate the elements that lead to Indian consumers' environmentally conscious choices towards consumer durable products, keeping in mind the growing potential of the consumer durables sector in India. To develop an empirical framework on responsible consumption behavior for Indian consumers belonging to Gen X and Gen Y (millennials), the current study seeks to investigate what factors contribute to enhancing environment-friendly purchase intention concerning buying eco-friendly home appliances in a developing nation like India. Because these consumer groups are important decision-makers and purchasers of home appliances in Indian households, the current study performed a multi-group analysis.

Literature Review

Theory of Planned Behavior

The TPB, formulated by Ajzen (1991), extends the Theory of Reasoned Action (TRA) proposed by Fishbein and Ajzen (1975) by incorporating the construct of perceived behavioral control. TPB posits that attitude, subjective norms, and perceived behavioral control are the primary determinants of behavioral intention. These elements are foundational in predicting behavioral intentions, as supported by a substantial body of empirical research (Ajzen, 1991).

In marketing research, behavioral intentions are defined as the combination of customers' desire for a product and their monetary capacity to pay for it (Bilsie *et al.*, 2023). TPB asserts that the presence of an intention to perform a specific action is the most immediate predictor of an individual's actual behavior (Ajzen, 1991). However, the distinction between "intention to behave" and "actual behavior" is significant. Despite pro-environmental sentiments and intentions to purchase eco-friendly products, few customers engage in environmentally conscious buying practices in reality. This discrepancy is known as the intention-behavior gap or green gap (Fenz, 2016; and Kazmi *et al.*, 2021).

Research has shown that while TPB effectively explains and predicts consumer intentions in various sustainability and pro-environment domains (Ramayah *et al.*, 2012; Echegaray and Hansstein, 2017; Chaudhary, 2018; Tommasetti *et al.*, 2018; and Sheoran and Kumar, 2022), it often does not account for domain-dependent variables. These

variables, which are not included in the TPB framework, can significantly influence the transition from intention to actual behavior (Armitage and Conner, 2001). For cross-sectional studies, such as those in green marketing, intention has traditionally been seen as a crucial determinant of actual behavior (Ghose and Chandra, 2020). Even with pro-environmental sentiments and intentions to purchase eco-friendly products, few customers in reality engage in environmentally conscious buying practices. This phenomenon is referred to as the intention-behavior gap or green gap (Eriz, 2016; and Kaemi *et al.*, 2021). Future research can fill this vacuum in the literature by using a longitudinal methodology.

Pro-Environmental Attitude: Pro-environmental attitude has garnered significant attention from researchers as a crucial factor in predicting environmental purchasing behavior (Tan *et al.*, 2020). This attitude reflects an individual's views and opinions about the ecological environment, indicating their concern for the natural world (BissingOlson *et al.*, 2013). A positive pro-environmental attitude often leads to adherence to environment-friendly behaviors. Consequently, a favorable attitude towards eco-friendly products is a key starting point for encouraging sustainable consumption (Marzouk and Mahrous, 2020; Park and Lin, 2020; Moon, 2021; and Wang *et al.*, 2021). It is reasonable to infer that consumers' attitudes significantly influence their intentions to make green purchases, such as buying eco-friendly home equipment.

Subjective Norm: Subjective norm is based on an individual's normative assumptions regarding what his/her friends and associates will feel about his/her choices, and their moral judgement to follow these choices (Ghose and Chandra, 2020). Subjective norm is a key factor in determining if a person will purchase an environment-friendly item based on the suggestions of individuals important in his or her life (Hameed *et al.*, 2019).

Perceived Behavioral Control: TPB framework suggested that customers' intention to perform a behavior is dependent on the presence of appropriate resources and the ability to act in a particular way (Ajzen, 1991). The addition of this variable in the TRA framework made it simpler to gauge people's intentions to perform a certain activity (Paswary *et al.*, 2022). The buyer must be persuaded that there are resources accessible and that there are alternatives that could either promote or inhibit conduct. Scientists in the field of environment-friendly consumption make extensive use of the construct (Han *et al.*, 2010; Bang *et al.*, 2014; Tommasetti *et al.*, 2018; Bhutto *et al.*, 2019; Prendergast and Tsang, 2019; and Dilotsotlhe, 2021).

