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Influence Of Altruism, Biospheric, Egoistic, And Product Quality Values On Energy-Efficient Home Appliances Purchase Intention Among Millennials And Gen Z

Bertha Rastika
Master of Management Program, University of Indonesia
Email: [1)] bertharastika@gmail.com

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ABSTRACT

This study examines how personal values—altruistic, biospheric, egoistic—and perceptions of product quality influence the intention to purchase energy-efficient home appliances (eeha).survey data were collected from 221 prospective indonesian consumers and analyzed using structural equation modeling (sem). Findings: by incorporating egoistic values focused on self-benefit into the existing framework of personal values, this research offers a broader view of the motivations behind environmentally conscious purchasing. It reveals how both self-centered and pro-social values contribute to consumers' interest in eeha. Originality/value: building on the value-based model proposed by bhardwaj et al. (2023), this study introduces egoistic values as an additional dimension. While past studies often overlook self-enhancing motives, this research addresses that gap and focuses specifically on the growing importance of eeha in sustainable living. Practical implications: findings suggest that social influence is a key driver of eeha purchase intention, highlighting the effectiveness of campaigns involving influencers and eco-communities. Perceived behavioral control also plays a crucial role, emphasizing the need to improve access, affordability, and consumer knowledge. Marketing should emphasize environmental benefits and product performance, as these factors significantly impact positive attitudes, while egoistic appeals are less effective.

INTRODUCTION

Residential energy consumption has surged due to the growing reliance on household appliances (Statista Market Insights, 2024). To counteract the environmental consequences, energy-efficient home appliances (EEHA) play a vital role in reducing electricity usage (Ministry of Energy and Mineral Resources, 2018). However, consumer adoption, especially in developing

nations like Indonesia, remains low despite their availability (Fithriyah, 2024). Prior studies have explored green product purchase intentions by emphasizing environmental and social values linked to personal value systems (Bhardwaj et al., 2023). This research seeks to address this gap by integrating the Theory of Planned Behavior (TPB) and the Stimulus-Organism-Response (SOR) model to better understand consumer decision-making in EEHA adoption (Ajzen, 1991; Mehrabian & Russell, 1974).

Recent frameworks, such as Konalingam et al. (2024), have merged value-based theories like the Value-Belief-Norm (VBN) model and TPB to examine how altruistic, biospheric, and egoistic values influence environmental behavior. These orientations, as outlined by de Groot and Steg (2008), shape environmental beliefs and actions. Similarly, Mazhar et al. (2022) included hedonic and identity-related variables in their green consumption models. Despite this, few studies have applied egoistic values to EEHA contexts. Factors such as pricing, brand trust, and awareness influence adoption (Lin & Dong, 2023; Li et al., 2021), with cost still outweighing environmental considerations for many consumers.

Although Indonesia has introduced policies like SKEM and LTHE to promote energy-saving products (Ministry of Energy and Mineral Resources, 2024), their impact is limited without greater public awareness. Thus, this study aims to expand the theoretical model by incorporating egoistic values into a framework that also considers product-specific attributes. Using a quantitative method, data were collected via an online survey of 221 respondents and analyzed through PLS-SEM. The structure of the paper includes a literature review, hypothesis development, methodology, analysis, and conclusions.

LITERATURE REVIEW

Literature Review and Hypotheses Development

Understanding consumer behavior involves examining three key dimensions: buying, owning, and identity. "Buying" encompasses the entire purchasing process from recognizing a need, gathering information, and evaluating alternatives to making a decision and post-purchase behavior. "Owning" reflects the emotional and psychological bonds people form with the products they possess, indicating a sense of attachment and ownership. "Being" refers to how the products we buy and use help shape our self-concept and influence how we are perceived by others (Solomon & Russell, 2023).

Theory of Planned Behavior (TPB) and Stimulus-Organism-Response (SOR) Theory

The Theory of Planned Behavior (TPB), introduced by Icek Ajzen in 1985, builds upon the earlier Theory of Reasoned Action (TRA). According to TRA, a person's intention to engage in a certain behavior is influenced by their attitude toward the behavior and the social pressure they perceive from others. When individuals view a behavior positively and feel socially supported, they are more likely to intend to perform it (Ajzen, 1991; Mehrabian & Russell, 1974).

