Ethical values and green purchase intentions: Mediating effects of egobiocentric values and green behavior

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ABSTRACT

The study aims to integrate the theory of planned behavior and the Hunt-Vitell ethical theory to evaluate consumers' sustainable consumption behaviors and intentions in a least developed nation. Conducting a PLS-SEM analysis with a sample size of 300 Gambians, the findings revealed that deontological and teleological evaluations have positive and significant direct effects on consumers' green product purchase intentions. However, the magnitude of the impact was higher with teleological evaluations than with deontological evaluations. Furthermore, the relationships between deontological evaluations, teleological evaluations, and green product purchase intention were found to be partially mediated by egobiocentric values. Similarly, green purchase behavior also partially mediated the relationship between green product purchase intention and green product repurchase intention. Additionally, results from the multi-group analysis indicate that green price sensitivity does not significantly moderate the relationship between green product purchase intention and green purchase behavior. Based on the findings, the study suggests recommendations relevant to green businesses and policymakers. First, to capture the attention of green-oriented consumers, marketing managers should focus on the green features of their products to persuade consumers. Also, favorable policies from the government should be enacted to promote the competitiveness and operations of green businesses in this region.

Contribution/Originality: By narrowing the intention-behavior-repurchase gap among African consumers, the study contributes to sustainability literature by showing how consumers' connection to nature strengthened their ethical values toward green consumption intentions. It also validates the application of the H-Vitell ethical theory and TPB to African consumers.

1. INTRODUCTION

With the rise in industrialization and rapid economic development in various countries, protecting and preserving the environment has become a challenging issue, as we have observed significant destruction of the ecosystem (Mauliawan & Nurcaya, 2021; Tian, Sun, Wang, Su, & Li, 2022). Statistically, due to irresponsible consumption and production methods, the global temperature has increased by about 1°C in recent decades, with an expected rise of approximately 1.5°C by 2030 and 2052 (Gil-Giménez, Rolo-González, Suárez, & Muinos, 2021). However, the increase in green consumerism has opened myriad new market segments for producers (Mawardi, Iqbal, Astuti, Alfisyahr, & Mappatompo, 2024), where firms' green sustainability agendas intersect with consumers' desire for healthier diets and a safer environment.

Based on the literature, green products are products consumers assume to be safe for consumption, either due to their mode of production, materials used, or implemented marketing strategies (Arli, Tan, Tjiptono, & Yang, 2018; Liu, Liu, & Mo, 2020). Further, green purchase behavior (GPB) arises when consumers develop specific green consumption patterns over time (Ramadhanti, Suryandaru, & Amelia, 2024), which is pivotal in achieving a sustainable future (Zhang, Zhang, Li, & Zhou, 2024). Hence, from a consumption perspective, consumers' green product purchase intention (GPPIs) occurs when their purchasing decision is driven by their readiness and willingness to buy green products instead of conventional ones.

Further, both the sustainability and marketing literature have received significant research in this domain as scholars try to understand the influencing factors on consumers' green intentions and behaviors (Smith, Zlatevska, Chowdhury, & Belli, 2023). As accounted by literature, the theory of planned behavior (TPB) is extensively used among researchers to predict individuals' behaviors (Ilagan, Ong, German, Gumasing, & Pabalan, 2024; Raman et al., 2024; Tommasetti, Singer, Troisi, & Maione, 2018) since the theory posits individual behavior as dependent upon intention of performing a given action (Ajzen, 2016). Recently, the theory of planned behavior has been extended to examine consumers' environmental and health consciousness (Liang, Wu, & Du, 2024) purchase intentions of green products (Maichum, Parichatnon, & Peng, 2016) firms' environmental corporate social responsibility in relation to GPPIs (Vu, Ha, Ngo, Pham, & Duong, 2022) influencing factors to eco-friendly behavioral intentions (Rex, Lobo, & Leckie, 2015) consumers' perception of Restaurants' sustainability (Tommasetti et al., 2018) and green purchase behavior (Kamalanon, Chen, & Le, 2022). Similarly, others utilized the sustainability theory of planned behavior (STP) to examine consumers' sustainability buying behaviors (Bajar, Ong, & German, 2024; Ilagan et al., 2024; Moon, Mohel, & Farooq, 2021). However, despite being widely used in sustainability studies, the theory is criticized for its lack of ethical and moral components necessary to better predict sustainability behaviors (Ho, Alam, Ahsan, & Lin, 2023).