Environmental Concern: One of the earliest ideas incorporated in environmental research was environmental concern (Antil, 1984). The level of personal involvement in issues related to the environment is referred to as environmental concern (Kim and Han, 2010). It stimulates people's emotional reactions when it comes to environmental preservation (Lee, 2008). A person's increased environmental concern depends on the

degree to which they take the environment as a valuable asset that is in danger. As a result of this concern, there is a higher chance that ecologically friendly consumption habits will be adopted (Kilbourne and Pickett, 2008). Consumers with better environmental awareness are more likely to be concerned about the environment (Ghose and Chandra, 2020). It is becoming increasingly vital to understand how environmental concerns affect Indian customers' intentions to make sustainable choices, given India's increasing economic growth and its negative consequences on the environment. Therefore, we anticipate that environmental concerns will have a favorable impact on consumer's intention to purchase eco-friendly goods.

Generational Cohort Theory

Inglehart (1977) outlined the GCT, which contends that a collection of people who encountered identical economic, political, social, and cultural occurrences in their growth phase would eventually go on to have identical opinions and behaviors throughout their entire lives. To investigate the beliefs, attitudes, and behaviors of cohort generation regarding the topic of environmentally conscious consumption, which can be described as consumption where buyers examine the environmental impact of the goods they purchase, we rely on the Theory of Planned Behavior (TPB) (Ajzen, 1991) and the GCT (Inglehart, 1977). By thoroughly investigating the values, beliefs, attitudes, and behaviors of an intended generation, according to the significant incidents and socioeconomic patterns that took place throughout the early stages of life, it may be possible to determine advertising campaigns that will be attractive to that particular generation (Thach *et al.*, 2021). The present study explored the factors that influence customers' willingness to buy ecologically sound durable products and also looked at the moderating effects of generational cohorts. The generational cohort may be broken down into five age categories: Silent Generation (1928-1945), Baby Boomers (1946-1964), Generation X (1965-1980), Generation Y (commonly known as millennials, born 1981-1996), and Generation Z (born 1997-2012) (Lin and Chen, 2022).

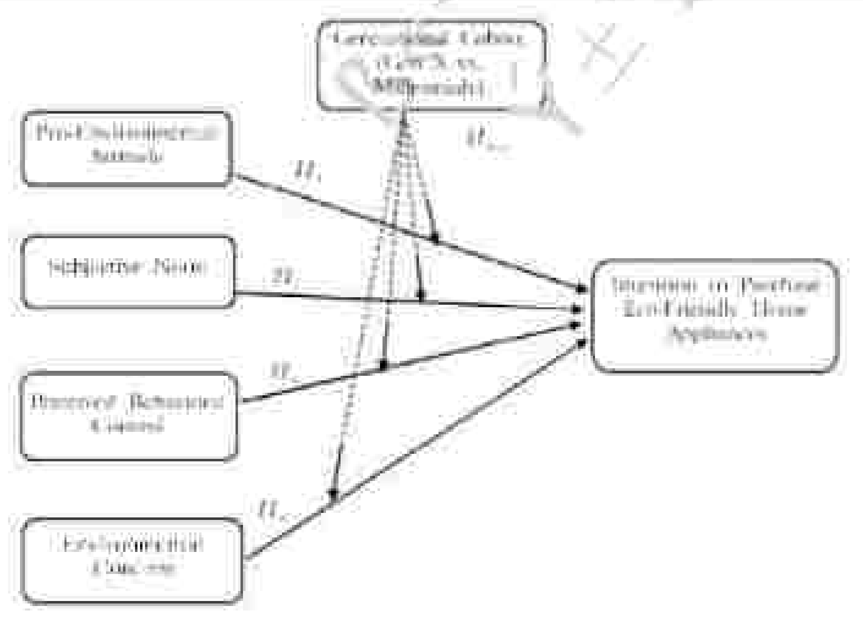
Gen X and Millennials: According to generational cohort academics, the generation known as Gen X covers people born between 1965 and 1980, whereas Gen Y (millennials) includes people born between 1981 and 1996 (Williams and Page, 2011; Schultz *et al.*, 2012; and Lin and Chen, 2022). According to prior research, Gen X and Millennials have distinct histories, abilities, and desires when compared to each other as well as their earlier generations (Wolburg and Pokrywczynski, 2001). For those in Gen X, knowledge and creativity are essential and are recognized for their ability to be independent, practical, and diligent (Taylor and Gao, 2014). They perceive innovation as altering their reality, watching more television, and going to museums and exhibitions featuring historical crafts than previous generations. Gen X is distinguished by its independence, desire for emotional security, preference for informality, and entrepreneurialism (Howe and Strauss, 2007). The members of Gen X are people who were raised before technological innovation was widely adopted,