However, TRA has limitations, especially in situations where individuals do not have full control over their actions. To overcome this, Ajzen introduced TPB by adding the concept of perceived behavioral control how capable individuals feel in performing the behavior (Ajzen, 1985). TPB aims to explain and predict human behavior through three key factors: attitude, subjective norms, and perceived behavioral control (Ajzen, 2005). Because of its comprehensive framework, TPB has been widely applied in various fields, including health, psychology, marketing, and education (Ajzen, 1991). By combining these three elements, TPB provides a robust framework for analyzing consumer behavior, particularly in contexts like sustainable consumption and green purchasing. It helps explain how values, social expectations, and self-efficacy influence individuals' decisions to act sustainably. This highlights the usefulness of TPB in connecting individual psychological drivers with broader social and environmental concerns.

The Stimulus Organism-Response (SOR) theory is a widely recognized framework in psychology, communication, and marketing. It describes how external stimuli influence an individual's internal processing and lead to specific responses. The theory evolved from the more basic Stimulus-Response (S-R) model, a dominant approach in early behaviorist psychology (Pavlov, 2003; Skinner, 1953). The original S-R model viewed behavior as a direct reaction to external stimuli, ignoring internal cognitive and emotional factors. It depicted humans as predictable beings responding to environmental triggers. While this view shaped much of early psychological research, it lacked consideration for inner mental states.

SOR theory enhances the traditional model by incorporating internal processes such as thoughts, emotions, and perceptions. It acknowledges that people interpret stimuli based on their psychological states and prior experiences. This broader perspective is particularly useful in marketing and consumer behavior studies, where external cues like branding or advertising affect consumers' thoughts and feelings, ultimately shaping their behavior. In the context of sustainable consumption, SOR theory explains how consumers' emotional and cognitive responses to environmental messages and product cues influence their intentions and decisions. Its ability to account for the interaction between external influences and internal processing makes it a powerful tool for studying green purchasing behavior (Mehrabian & Russell, 1974).

Values

Environmental and social values are deeply held principles that reflect a concern for nature and the well-being of society, and they significantly influence consumer purchasing behavior. These values embody a personal sense of duty to protect the environment, conserve natural resources, sustain biodiversity, and uphold ecological stability (biospheric values). On the social side, they include altruistic motivations aimed at benefiting the broader community—such as promoting fair trade, advocating for the empowerment of underrepresented groups, and striving for social equity. When it comes to buying environmentally friendly products, these values are crucial in shaping favorable attitudes and a strong intention to make sustainable purchases (Bhardwaj et al., 2023).

Moreover, environmental and social values substantially impact perceived behavioral control (PBC) in the context of green purchasing decisions (Alam et al., 2024). Altruism, defined as helping others without expecting anything in return, is closely related to positive social behaviors such as giving to charity, recycling, and protecting the environment. Research shows that individuals with altruistic values are more inclined to adopt eco-friendly behaviors and develop favorable attitudes toward sustainable products (Bhardwaj et al., 2023).

Environmental values also positively affect subjective norms by reinforcing the social acceptability of eco-conscious behavior. Consumers with strong environmental values are more likely to be guided by societal norms that support environmentally responsible choices. For instance, in the case of energy-efficient home appliances, environmental values strengthen the belief that such green behaviors are socially endorsed. More broadly, these values help harmonize individuals' ecological concerns with societal standards that favor sustainability (Bhardwaj et al., 2023).

Environmental concern itself has a notable positive effect on subjective norms, especially regarding the purchase of energy-saving appliances. Findings suggest that as consumers' environmental awareness increases, so does the social pressure from peers and communities to act in environmentally responsible ways (Li et al., 2021). People who are naturally altruistic often feel more empowered in their decision-making, particularly when it involves spending on ethical or sustainable products. This indicates a strong positive link between altruistic values and the three psychological components of the Theory of Planned Behavior—attitudes, subjective norms, and perceived behavioral control—in the context of green purchasing behavior (Bhardwaj et al., 2023).

Based on this, the following hypotheses are proposed:

- **H1a**: Altruistic values positively influence consumer attitudes.
- **H1b**: Altruistic values positively influence subjective norms.
- **H1c**: Altruistic values positively influence perceived behavioral control.

Individuals who prioritize biospheric values often demonstrate heightened concern for environmental issues, which motivates them to engage in environmentally responsible behaviors. These individuals tend to value the well-being of nature and other living beings more than their own personal gain, making them more likely to support and adopt eco-friendly practices and products. As a result, people with strong biospheric values generally form favorable attitudes toward sustainable products (Bhardwaj et al., 2023).