Ethical concerns of consumers stem from their acceptance of the inherent norms and values of conserving and preserving the environment (Smith et al., 2023). The Hunt-Vitell theory, a widely used concept in ethical studies, outlines the mental process consumers undergo when exposed to situations involving ethical dilemmas (Lu, Chang, & Chang, 2015). The theory augments the theory of planned behavior by outlining the influencing effect of ethical judgment on an individual's intention and behavior if ethics become a central issue (Hunt & Vitell, 2006). Specifically, based on deontological evaluation (DE), consumers assess the rightness and wrongness of purchasing a given product when alternatives are present. Also, backed by their moral judgment, consumers will be involved in teleological evaluation (TE) in weighing the goodness and badness of the consequences of their purchase decisions. Hence, the presence of an ethical dilemma will trigger consumers' DE and TE evaluations as a foundation for their ethical judgment. In sum, the whole process will lead to the formation of intentions which later transform into behaviors over time (Lu et al., 2015).

Moreover, green self-identity, which in the current study is regarded as egobiocentric values (EGO), has emerged as a recent phenomenon where consumers associate themselves with nature. As observed by Kumar et al. (2023), egobiocentric values and ethical evaluations have been treated separately by existing literature. Thus, by employing structural equation modeling, the current study aims to build on the theory of planned behavior and the H-V theory to evaluate how ethical values (DE and TE) relate to green product purchase intention through the mediating roles of egobiocentric values. The study provides insight into how ethical evaluations relate to egobiocentric values and green purchase intention and behavior. Therefore, it enables green marketing managers to better position their products in the market by targeting green consumers.

In addition, the study also aims to enrich our understanding of consumers' green purchase behavior by examining the moderating effects of green price sensitivity (GPS) between green purchase intention and green purchase behavior. Incorporating green price sensitivity as a moderator provides insight into how green purchase intentions translate into green purchase behavior, considering changes in green product prices over time. Findings from such

studies help to narrow the gap between intention and behavior in green consumption phenomena, as there is a blurred research stream between consumers' actual and stated intentions (Kumar et al., 2023; Marwat, Ahmad, & Yousafzai, 2022; Sun, Li, & Wang, 2022).

Further studies have attempted to examine green purchase intention and green purchase behavior (Marwat et al., 2022). However, the current study deviates from previous literature by evaluating green product repurchase intention (GPRI), considering green purchase behavior as a mediator between green purchase intention and green repurchase intention. Evaluating such relationships is timely given the importance of understanding consumers' willingness and readiness to favor green products in their future buying situations, as reflected by their behaviors. Hence, the following research questions help to achieve the objectives of the study: (1) What is the relation between ethical values (DE and TE) and green purchase intention, and is the relation mediated by egobiocentric values? (2) Could the relationship between green purchase intention and green purchase behavior be positively moderated by green price sensitivity? (3) What are the relationships between green purchase intention and green repurchase intention, and to what extent does purchase behavior positively moderate the relation?

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Deontological and Teleological Evaluations and Green Product Purchase Intention

Since ethical and moral values have become central issues in addressing environmental problems, researchers most often use the H-V model of deontological and teleological evaluations to examine factors influencing consumers' pro-environmental and ethical judgments (Smith et al., 2023). However, findings from such studies have provided mixed results. For example, by evaluating the relations between the H-V model and TPB in consumers' sustainability behavior, evidence suggests DE exerts a more significant impact on attitude, perceived behavioral control, and consumers' subjective norm, with TE indicating an important relationship only with perceived behavioral control Chang and Chou (2018). An opposite finding was reported by Ho et al. (2023), indicating that both DE and TE have significant, positive relationships with subjective norm and behavioral controls. Such studies suggest the applicability of both theories in predicting consumers' sustainability actions. Also, by integrating the H-V theory with the TPB to evaluate consumers' willingness and readiness to engage in sustainable buying behavior, the findings of Lan Vi and Dinh (2020) indicate that compared to teleological evaluations, deontological evaluations exert more influence on consumers' "Bring your own bag "intentions.