Millennials, frequently referred to as digital natives (Hargittai, 2010), make use of technology frequently. These consumers are passionate about fashionable products (Williams and Page, 2011), and because of their impact on overall spending across a variety of product categories, they play a crucial role in the market. They have a tremendous spending power and are regarded as the second-largest cohort of buyers after Baby Boomers (Strauss and Howe, 2007). Because of their willingness to accept and flexibility towards various ways of life, millennials is additionally referred to be the best-educated and most culturally diverse generation in history (Wolburg and Pokrywczynski, 2001). Gurău (2012) found millennials are more inclined to behave as responsible consumers regardless of limited resources. Higher levels of education have been identified as the primary justification for millennials' stronger acceptance of environment-friendly practices (McKay, 2010). Additional studies examining millennials' attitudes and behaviors toward environment-friendly goods above those of preceding generations are needed (Pomarici and Vecchio, 2014). The present study examines, in light of the foregoing reasoning, that generational differences will moderate the linkages between eco-friendly purchase intention and its antecedents. As a result, we propose that the antecedents of purchase intention will be stronger for millennials as compared to Gen X.

Hypothesis Development

Based on literature review, the following hypotheses have been formulated (Figure 1):

Figure 1: Theoretical Model and Hypotheses



H_4: *There is a positive relationship between pro-environmental attitude and intention to purchase eco-friendly home appliances*

H_5: *There is a positive relationship between subjective norm and intention to purchase eco-friendly home appliances*

H_6: *There is a positive relationship between perceived behavioral control and intention to purchase eco-friendly home appliances*

H_7: *There is a positive relationship between environmental concern and intention to purchase eco-friendly home appliances*

H_{8a}: *The strength of the relationship between pro-environmental attitude and purchasing intentions for eco-friendly home appliances is stronger for millennials than for Gen X*

H_{8b}: *The strength of the relationship between subjective norm and purchasing intention for eco-friendly home appliances is stronger for millennials than for Gen X*

H_{8c}: *The strength of the relationship between perceived behavioral control and purchasing intention of eco-friendly home appliances is stronger for millennials than for Gen X*

H_{8d}: *The strength of the relationship between environmental concern and purchasing intention of eco-friendly home appliances is stronger for millennials than for Gen X*

Data and Methodology

Sample and Data Collection Procedure

To collect the data, a mall-intercept survey was used, and it lasted about a period of three weeks in March 2021. The intended audience consisted of buyers in India's Delhi-National Capital Region (also known as the NCR). The study was done in supermarkets and exclusive brand outlets (EBOs) located in five major malls in NCR selling home appliances such as refrigerators, air conditioners, televisions, dishwashers, etc. with Energy Star ratings and other green labels. The random sample strategy was applied by approaching people leaving stores in these markets and shopping centers. Only individuals who were well informed about eco-friendly home appliances were given questionnaires. Respondents were contacted on working days from 14:00 to 21:00 hours and on weekly offs from 11:00 to 21:00 hours to produce a sample that was significantly representative of the population. People who participated had a choice of responding to questions on paper or digitally on their smartphones or tablets. A total of 348 of the 490 completed questionnaires received were valid, yielding a response rate of 71.02%. Of the 348 responses, 234 (123 for millennials and 111 for Gen X) were used for analysis. The sample profile is presented in Table 1.