Environmental concern defined as a person's awareness of ecological problems and their willingness to take action plays a pivotal role in influencing consumer attitudes toward green products (Maichum et al., 2017). Environmentally conscious consumers place a high value on sustainability and are more likely to prefer products that align with their ecological principles. Furthermore, environmental values such as ecological awareness and sensitivity to environmental impacts enhance perceived behavioral control by strengthening the belief that individuals can make choices that contribute to sustainability. This is especially true when it comes to green products, where biospheric values help reinforce a sense of agency by aligning product features with consumers' sustainability goals (Bhardwaj et al., 2023).

Based on these insights, the following hypotheses are proposed:

- **H2a**: Biospheric values have a positive effect on consumer attitudes.
- **H2b**: Biospheric values have a positive effect on subjective norms.
- **H2c**: Biospheric values have a positive effect on perceived behavioral control.

An egoistic orientation emphasizes personal gain and tends to be at odds with sustainability values, which are inherently collective and altruistic in nature. In the context of developing nations such as Sri Lanka, economic and social hardships may shape individual priorities in ways that deprioritize environmental concerns. Research indicates that egoistic values do not significantly contribute to the development of attitudes that support environmentally responsible behavior (Konalingam et al., 2024).

Likewise, a cross-national study on pro-environmental behavior specifically efforts to reduce private car usage—in Austria, the Czech Republic, Italy, the Netherlands, and Sweden, found that egoistic values negatively affect the formation of environmentally supportive attitudes and beliefs. These findings suggest that a self-centered value orientation may be linked to unfavorable views on environmental protection (de Groot & Steg, 2008).However, in some contexts, egoistic values can lead to favorable attitudes toward green products. For instance, when it comes to purchasing sustainable food items, individuals may appreciate the personal benefits such as improved health, cost savings, or psychological satisfaction associated with these products (Mazhar et al., 2022). Additionally, younger consumers often respond positively to green packaging when they perceive it as offering personal advantages, such as enhancing their social image or providing economic value (Prakash et al., 2019).

Based on these observations, the following hypotheses are proposed:

- **H3a**: Egoistic values negatively affect consumer attitudes.
- **H3b**: Egoistic values negatively affect subjective norms.
- **H3c**: Egoistic values negatively affect perceived behavioral control.

Product-specific values refer to the importance placed on particular features or qualities of a product that meet consumers' needs or motivations when choosing that product. In the context of eco-friendly products, these values are especially important because they highlight the direct advantages a product offers to consumers, beyond general environmental or social concerns.

Consumers tend to prefer green products when they believe these items are reliable, safe, effective, and capable of delivering satisfactory performance. Key factors such as functionality, ease of use, and longevity often influence how consumers perceive the quality of sustainable products (Bhardwaj et al., 2023).

A related concept, often described as functional value, pertains to how consumers assess a product's usefulness based on its practical and physical attributes. This includes considerations like durability, energy efficiency, consistent quality, and technological features (Lin & Dong, 2023). Research by Lin and Dong (2023) demonstrated that functional value, along with price and environmental values components of the Perceived Value Theory significantly shape consumer attitudes toward energy-efficient products. These values offer consumers a clear understanding of tangible benefits, which strengthens positive perceptions of green product quality.

Product quality itself has a direct effect on consumer attitudes toward environmentally friendly products. When consumers perceive a product as high quality, they are more inclined to accept it and develop favorable attitudes toward it. Therefore, the quality of green products plays a vital role in shaping consumers' positive views and preferences for these products (Cheung & To, 2019).

Based on this, the following hypotheses are formulated:

- **H4a**: Product quality values positively affect consumer attitudes.
- **H4b**: Product quality values positively affect subjective norms.
- **H4c**: Product quality values positively affect perceived behavioral control.

Green Purchase Intention

A key element of modern consumer behavior is green purchase intention, which refers to an individual's motivation, willingness, or inclination to buy products that are environmentally friendly. Such products are generally designed to reduce adverse environmental effects, including items that are biodegradable, made from recycled materials, or are energy efficient (Bhardwaj et al., 2023). Green purchase intention reflects the interplay between personal values, perceptions of products, and social influences, focusing on buying choices that support environmental sustainability (Lin & Dong, 2023).