Furthermore, the findings of Chan, Wong, and Leung (2008) show significant effects of both DE and TE on consumers' green purchase intention, although the magnitude of the influence was greater with TE than DE. Thus, building on existing literature, the current study argues that consumers' ethical considerations for themselves and others in society will motivate their intentions to purchase green products as the right thing to do, given their deontological orientations. Also, by considering the environmental impact of their purchase decision, their teleological evaluations will promote the purchase of green products. Accordingly, the study hypothesized that:

H_{1a}: There exists a significant and positive direct relationship between consumers' DE and their green product purchase intentions.

H_{1b}: There exists a significant and positive direct relationship between consumers' TE and their green product purchase intention.

2.2. Mediating Roles of Egobiocentric Values

Based on existing literature, environmental values and human interaction have been divided into three different spheres (Perera, Kalantari Daronkola, & Johnson, 2022; Sierra-Barón, Navarro, Amézquita Naranjo, Teres Sierra, & Narváez González, 2021). The first group is anthropocentrism, which reflects human control of nature. Egobiocentrism, as the second group demonstrates, highlights the positive connection of humans to nature by recognizing the value of nature for its own sake (Amérigo, Aragonés, de Frutos, Sevillano, & Cortés, 2007). The third

group involves biophereism, which also indicates the intrinsic value of nature. However, among the three, egobiocentric values are most likely to ignite individuals' sustainability behavior as they promote behaviors that are assumed to be less harmful to the environment. Similarly outlined by Kumar et al. (2023), green-self-identity (egobiocentric values) is expected to positively influence GPPIs because consumers with this orientation tend to create a sense of differentiation with others by engaging in sustainable purchasing behaviors. These findings are in line with the findings of Kamalanon et al. (2022), which show the positive and direct effects of environmental concerns on green product purchase intention. As further contended by Martin and Czellar (2017) and Gil-Giménez et al. (2021), individuals with environmental consciousness regard themselves as part of the natural environment and thus develop trans-situational beliefs obliging them to act environmentally responsibly.

Besides, aiming to evaluate the mediating effect of egobiocentric values between environmental value and GPPIs, the findings of Perera et al. (2022) indicate a greater mediating effect of egobiocentric values compared to anthropocentric and biophysical values. In addition, moral obligations, along with green-self-identity, were found to influence GPPIs positively (Sun et al., 2022), thus reflecting the significance of ethical obligations in promoting consumers' green consciousness and their ecocentric orientations. Accordingly, it's hypothesized:

H_{2a}: The relationship between consumers' DE and their green purchase intention is positively and significantly mediated by egobiocentric values.

H_{2b}: The relationships between consumers' TE and their green product purchase intention are positively and significantly mediated by their egobiocentric values.

2.3. Mediating Roles of Green Purchase Behavior between Green Purchase Intention and Green Repurchase Intention

Based on existing literature, the term green has been synonymous with environmentally friendly or eco-label (Perera, Auger, & Klein, 2018), making it easy to define green purchase intention as consumers' tendency and willingness to show interest in green products. In other words, green purchase intention arises when consumers are willing and ready to purchase green products considered less harmful to society. The term extends to the promotion of organic products that are produced using green production and marketing techniques (Lu et al., 2015). Since purchase intention indicates the tendency to buy a green product, green purchase behavior reflects consumers' responsible consumption by choosing eco-friendly products (Sheikh, Mirzaei, & Ahmadinejad, 2023). It is observed to provide a mighty explanatory power in predicting consumers' purchase decisions (Walia, Kumar, & Negi, 2020; Wang & Li, 2021).

Further, green repurchase intention, recognized through green purchase behavior, is considered an individual's mental state of developing the willingness to repurchase green products after an initial experience with the product (Lee, Seo, & Quan, 2024; Mauliawan & Nurcaya, 2021; Mawardi et al., 2024). The inclusion of the variable in the intention-behavior model helps us better understand the consistency of consumers' purchase intentions over time in various purchasing situations. Moreover, studies on consumers' green purchase intention, behavior, and repurchase intention have provided consistent results over time. For example, by evaluating the behaviors of Indonesian young consumers toward circular packaging, findings have supported green intention as a significant determinant of green purchase behavior (Ramadhanti et al., 2024). Similarly, studies also found green purchase intention and purchase behavior to be proportionally related (Chaudhary & Bisai, 2018; Kamalanon et al., 2022).