Table 1: Sample Profile				
	Millennials		Gen X	
	Number	%	Number	%
Gender				
Female	65	31.58	69	63.86
Male	48	46.15	42	38.88
Monthly Income				
Below ₹25,000	56	30.11	29	24.0
₹25,000-50,000	44	34.92	30	27.77
₹50,000-1 lakh	74	31.48	32	29.62
Above ₹1 lakh	10	4.9	20	18.51
Education				
High School or Less	10	4.8	13	12.03
Undergraduate	23	18.25	29	26.85
Graduate	44	54.71	45	41.66
Postgraduate	48	28.08	21	19.44
Note: N = 253				

Data Source and Measurement Scale

The development of the measurement scale started with a pilot study to ensure the questionnaire was accurate, reliable, valid, and easy to comprehend. Based on the pilot study on a sample of 60 participants, reliability and validity were checked, which were within the recommended threshold. Moreover, content validity was checked by sharing the questionnaire with three university lecturers who specialize in consumer behaviour, who reviewed it and gave suggestions. Based on their suggestions, some words were changed after taking the preliminary survey's suggestions. The term "nonbinary," which denoted a third gender, was subsumed with "other." This method demonstrated that it was effective in obtaining an adequate number of sample for a structural equation modeling (SEM) analysis. Each item was scored on a 5-point Likert-type scale with the options "strongly disagree" and "strongly agree."

The measurement scales used in the questionnaire were adopted from the previous studies; environmental concern with four dimensions was adopted from Dief and Font (2010); perceived behavioral control with three dimensions from Kim and Han (2010); subjective norm with two dimensions from Chan and Lau (2002); purchase intention using three dimensions from Kim *et al.* (2013); and to evaluate the pro-environmental attitude four items were adopted from Kim and Han (2010). Every scale extracted from previous investigation was used in its entirety, and no items were removed except for the scale of pro-environmental attitude. The questionnaire only incorporated four of the six

items from the scale of Kim and Han (2010) for the pro-environmental attitude post-pilot study.

Results and Discussion

Due to its popularity in the field of social science research, particularly in the field of marketing, SmartPLS 4 software was used to test the measurement model among the other possibilities (Hair *et al.*, 2012). Since the scales were adopted from the previous studies and were modified, we carried out confirmatory factor analysis (CFA) (Table 2). The standardized factor loadings satisfied the minimum requirement of 0.6 for all factors (Hair *et al.*, 2017). Additionally, to evaluate reliability and validity, Cronbach's alpha (Cron. α), composite reliability (CR), and average variance extracted (AVE) were employed. The findings supported the reliability and validity of the constructs tested in the current study, with Cronbach's alpha, CR scores all exceeding 0.7 (Fornell and Larcker, 1981).

The AVE for the constructs was higher than 0.50 for the overall sample, which again corroborates convergent validity. Table 3 presents the satisfactory confirmatory factor analysis results for the individual samples of Gen X and millennials. Heterotrait-monotrait ratio (HTMT) matrix criteria were applied to determine the discriminant validity of each reflective scale incorporated into the framework (Table 4). The HTMT ratio received favorable evaluations, below 0.85 (Henseler *et al.*, 2015) in all the cases. Because of the strong ability to assess the discriminant validity, the HTMT matrix over the Fornell and Larker criteria, was retained in the paper.

The structural model was used to test the hypotheses via the three suggested criteria: the path coefficients along with the value of the *t*-statistics, the coefficient of determination (R^2) and the Stone-Geisser criterion (Q^2) (Geisser, 1975). To examine the relevance of the structural correlations, a bootstrapping approach centered around 5000 runs was used (Hair *et al.*, 2017). The findings support hypotheses H_1, H_2, H_3, and H_4 by demonstrating *p*-values less than 0.05, showing the considerable positive effects of pro-environmental attitude, subjective norm, perceived behavioral control, and environmental concern on purchase intention (Table 5).

Using R^2 indices, the structural model's explanatory and predictive ability was evaluated and R^2 values exceeded the advised threshold of 0.10 (Falk and Miller, 1992). The constructs' predictive relevance has been cross-validated by analyzing Q^2 values using the blindfolding approach (Geisser, 1975). Furthermore, the Q^2 test outcomes show that all constructions have a positive value, suggesting that all constructs meet the criterion of relevance (Chin *et al.*, 2009).