Philip Kotler, in *Marketing 3.0: From Products to Customers to the Human Spirit*, emphasizes the significance of marketing approaches that prioritize human values and sustainability. Kotler points out that contemporary consumers seek not only high-quality products but also consider the social and ecological consequences of their purchases. This view suggests that green purchase intention is heavily shaped by consumers' environmental awareness and their readiness to contribute to sustainable practices (Kotler et al., 2010).

Multiple studies on environmentally friendly behavior have shown that the elements of the Theory of Planned Behavior (TPB) are strong positive predictors of various green intentions, such as staying at eco-friendly hotels, buying organic food, purchasing hybrid vehicles, and participating in recycling programs (Yadav, 2020). The application of TPB in research on pro-environmental actions underscores how attitudes, subjective norms, and perceived behavioral control effectively influence consumer intentions. By comprehending how these psychological factors affect sustainable choices, companies and policymakers can design strategies that promote responsible consumption. For example, encouraging eco-friendly lodging, organic food consumption, and hybrid car usage through focused campaigns can utilize TPB constructs to foster greener consumer behavior.

Based on this, the following hypotheses are proposed:

- **H5a**: Attitude has a positive effect on green purchase intention.
- **H5b**: Subjective norms have a positive effect on green purchase intention.
- **H5c**: Perceived behavioral control has a positive effect on green purchase intention.

METHODS

Model Conceptualization

This research builds upon previous conceptual frameworks by Bhardwaj et al. (2023), Konalingam et al. (2024), and Mazhar et al. (2022) to investigate green purchase intentions, focusing specifically on Energy-Efficient Home Appliances (EEHA). Bhardwaj et al. (2023) combined the Theory of Planned Behavior (TPB) and the Stimulus-Organism-Response (SOR) model to explore how environmental and social values—particularly altruistic and biospheric values—together with product-specific values, influence consumers' intentions to engage in green behaviors. Expanding on this, the current study incorporates egoistic values as an additional dimension of personal values, based on de Groot and Steg's (2008) categorization of environmental value orientations. Further insights are drawn from Konalingam et al. (2024), who linked personal values to psychological mechanisms within both TPB and the Value Belief Norm (VBN) theory, and from Mazhar et al. (2022), who highlighted the importance of environmental values in fostering sustainable behavior.

Given Indonesia's rising energy demands, the relatively low uptake of EEHA (Fithriyah, 2024), and government policies promoting energy efficiency such as SKEM and LTHE, it is crucial to better understand the psychological and value-based drivers behind sustainable consumer behavior. This study aims to address a gap in the existing literature by examining how egoistic motivations, alongside altruistic, biospheric, and product-related values, influence green purchase intentions in a developing country setting. Integrating egoistic values is expected to enhance the TPB-SOR model, providing a more comprehensive perspective on pro-environmental consumer behavior in emerging markets where self-interest and perceived personal benefits may significantly impact the adoption of energy-efficient technologies. Based on these theoretical and contextual factors, Figure 3.1 presents the conceptual framework proposed in this study.

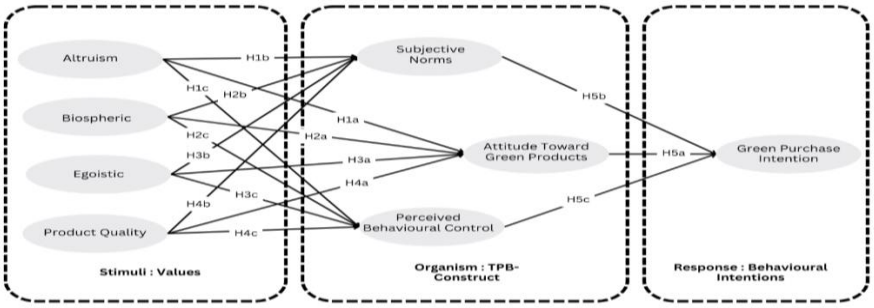

Figure 1. Conceptual Framework

Participants and Procedures

Data for this research were collected through an online survey conducted via Google Forms. The survey targeted Indonesian residents aged 18 and above living in Indonesia. A total of 221 valid responses were collected and included in the main analysis. Participants completed a structured questionnaire comprising 36 items designed to measure constructs related to values and behavioral intentions toward energy-efficient home appliances (EEHA).