Thus, the current study argues that green purchase behavior, supported by consumers' personal value for the environment, will strengthen their intentions to reconsider green products in future purchases. Building on existing literature, the study formulates that:

H_{3a}: There exists a significant and positive direct effect of green product purchase intention on green product repurchase intention.

H_{3b}: The relationship between green purchase intention and green repurchase intention is positively mediated by green purchase behavior.

2.4. Moderating Role of Green Price Sensitivity between Green Purchase Intention and Green Purchase Behavior

Product price, regarded as an egoistic product feature, is the amount of money spent in return for a product (Durmaz & Akdoğan, 2024). Based on rational consumption decisions, consumers will engage in cost-benefit analysis before purchasing a given product. In doing so, price-sensitive consumers will forego the quality and other functional or performance values they might gain from a product if it is priced higher than alternatives (Marwat et al., 2022; Mauliawan & Nurcaya, 2021). This rational behavior of consumers has posed a significant challenge to green products, which, due to their mode of production, are assumed to be more costly than conventional products. Thus, green price sensitivity refers to fluctuations in green product prices that influence consumers' purchasing decisions (Hisam, Sanyal, & Singh, 2022; Hsu, Chang, & Yansritakul, 2017; Lavuri, 2022; Wang, Pham, & Dang, 2020).

Further, based on its significance in explaining consumers' green purchase intention and behavior, the moderating role it plays in bridging the consumers' intention-behavior gap is well recognized. Such includes the studies of Marwat et al. (2022), which found that price sensitivity plays a moderating role between environmental beliefs and green purchase intention. This was found to be in line with the findings of Akbar, Ghutai, Yousafzai, and Ahmad (2023), which also indicate that green price sensitivity positively influences the relationship between green purchase intention and environmental motivation. Thus, based on existing literature, the study formulates that:

H₄: Green price sensitivity will moderate the relationship between GPPIs and GPB, and the relationship is expected to be weaker if price sensitivity is high.

2.5. Theoretical Framework and Conceptualization

As accounted for by the literature, the theory of planned behavior and the theory of Reasoned Action provide a firm conceptual ground in explaining the relationship between purchase intention and purchase behavior (Ghali-Zinoubi, 2020). As outlined by Ajzen (2016), the theory of planned behavior aims to provide a comprehensive understanding of the determinants of a given behavior in question, of which the intention to perform the action, determined by "behavioral beliefs, normative beliefs, and control beliefs," offers the ground to better understand behaviors in different situations.

Besides, the H-V theory introduced by Hunt and Vitell provides the necessary ground for resolving ethical issues based on philosophical approaches, i.e., deontological and teleological evaluations (Mayo & Marks, 1990). It is assumed, based on deontological evaluations, that individuals will weigh the rightness or wrongness of engaging in a given action (for example: Is buying recyclable materials the best way to protect the environment?). Also, based on teleological evaluation, one will assess the consequences of their actions on other stakeholders in society, including animals, people, and plants (for example: what damage could purchasing a non-eco-friendly product cause to the environment?). In sum, both approaches guide individuals' moral and ethical values in acting justly toward the environment. Based on Figure 1, applying the H-Vitell ethical theory to consumers' ethical consumption behaviors and intentions provides a rich theoretical foundation for consumers' sustainability actions.
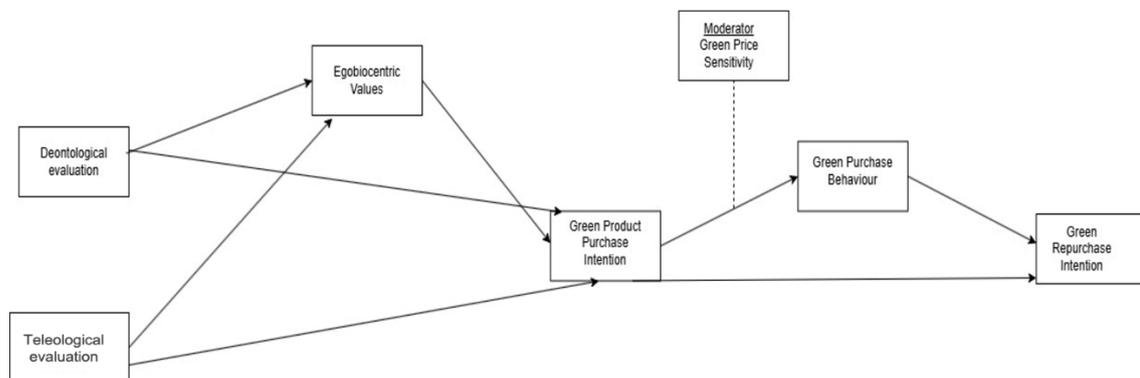

Figure 1. Conceptual Model.