Multi-Group Analysis

In the final part of the study, we looked at the notable variation between Gen X and millennials in terms of their environmentally responsible purchase intentions. Multi-group

Table 2: Descriptive Statistics and CFA Constructs for the Combined Model

Constructs and Factors	M	SD	Factor Loading	t-Value
Pro-Environmental Attitude Adopted from Kim and Han (2010)				
ATT-Cron. alpha = 0.849, CR = 0.823, AVE = 0.667				
ATT1 For me, purchasing eco-friendly home appliances is (Extremely bad/ Extremely good)	0.796	0.021	0.791	31.647
ATT2 For me, purchasing eco-friendly products is (Extremely undesirable/ Extremely desirable)	0.843	0.026	0.844	32.202
ATT3 For me, purchasing eco-friendly products is (Extremely unenjoyable/ Extremely enjoyable)	0.818	0.026	0.840	32.491
ATT4 For me, purchasing eco-friendly products is (Extremely foolish/ Extremely wise)	0.834	0.028	0.836	29.354
Subjective Norm Adopted from Chan and Lau (2002)				
SN-Cron. alpha = 0.600, CR = 0.835, AVE = 0.631—				
SN1 Most people who are important to me would want me to purchase ecofriendly home appliances	0.896	0.025	0.858	36.032
SN2 People who are important to me think I should purchase ecofriendly home appliances	0.934	0.012	0.933	39.939
Perceived Behavioral Control Adopted from Chan and Lau (2002)				
PBC-Cron. alpha = 1.908, CR = 0.852, AVE = 0.717				
PBC1 Whether or not I buy eco-friendly appliances in place of conventional appliances is entirely up to me	0.875	0.129	0.911	7.061
PBC2 I have resources, time, and opportunities to buy eco-friendly appliances	0.732	0.172	0.729	4.331

Table 2 (Cont.)

Constructs and Factors	M	SD	Factor Loading	t-Value
PBC3 I am confident that if I want to, I can buy eco-friendly appliances in place of conventional appliances	0.604	0.137	0.846	5.358
Environmental Concern Adopted from Diel and Fane (2019)				
EC-Cons alpha = 0.828, CR = 0.844, AVE = 0.659				
EC1 We are approaching the limit of the number of people the earth can support	0.948	0.020	0.846	42.842
EC2 The balance of nature is very delicate and easily gets upset	0.851	0.018	0.852	47.338
EC3 Plants and animals have as much right as humans to exist	0.771	0.041	0.774	18.754
EC4 If things continue on their present course, we will soon experience a major ecological catastrophe	0.768	0.031	0.769	24.414
Purchase Intention Adopted from Kim *et al.* (2017)				
PI-Cons alpha = 0.870, CR = 0.873, AVE = 0.756				
PI1 I am willing to purchase eco-friendly appliances for personal use	0.853	0.020	0.852	43.406
PI2 I will purchase eco-friendly home appliances	0.921	0.019	0.923	49.646
PI3 I will put the required efforts into purchasing eco-friendly home appliances	0.893	0.014	0.893	63.942

Note: M: Mean, SD: Standard Deviation, CR: Composite Reliability, AVE: Average Variance Extracted; $p < 0.01$.

Table 3: Descriptive Statistics and CFA Constructs for Gen X and Millennials

Construct/ Item	Gen X				Millennials			
	Loading	Alpha	CR	AVE	Loading	Alpha	CR	AVE
ATT		**0.883**	**0.885**	**0.741**		**0.776**	**0.781**	**0.591**
ATT1	0.834				0.726			
ATT2	0.868				0.780			
ATT3	0.901				0.748			
ATT4	0.838				0.818			
SN		**0.842**	**0.843**	**0.839**		**0.725**	**0.802**	**0.778**
SN1	0.894				0.834			
SN2	0.939				0.926			
PBC		**0.826**	**0.838**	**0.741**		**0.793**	**1.014**	**0.669**
PBC1	0.894				0.932			
PBC2	0.839				0.665			
PBC3	0.848				0.822			
EC		**0.839**	**0.866**	**0.702**		**0.742**	**0.777**	**0.557**
EC1	0.855				0.629			
EC2	0.669				0.811			
EC3	0.925				0.848			
EC4	0.908				0.629			
PI		**0.861**	**0.863**	**0.782**		**0.869**	**0.874**	**0.793**
PI1	0.855				0.839			
PI2	0.901				0.958			
PI3	0.888				0.922			

Table 4: Discriminant Validity (Heterotrait-Monotrait Ratio (HTMT) Matrix)