To ensure the clarity and validity of the survey instrument, several preparatory steps were undertaken. Initially, a wording test was conducted with 4 respondents to evaluate the clarity and appropriateness of the language used. This was followed by a pre-test with 40 respondents who met the study criteria. Feedback from the pre-test was utilized to refine the questionnaire prior to the main data collection phase. The pre-test data were analyzed using SmartPLS 3 to assess the instrument's validity and reliability.For the primary data analysis, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed to evaluate both the measurement and

structural models. The assessment of the measurement (outer) model included tests of indicator reliability, internal consistency, convergent validity, and discriminant validity. The structural (inner) model was evaluated for multicollinearity, path coefficients, coefficient of determination (R^2), predictive relevance (Q^2), and overall model fit.

RESULTS

Respondent Demographics

This study involved 221 participants, all Indonesian citizens aged 18 years and above residing within Indonesia. A screening procedure was implemented to confirm eligibility according to the research criteria. The sample was fairly balanced in terms of gender, comprising 59% males and 41% females. Most respondents were located in Jakarta (37%), Depok (24%), and other areas within the Jabodetabek region. Regarding educational background, 39% had completed high school, with others holding undergraduate, diploma, or postgraduate qualifications. The predominant occupations among participants were business owners (26%), government employees (25%), and private sector workers (14%). Additionally, 60% of respondents reported a monthly income ranging from IDR 5,000,001 to IDR 10,000,000, reflecting a primarily middle-income group.

Table 1. Demographics Data

	N	Percentage
Gender		
Male	130	59%
Female	91	41%
Residence		
Jakarta	82	37%
Depok	54	24%
Bogor	32	14%
Tangerang	18	8%
Outside of Jabodetabek	16	7%
Bekasi	19	9%
Education		
High School	87	39%
Diploma	45	20%
Graduate (S1)	80	36%
Postgraduate (S2)	9	4%
Occupation		
Students	54	24%
Government's Employee	56	25%
Private Employee	32	14%
Business Owner	57	26%
Housewife	7	3%
Freelance	15	7%
Income		
< IDR 5.000.000	65	29%
IDR 5.000.001 to IDR 10.000.000	133	60%
IDR 10.000.001 to IDR 15.000.000	11	5%
IDR 15.000.001 to IDR 20.000.000	7	3%
IDR 20.000.001 to IDR 25.000.000	2	1%
> IDR 25.000.001	3	1%

Measurement Model Evaluation

The outer model, also known as the measurement model, represents the connection between latent variables and their observed indicators (F. Hair JR et al., 2022). In reflective measurement models, several evaluations are necessary to determine the model's quality. These include assessing indicator reliability via outer loadings, internal consistency through Cronbach's Alpha and Composite Reliability, and convergent validity measured by Average Variance Extracted (AVE). The results show that all outer loadings surpass the minimum threshold of 0.70 (Malhotra & Birks, 2006), demonstrating strong indicator reliability for all constructs. Additionally, Cronbach's Alpha values range from 0.830 to 0.933, and Composite Reliability values range from 0.881 to 0.949, both exceeding the recommended cutoffs of 0.60 and 0.70, respectively, confirming the internal consistency and reliability of all constructs. Regarding convergent validity, all AVE values are higher than 0.50, ranging from 0.597 for Attitude to 0.816 for Egoistic values, indicating that the indicators explain a significant amount of variance for each latent variable. Based on these findings, it can be concluded that the measurement model meets the criteria for reliability and convergent validity and is appropriate for proceeding to the structural model analysis.

Table 2. Measurement Items and Validity Assesment

Constructs	Items	Outer Loading	Cronbach Alpha	Composite Reliability	AVE
Altruism	AL1	0.926	0.915	0.940	0.798
	AL2	0.914			
	AL3	0.890			
	AL4	0.841			
Biospheric	BI1	0.864	0.841	0.894	0.679
	BI2	0.894			
	BI3	0.783			
	BI4	0.746			
Egoistic	E1	0.895	0.926	0.947	0.816
	E2	0.915			
	E3	0.922			
	E4	0.881			
Product Quality	PQ1	0.866	0.919	0.942	0.802
	PQ2	0.912			
	PQ3	0.899			
	PQ4	0.906			
Attitude	AT1	0.808	0.830	0.881	0.597
	AT2	0.763			
	AT3	0.681			
	AT4	0.810			
	AT5	0.795			
Subjective Norm	SN1	0.900	0.933	0.949	0.788
	SN2	0.898			
	SN3	0.902			
	SN4	0.895			
	SN5	0.842			