3. MATERIAL AND METHODS

3.1. Sampling

Using the convenience sampling method, the study conducted an online survey to collect data from 300 Gambian respondents (n=300). At the beginning of the study, written information about its purpose was provided, and this information was to be used purposefully, in accordance with research ethics. Based on Table 1, the majority of the participants fall within the age group of 18-29 years, representing 40.0%, followed by those in the age bracket of 66 years and above. Based on educational background, it can be observed that the majority of individuals in the study have attained either a bachelor's degree or its equivalent, accounting for 48.0%. Further, many of the research participants receive an income level of D16,000 and above, reflecting the higher product purchasing capacity of the respondents.

Table 1. Participants' Profile.

Variables	Values	N	Percentage
Gender	Female	114	38.00%
	Male	185	61.70%
Age	18-29 years	120	40.00%
	30-41 years	25	8.30%
	42-53 years	44	14.70%
	54-65 years	47	15.70%
	66 years and Above	64	21.30%
Educational Level	Nursery- Primary School level	3	1.00%
	Junior Secondary-Senior Secondary School level	65	21.70%
	Bachelor's/ Tertiary Institution Level	144	48.00%
	Master's-Doctoral Level	81	27.00%
	None of the above	7	2.30%
Highest income level	D0-D4,000	79	26.30%
	D4,000-D8,000	49	16.30%
	D8,000-D12,000	48	16.00%
	D12,000-D16,000	23	7.70%
	D16,000 and above	101	33.70%

Note: $1=D74.

3.2. Construct Measurement

All items measuring the variables were adopted from previous studies and modified for the study. Specifically, to measure the construct deontological evaluation, three-item scales were adopted from Leonidou, Leonidou, and Kvasova (2010) (example: "conservation of natural resources is very important to me"), and one-item scale was adopted from Ho et al. (2023) (example: "Buying ethically produced products is the right thing to do"). Further, the construct teleological evaluation was measured on four-item scales taken from (ibid) (example: "I buy ethically produced products to protect the environment"). Egobiocentric values were measured based on four-item scales adopted from Perera et al. (2022) (example: "I find comfort in nature when feeling unhappy"). Besides, the construct green price sensitivity was measured using four-item scales adopted from Kumar and Mohan (2021) (example: "I pay attention to the attached price while purchasing eco-friendly products").

Besides, green product purchase intention was measured on a four-item scale adopted from Chaudhary and Bisai (2018) (example: "I will consider buying green products because they are less polluting in the coming times"). Two-item scales were adopted from Zhang et al. (2024) (example: "I purchase products that are less environmentally harmful") to measure green purchase behavior, with another two-item scale from Chaudhary and Bisai (2018) (example: "I have been purchasing green products on a regular basis"). A two-item scale was used to measure green product repurchase intention, adopted from De Toni, Eberle, Larentis, and Milan (2018) (example: "I will buy eco-friendly products again"). The other two-item scale was from Pappas, Pateli, Giannakos, and Chrissikopoulos (2014)

(example: "I will continue purchasing eco-friendly products in the future"). All items were measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

4. RESULTS

4.1. Assessment of the Measurement Model

An exploratory factor analysis (EFA) was first conducted to identify items with poor loadings and to check the amount of correlation among the variables for a factor analysis. From the analysis, DE4 and TE4 were found to have poor loadings and were thus excluded from the model for further analysis. Additionally, each item represents an MSA value greater than .80, as suggested by Hair, Black, Babin, and Anderson (2018), with values ranging from 0.86 to 0.96.

Table 2. Assessment of the measurement model.