	ATT	EC	PBC	PI	SN
ATT					
EC	0.668				
PBC	0.039	0.116			
PI	0.731	0.684	0.144		
SN	0.653	0.570	0.051	0.521	

Table 5: Structural Model Evaluation					
Hypothesis	Relationship	Beta	t-Value	p-Value	Contrast
H_1	ATT → PI	0.444	6.961	0.000	Supported
H_2	SN → PI	0.193	4.153	0.000	Supported
H_3	PBC → PI	0.100	2.093	0.036	Supported*
H_4	FC → PI	0.273	4.762	0.000	Supported
Note: Purchase Intention R^2 = [illegible] Q^2 = [illegible] * Relationships significant at $p < 0.05$					

analysis (hereafter MGA) was used to validate H_{5-8} utilizing the SmartPLS4 program. We anticipate major variations in the correlations among the dimensions based on generational cohort, namely, Gen X (N = 108) born between 1965 and 1980 and millennials (N = 126) born between 1981 and 1996 (Liu and Chen, 2022). Subsequently, before conducting the MGA, the construct invariance (measurement invariance of composite, MICOM) of the model in the two groups has been established (Table 6). Also, the configural invariance is established by using the same items, algorithm, and data procedure for every construct in both groups. Finally, the permutation test findings did not support the equality of the composite mean values and variances for the constructs, which is the third step of the process (Henseler *et al.*, 2015); hence partial measurement invariance was confirmed and the phenomenon supports the MGA's usefulness in the hypothesis testing.

Table 6: Results of Invariance Measurement Testing (Bootstrapping Results)						
Path	Configural Invariance	Original (Gen X)	p-Value (Gen X)	Original (Millennials)	p-Value (Millennials)	Invariant
ATT → PI	Yes	0.423	0.000	0.470	0.000	Yes
SN → PI	Yes	0.193	0.004	0.196	0.003	Yes
PBC → PI	Yes	0.104	0.152	0.119	0.21	Yes
FC → PI	Yes	0.310	0.000	0.268	0.002	Yes

Using the MGA, it is feasible to determine whether there are any statistically significant variations in variable estimations between previously identified data categories. The findings revealed that all the differences were found insignificant since all the paths have a p-value of more than 0.05. The path coefficients in the case of Gen X and millennials are not significantly different and all the antecedents of purchase intention are more or less equal in the case of both Gen X and millennials.

p-value for PBC in both the separate models is higher than 0.05, suggestive of the fact that purchase intention is not affected by PBC for the individual samples of Gen X and millennials. All the direct path coefficients, *t*-values, and *p*-values for the two separate models and the combined model are revealed in Table 7. Thus, the differences in path coefficients revealed that the impact of generation cohorts on environmentally responsible purchase intention was not stronger in the case of millennials, nor was the supposition correct for Gen X consumers. The results of the multi-group analysis are summarized in Table 8.

Table 7: Direct Relationships

Path	Gen X			Millennials		
	Beta	*t*-Values	*p*-Values	Beta	*t*-Values	*p*-Values
ATT → PI	0.421	4.641	0.000	0.470	5.668	0.000
SN → PI	0.193	2.880	0.001	0.186	2.913	0.001
PBC → PI	0.104	1.527	0.127	0.119	1.249	0.211
EC → PI	0.190	3.300	0.001	0.268	3.030	0.002

Note: Gen X = R^2 = 0.319, Q^2 = 0.311; millennials = R^2 = 0.428; Q^2 = 0.406. Relationships are significant at $p < 0.05$.

Table 8: Multi-Group Analysis (Welch-Satterthwaite Test)

Hypothesis	Relationship	Difference (Millennials-Gen X)	*t*-Value ((Millennials vs. Gen X))	*p*-Value (Millennials vs. Gen X)	Contrast
H_a	ATT → PI	0.049	0.854	0.393	Not Supported
H_b	SN → PI	0.039	0.431	0.668	Not Supported
H_c	PBC → PI	0.015	0.234	0.815	Not Supported
H_d	EC → PI	0.061	0.485	0.629	Not Supported
H_e	EC → PI	0.253	4.262	0.000	Supported

Note: Differences insignificant between the cohorts; *p* not less than 0.05

Conclusion

Contributing to the green literature, this paper adds to the existing body of knowledge by addressing the need for investigation into how generations moderate the relationship

between environmentally responsible purchase intention and its antecedents (Ivanova *et al.*, 2019). Since many researchers have concentrated largely on millennials or centennials, the findings close the long-standing research gap in the literature about generational differences by taking older generations into account (Polonsky and Vocchio, 2014; and Cerezo-Arroyo and Mayner-Gandelcuma, 2022).