Perceived Behavioral Control	PBC1	0.849	0.913	0.935	0.743
	PBC2	0.886			
	PBC3	0.855			
	PBC4	0.888			
	PBC5	0.830			
Green Purchase Intention	GPI1	0.815	0.878	0.911	0.672
	GPI2	0.821			
	GPI3	0.828			
	GPI4	0.835			
	GPI5	0.798			

Discriminant validity assesses whether a concept or construct is truly distinct from others, both theoretically and in measurement (F. Hair JR et al., 2022). A common method to evaluate this is the Heterotrait-Monotrait Ratio (HTMT), which examines the correlation strength between items belonging to different constructs. According to Hair et al. (2022), HTMT values below 0.90 between any pair of constructs indicate that they are sufficiently distinct. The HTMT results shown in Table 3 reveal that all inter-construct correlations fall well under the 0.90 threshold, with the highest correlations found between perceived behavioral control (PBC) and green purchase intention (GPI) at 0.714, and between attitude (AT) and altruism (AL) at 0.516. These outcomes confirm that the constructs possess adequate discriminant validity, as there is no evidence of problematic overlap. Consequently, the measurement model satisfies the discriminant validity criteria and is ready for structural model evaluation.

Table 3. Heterotrait-Monotrait Test (HTMT)

	AL	AT	BI	E	GPI	PBC	PQ	SN
AL								
AT	0.516							
BI	0.205	0.484						
E	0.102	0.083	0.140					
GPI	0.317	0.680	0.403	0.111				
PBC	0.283	0.691	0.298	0.089	0.714			
PQ	0.061	0.369	0.143	0.063	0.183	0.228		
SN	0.350	0.622	0.237	0.125	0.748	0.559	0.145	

Structural Model Evaluation

An analysis of the inner model was performed to assess the reliability and validity of the structural model. This evaluation included checks for collinearity using the Variance Inflation Factor (VIF), examination of path coefficients, determination of the coefficient of determination (R^2), assessment of predictive relevance (Q^2), and overall model fit comparison. Collinearity diagnostics help identify whether multicollinearity exists among predictor variables, which can bias the estimation of path coefficients. According to Hair et al. (2022), a VIF value below 3 indicates no multicollinearity, whereas values between 3 and 5 suggest a moderate but acceptable presence of multicollinearity. The VIF results show that all predictor variables in the model have VIF values ranging from 1.018 to 1.785, well below the threshold of 5. This confirms the absence of multicollinearity, indicating that each independent construct uniquely contributes to explaining the dependent constructs. Therefore, the data satisfies the collinearity criteria, making the model appropriate for further structural analysis.

Table 4. Result of Inner VIF

	VIF
Altruism > Attitude	1.051
Altruism > Perceived Behavioral Control	1.051
Altruism > Subjective Norms	1.051
Biospheric > Attitide	1.073
Biospheric > Perceived Behavioral Control	1.073
Biospheric > Subjective Norms	1.073
Egoistic > Attitude	1.031
Egoistic > Perceived Behavioral Control	1.031
Egoistic > Subjective Norms	1.031
Product Quality > Attitude	1.018
Product Quality > Perceived Behavioral Control	1.018
Product Quality > Subjective Norms	1.018
Attitude > Green Purchase Intention	1.785
Perceived Behavioral Control > Green Purchase Intention	1.697
Subjective Norms > Green Purchase Intention	1.553

After confirming the absence of multicollinearity in the model, the next step is to evaluate the structural model's explanatory power and predictive accuracy. This assessment includes examining the coefficient of determination (R^2), which measures the proportion of variance in the dependent variable accounted for by the independent variables, and the predictive relevance (Q^2), which assesses the model's ability to forecast data points not included in the model estimation.

The results show that the R^2 value for Attitude is 0.466, indicating a considerable level of explained variance. Likewise, Green Purchase Intention has a relatively high R^2 of 0.590, implying that the model accounts for a significant portion of the variance in purchase intention. On the other hand, the R^2 values for Perceived Behavioral Control (0.185) and Subjective Norms (1.183) fall within a low to moderate range, suggesting these constructs are less strongly influenced by the model.

Regarding predictive relevance, all Q^2 values are positive, confirming the model's predictive strength. Green Purchase Intention stands out with strong predictive relevance (Q^2 = 0.388), followed by Attitude (Q^2 = 0.266) and Subjective Norms (Q^2 = 0.137), while Perceived Behavioral Control (Q^2 = 0.129) shows a moderate predictive capacity. Overall, these results validate the model's effectiveness in explaining and forecasting behavioral constructs related to green purchase intention.