Construct	Item measurement	Cronbach's Alpha value	Factor loadings	Composite Reliability (CR)	Average variance extracted (AVE)
Deontological evaluation	DE1	0.73	0.67	0.73	0.48
	DE2		0.75		
	DE3		0.65		
Teleological evaluation	TE1	0.82	0.76	0.81	0.59
	TE2		0.82		
	TE3		0.75		
Egobiocentric values	EGO1	0.78	0.76	0.76	0.53
	EGO2		0.82		
	EGO4		0.60		
Green price sensitivity	GPS1	0.76	0.69	0.75	0.50
	GPS2		0.68		
	GPS3		0.76		
Green product purchase intentions	GPPIs1	0.85	0.62	0.85	0.58
	GPPIs2		0.82		
	GPPIs3		0.78		
	GPPIs4		0.75		
Green purchase behavior	GPB1	0.79	0.70	0.79	0.56
	GPB2		0.72		
	GPB3		0.77		
	GPB4		0.74		
Green product repurchase intention	GPRI1	0.92	0.83	0.92	0.74
	GPRI2		0.81		
	GPRI3		0.92		
	GPRI4		0.88		

Further, to determine whether the model fit the data, a CFA was conducted, and from the analysis, the Chi-square value was 544.8 with 214 degrees of freedom, hence the overall value was 2.5 with p-values being less than 0.000. However, to improve the overall model fit of that data, GPS4, EGO3, and GPB1 were excluded from the model. Thus, based on the incremental fit indices, the comparative fit index (CFI) was 0.91, which is greater than the cutoff value of 0.9. Additionally, by observing the absolute fit measures, the RMSEA value was 0.07, which is less than 0.08. Moreover, the Goodness of Fit Index (GFI) and the Adjusted Goodness of Fit Index (AGFI) were found to be 0.87 and 0.84, respectively. Hence, this suggests that the model fits the data and requires further evaluation.

To further assess the measurement model, the validity and reliability of the constructs were checked. Specifically, the Cronbach's Alpha values (α), factor loadings, CR, and AVE values were considered. From Table 2, it can be observed that the Cronbach's Alpha values of all the constructs exceed the recommended cutoff value of 0.7, with

values ranging from .73 to .92, indicating internal consistency and reliability among the constructs (Nunnally, 2013). Furthermore, the AVE values of all the constructs are above the cutoff value of 0.5, except for DE, which is slightly below the recommended value. Overall, the model indicates good convergent validity.

Besides, all the factor loadings were greater than .5, which is relevant in achieving the practical significance of the variables (Hair et al., 2018). Nonetheless, discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT), where the correlation among the constructs was found to be less than .9, as suggested by Henseler, Ringle, and Sarstedt (2015).

The results indicate no discriminant validity problems in the data reflected in Table 3.

Table 3. Heterotrait-Monotrait ratio (HTMT).

Constructs	DE	EGO	GPB	GPPIs	GPRI	GPS	TE
DE							
EGO	0.59						
GPB	0.40	0.54					
GPPIs	0.64	0.77	0.70				
GPRI	0.53	0.57	0.63	0.79			
GPS	0.44	0.51	0.51	0.57	0.53		
TE	0.62	0.59	0.56	0.65	0.51	0.35	

Note: DE=Deontological evaluation, EGO=Egobiocentric values, GPB=Green product purchase behavior, GPPIs=Green product purchase intentions, GPRI=Green product repurchase intention, GPS=Green price sensitivity, TE=Teleological evaluation.

4.2. Common Method Bias

Problems related to common method bias (CMB) in the study were assessed based on the variance inflation factor (VIF) of the constructs. Such an assessment is significant given the possibility of determining the level of collinearity among the constructs, thus avoiding false associations between variables (Yue, Sheng, She, & Xu, 2020). The analysis showed that the VIF of all constructs was less than 3.30, with values ranging from 1.30 to 1.49, indicating the absence of CMB (Kock, 2021).

Additionally, the single-factor test for CMB, as suggested by Kock (2021), was conducted to further verify the presence of CMB in the data. The results indicated that the eigenvalue of the first factor was 40.03%, which is less than 50%, suggesting no CMB problem in the data.

4.3. Structural Model

To evaluate the structural model and test the hypotheses, a bootstrapping technique in SmartPLS 4 was conducted. An assessment of the model fit based on the standardized root mean square residual (SRMR) was performed. The SRMR value was 0.089, which is within the acceptable range as suggested by Hu and Bentler (1999), indicating acceptable badness-of-fit measures of the model.

Further, the proposed hypotheses were tested, and the results revealed a direct and proportional relationship between deontological evaluation and green product purchase intentions (DE→GPPIs) with (β=0.19, t=2.94, p=0.003), thus supporting H1a.