Our findings imply that attitude, subjective norm, perceived behavioral control, and environmental concern all have a positive influence on customers' intentions to purchase ecologically responsible products. However, moderation analysis reflected that there are no significant differences in the purchase intention of eco-friendly products among the two generational cohorts, i.e., Gen X and millennials. This reflects that purchase intention for eco-friendly products or green purchase intention is embraced by both the generations with same strength. This provides valuable insights concerning the acceptance of eco-friendly products among consumers at a large scale.

The results suggest that when considered separately, neither Gen X nor millennials's intention to buy is significantly influenced by perceived behavioral control. This may have significant effects on our comprehension of the factors that influence each generational category's desire to acquire eco-friendly products (Bandari *et al.*, 2023). Subsequent research endeavors ought to proceed with interpreting these results and assessing the influence of supplementary elements such as proportions of the sample taken and contextual or environmental factors.

The study further highlighted that consumers' concern for the environment positively impacts their cognitive mindset for purchasing those products that have comparatively less impact on the environment. This shows that marketers can position their advertisements and social media post by stressing the impact of non-ecofriendly products on the environment and how using ecofriendly products can save our planet from hazardous impacts. Such promotions will motivate consumers to contribute towards a greener environment by purchasing ecofriendly products.

Theoretical Contribution

Our study's findings not only corroborate past findings but also considerably broaden the existing theoretical framework, laying the groundwork for future investigations. The current study represents a pioneering attempt that offers a valuable understanding of the impact of generational cohorts on green durable consumption in India. The study while investigating the generational influences found that there was no significant impact of Gen X and millennials on environmentally responsible purchasing intention concerning ecofriendly home appliances. Also, one can observe a strong association between the intention to make green durable purchases and its antecedents suggestive of the fact that the people of India embrace the purchase of such products irrespective of the generations they belong to. The study employed TPB to examine the purchase intention for environment-friendly household equipment. The influence of the drivers of the TPB to buy green home appliances has been verified by our study's findings. It

implies that the TPB integrates effortlessly with the construct of environmental concern in the data set, hence improving the predictive power of the model.

Practical Implications: Marketing managers can use the investigation's significant recommendations for developing and implementing marketing strategies. According to the study, consumers create their intention to buy particular products based on entrenched notions. To enhance customers' environment-friendly beliefs, advertisements must simultaneously promote positive attitudes towards environment-friendly products and showcase the ecological benefits of using ecofriendly home appliances. Also, social media advertisements must simultaneously raise the degree of environmental concerns among consumers by highlighting the hazards of environmental pollution and global warming. In addition, managers must focus on distributing environment-friendly household types of appliances on a wider scale, particularly in emerging nations like India, where there are not many green options. A majority of customers in such nations are unaware that certain products are available in the markets. Furthermore, by creating laws that provide incentives for the purchase of environment-friendly goods, authorities can support consumers' intentions to make purchases. On the other hand, lowering the tax rates on these goods may also help make them more accessible to consumers, and this will encourage customers to make larger purchases, which will ultimately benefit the environment.

Limitations and Future Scope: Despite the significant insights and outcomes that our study offers to researchers as well as practitioners, it is subject to some limitations. Firstly, participants for the study were only selected from urban areas, as they were anticipated to be engaged on contemporary and classic social media platforms, as well as informed about environmental issues. Because the study was restricted to a specific region of the nation, the findings do not support the proposed model's generalisation. Future studies might use a sample that is more diverse in terms of demographics and includes rural samples as well. Secondly, convenience sampling was used in the study, leading to undiscovered systematic and variable errors in the present investigation. A more probabilistic sampling strategy would be advantageous for future studies. Usable patterns in generational differences can be insightful, but concentrating only on these disparities across groups could leave out possibly more significant differences within the same group (Petrocea *et al.*, 2019). Therefore, in addition to generational differences, a generation's the significance of cultural, geographical, and behavioral distinctions within should be emphasized in future research. ✪

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