Table 3. Result of R-Square (R^2) and Q-Square (Q^2)

	R^2	Q^2
Attitude	0.466	0.266
Green Purchase Intention	0.590	0.388
Perceived Behavioral Control	0.185	0.129
Subjective Norms	0.183	0.137

Hypothesis Testing

This study tested a total of 15 hypotheses. The significance of each proposed relationship was evaluated using path coefficient analysis, focusing on T-statistics and P-values. The results indicate that most of the hypothesized relationships were statistically significant, thereby supporting the theoretical framework. However, a few relationships did not achieve the required

level of significance. In particular, the effects of egoistic values on attitudes (hypothesis H3a), on subjective norms (hypothesis H3b), and on perceived behavioral control (hypothesis H3c) were found to be non-significant. These findings imply that not all personal values directly influence individuals' attitudes toward green products. Conversely, the remaining hypotheses were supported, offering strong evidence that altruistic and biospheric values, product quality, and key components of the Theory of Planned Behavior such as attitude, subjective norms, and perceived behavioral control play crucial roles in shaping intentions to purchase green products.

Table 4. Hypotheses Testing Results

Hypotheses		*Beta (β)*	*T Values*	*P Values*	Result
H1a	Altruism → attitude	0.407	9.441	0.000	Supported
H1b	Altruism → subjective norms	0.316	4.439	0.000	Supported
H1c	Altruism → perceived behavioral control	0.235	3.988	0.000	Supported
H2a	Biospheric → attitude	0.372	6.802	0.000	Supported
H2b	Biospheric → subjective norms	0.167	2.342	0.019	Supported
H2c	Biospheric → perceived behavioral control	0.236	3.322	0.001	Supported
H3a	Egoistic → attitude	0.051	0.723	0.470	Not Supported
H3b	Egoistic → subjective norms	0.138	1.783	0.075	Not Supported
H3c	Egoistic → perceived behavioral control	0.079	0.974	0.330	Not Supported
H4a	Product Quality → attitude	0.395	7.685	0.000	Supported
H4b	Product Quality → subjective norms	0.183	2.738	0.006	Supported
H4c	Product Quality → perceived behavioral control	0.263	3.852	0.000	Supported
H5a	Attitude → green purchase intention	0.143	2.644	0.008	Supported
H5b	Subjective norm → green purchase intention	0.431	7.881	0.000	Supported
H5c	Perceived behavioural control → green purchase intention	0.333	5.845	0.000	Supported

The path coefficient analysis revealed that most of the hypothesized relationships in this study were statistically significant. Nevertheless, some paths did not reach the conventional significance levels. Specifically, egoistic values showed no significant impact on attitude (β =

0.051; T = 0.723; P = 0.470), subjective norms (β = 0.138; T = 1.783; P = 0.075), or perceived behavioral control (β = 0.079; T = 0.974; P = 0.330). These results imply that motivations driven by self-interest may not directly influence individuals' attitudes, perceived social expectations, or perceived control over behavior when it comes to intentions to purchase Energy-Efficient Home Appliances (EEHA).

This finding is consistent with prior research by Konalingam et al. (2024) conducted in Sri Lanka, a developing country where economic and social difficulties tend to alter personal priorities. Consequently, egoistic values did not significantly contribute to the development of pro-environmental attitudes (Konalingam et al., 2024). Similarly, a multinational study examining efforts to reduce car usage in five European nations Austria, the Czech Republic, Italy, the Netherlands, and Sweden identified egoistic values as obstacles to forming beliefs and attitudes favorable to environmental actions. This indicates that egoistic values may be indirectly linked to negative attitudes toward environmental conservation (de Groot & Steg, 2008). Conversely, other examined relationships, such as the influence of altruistic and biospheric values, product quality, and constructs from the Theory of Planned Behavior (TPB), were all statistically significant. These outcomes highlight the essential role of both personal and product-specific values, especially in shaping subjective norms and perceived behavioral control, which in turn foster intentions to make environmentally friendly purchases.