Similarly, the direct relationship between TE→GPPIs was also found to be positive and significant (β=0.25, t=3.88, p=0.000), hence, H1b was also supported as shown in Table 4. Moreover, a direct and positive relationship was found between green product purchase intentions and green product repurchase intentions (GPPIs→GPRI), with (β=0.58, t=11.38, p=0.000), thus providing support for H3a.

Table 4. Results of the Hypotheses n=300.

Hypotheses	Path	Coefficient (β)	t-values	p-values	Decision
H1a: There exists a significant and positive direct relationship between consumers' DE and their GPPIs.	DE→ GPPIs	0.19*	2.94	0.003	Accepted
H1b: There exists a significant and positive direct relationship between consumers' TE and their GPPIs.	TE→GPPIs	0.25**	3.88	0.000	Accepted
H2a: The relationship between consumers' DE and their GPPIs is positively and significantly mediated by egobiocentric values.	DE→ EGO→GPPIs	0.12**	3.48	0.001	Accepted
H2b: The relationships between consumers' TE and their GPPIs are positively and significantly mediated by their egobiocentric values.	TE→EGO→GPPIs	0.14**	4.09	0.000	Accepted
H3a: There exists a significant and positive direct effect of GPPIs and green product repurchase intention.	GPPIs→GPRI	0.58**	11.38	0.000	Accepted
H3b: The relationship between GPPIs and green repurchase intention is positively mediated by green purchase behavior.	GPPIs→GPB→GPRI	0.10**	3.43	0.001	Accepted
Total effects on green product purchase intentions:					
β Deontological evaluation with Egobiocentric values=0.29**					
β Teleological evaluation with egobiocentric values=0.34**					
Total effects on green product repurchase intention:					
Green product purchase intentions with green purchase behavior=0.51**					

Note: *p<0.05, **p<0.01, T=t-statistics, P=Probability,

4.4. Mediation Analysis

From the results, egobiocentric values play a significant and positive mediating role between deontological evaluation and green product purchase intention DE→EGO→GPPIs, with (β=0.12, t=3.48, p=0.001), supporting H2a. Additionally, it was found to play a positive and significant mediating role between teleological evaluation and green product purchase intentions (TE→EGO→GPPIs), with (β=0.14, t=4.09, p=0.000), supporting H2b. Furthermore, the mediating role of green product purchase behavior between green product purchase intentions and green product repurchase intention (GPPIs→GPB→GPRI) was observed, with GPB playing a significant and positive mediating role, as shown in Figure 2, supporting H3b.
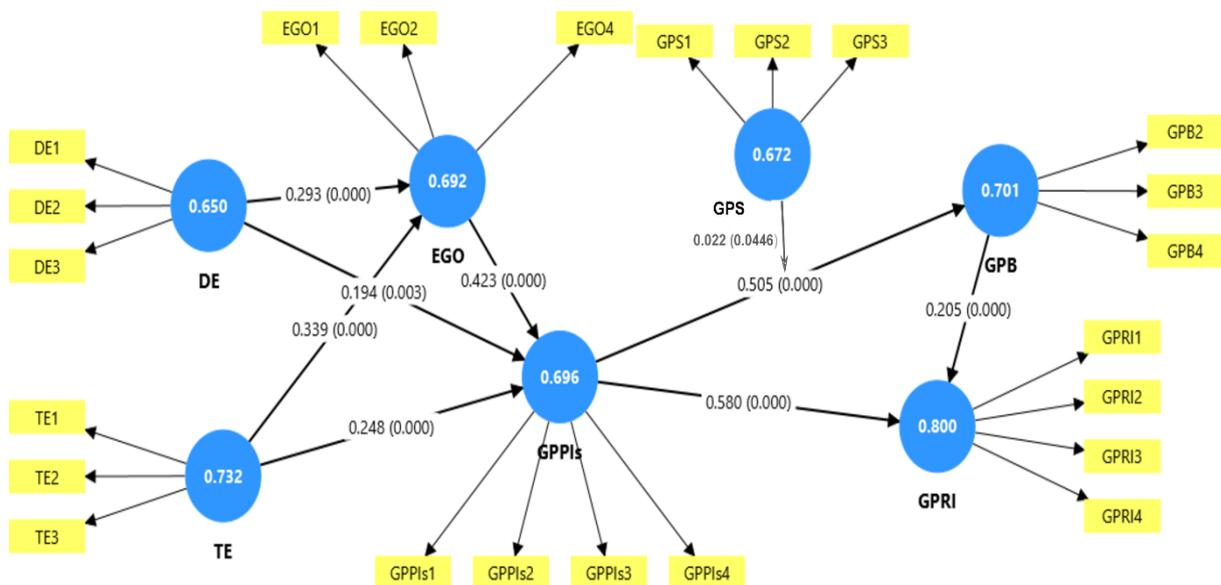