DISCUSSION

This study aimed to examine how different personal values altruistic, biospheric, and egoistic along with product quality perceptions influence the purchase intention of energy efficient home appliances (EEHA) among Millennials and Generation Z consumers. The findings provide valuable insights into the motivational factors driving green consumption behavior in these younger generations, who are increasingly recognized as key players in the transition toward sustainable consumption. The results reveal that altruistic and biospheric values have a significant positive influence on the intention to purchase EEHA. This suggests that Millennials and Gen Z consumers who prioritize concern for others and the environment are more likely to engage in sustainable purchasing behavior. These findings are consistent with previous literature indicating that pro-social and ecological motivations strongly underpin environmentally responsible actions (e.g., de Groot & Steg, 2008). The prominence of these values highlights a shift towards collective and environmental consciousness in younger consumers, reflecting their responsiveness to global environmental challenges.

In contrast, egoistic values did not exhibit a significant direct effect on purchase intention, attitude, subjective norms, or perceived behavioral control. This indicates that self-interest or personal gain is not a primary driver for choosing energy-efficient products within this demographic. Such a result aligns with studies in developing and developed contexts (Konalingam et al., 2024; de Groot & Steg, 2008) which argue that in the face of broader social and environmental concerns, egoistic motivations may be less relevant or even obstructive to fostering pro-environmental attitudes. For Millennials and Gen Z, it appears that the emphasis on individual benefits is overshadowed by broader altruistic and ecological considerations.

Product quality emerged as a strong predictor of purchase intention, confirming that beyond values, practical considerations related to product performance and reliability remain crucial. This finding underscores that for energy-efficient home appliances to be embraced, consumers need assurance that these products meet or exceed their expectations in quality. Therefore, manufacturers and marketers should emphasize both the environmental benefits and the superior quality of EEHA to appeal effectively to young consumers.

Additionally, the significant roles of subjective norms and perceived behavioral control in shaping purchase intentions highlight the social and behavioral dimensions influencing decision-making. Millennials and Gen Z are sensitive to social expectations and their perceived ability to

engage in green consumption, suggesting that peer influence and ease of access to sustainable options are important factors. In summary, this study confirms the multidimensional nature of green purchase intentions among younger consumers, where altruistic and biospheric values, combined with product quality and social-behavioral factors, jointly contribute to energy-efficient appliance adoption. Marketers, policymakers, and environmental advocates should leverage these insights by promoting both the ethical and practical advantages of EEHA, as well as fostering supportive social environments that enable sustainable choices.

CONCLUSION

This study explores green purchase intentions toward Energy-Efficient Home Appliances (EEHA) in Indonesia. Despite government initiatives like SKEM and LTHE, adoption rates remain low. By introducing egoistic values—which emphasize self-interest—alongside previously studied altruistic and biospheric values, the research reveals that social and psychological factors (particularly subjective norms and perceived behavioral control) strongly influence consumer intentions, especially among Millennials and Gen Z. The integration of the TPB and SOR frameworks offers deeper insights into how internal values and external perceptions shape eco-friendly behavior in emerging markets.

1. Theoretical Contribution
   The study expands on Bhardwaj et al.'s (2023) model by adding egoistic value as a new dimension of personal value. Despite a slightly lower R^2 (59%), the model still offers strong predictive power and adds depth to the understanding of how self-interest influences pro-environmental intentions. This provides a more comprehensive framework for sustainable consumer behavior, particularly in emerging economies like Indonesia.

2. Managerial Implications
   The findings provide practical guidance for EEHA manufacturers and marketers:
   - Product design should prioritize energy efficiency, user-friendliness, and safety.
   - Marketing messages should stress product safety, durability, and social responsibility.
   - Campaigns should emphasize altruistic and biospheric values (e.g., environmental protection for future generations).
   - Avoid egoistic messaging, such as personal savings or prestige, as it has minimal impact on purchase intention.
   - Strategies should be tailored for digitally savvy, environmentally conscious Millennials and Gen Z.

3. Recommendations and Limitations
   Limitations include a geographically limited sample (mostly from Jakarta) and a small sample size (n = 221), which may affect generalizability. Future research should:
   - Broaden geographic reach across Indonesia.
   - Use larger, more representative samples.
   - Focus on specific EEHA product categories (e.g., air conditioners or refrigerators) for more targeted insights.

LIMITATION

This study is limited by its focus on Millennials and Gen Z consumers, which may not reflect the purchase intentions of older demographics. Additionally, the use of self-reported data may introduce social desirability bias, particularly in measuring pro-environmental values. The geographic scope is also restricted, as the majority of respondents are from urban areas, potentially limiting the generalizability of the findings to rural or less-developed regions. Finally,

while this research examines general categories of Energy-Efficient Home Appliances (EEHA), it does not differentiate between specific product types, which may influence consumer priorities differently.

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