Figure 2. Structural model with path coefficients, p-Values, and AVE.

4.5. Multi-Group Analysis

To test the moderating role of green price sensitivity between green product purchase intentions and green purchase behavior, a permutation multi-group analysis was conducted. The use of the permutation technique allows the evaluation of the PLS-SEM measurement invariances as recommended by Henseler, Ringle, and Sarstedt (2016). From the results, all the constructs' original correlation (c) is greater than their 5th Percentile (c_5) values, thus confirming the presence of partial compositional invariance. Hence, the structural path differences were compared to determine differences in the groups. Further, as suggested by Hu and Bentler (1999), the sample was split into high GPS (n=152) and low GPS (n=148) using the overall mean score method.

Table 5. Multi-group analysis.

Hypothesis	Path	Original (High GPS)	Original (Low GPS)	Original difference	Permutation mean difference	Permutation p-value	Decision
H4: Green price sensitivity will moderate the relationship between green purchase intention and green purchase behavior, and the relation is expected to be weaker when price sensitivity is high.	GPS -> GPB	-0.02	0.15	-0.17	-0.001	0.201	Rejected

Further, the analysis shows that the relationship between GPPIs and GPB is significantly moderated by GPS when GPS is higher. Specifically, the relation varies significantly between the low GPS group and the high GPS group. Overall, low GPS shows a proportional relationship (β= 0.15, p=0.201), while high GPS indicates an inverse relationship (β=-0.02, p=0.201). The difference between the two groups is positive and significant, as shown in Table 5. Hence, it could be said that high green price-sensitive consumers might be unable to purchase green products over time; thus, hypothesis 4 was not supported.

5. DISCUSSION AND CONCLUSION

Building on the Hunt-Vitell ethical theory and the TPB, the current study evaluates consumers' ethical evaluations of their GPPIs. Based on their DE and TE evaluations, it was found that consumers have positive ethical views towards other stakeholders in the environment, including animals, humans, and plants, and thus, purchase products that are termed eco-friendly. Besides, by evaluating the mediating role of egobiocentric values, the study confirms consumers' connection to nature as a strengthening factor in their adoption of green products. Thus, it becomes relevant for policymakers in least developed countries to enact green policies that support green product producers and manufacturers by creating a favorable business environment for a more sustainable future for all. Besides, the study validates the application of the TPB by filling the existing knowledge gap in consumers' green product purchase intentions and repurchase intentions in the African market.

5.1. Theoretical Contribution

The theoretical contribution of this study can be evaluated from three perspectives. First, it expands our understanding of consumers' DE and TE roles in their GPPIs. Unlike studies that indirectly assess consumers' ethical values on GPPIs (Lu et al., 2015; Qian & Yin, 2017; Suphasomboon & Vassanadumrongdee, 2022), this study integrates the TPB and H-V ethical theory to examine the direct effects of moral values on Gambian consumers'

GPPIs. The findings show both DE and TE have a positive, significant direct impact on GPPIs. These results align with those of Chan et al. (2008): Haq, Miah, Biswas, and Rahman (2023) and Sun et al. (2022), where both DE and TE significantly influenced GPPIs.

However, compared to the results of Lan Vi and Dinh (2020) and Smith et al. (2023), the magnitude of the effect was higher with TE than with DE. This indicates consumers' ethical judgments based on the outcome of their actions. Additionally, the simultaneous evaluation of DE and TE provides a robust dual understanding of duty-driven and consequential differences among consumers. This complements the theory of planned behavior by confirming consumers' attitudes toward green products and how their ethical judgments trigger psychological evaluations.

Furthermore, as argued by Kumar et al. (2023), ethical values and egobiocentric values have been treated separately in existing literature. To develop a comprehensive understanding of consumers' sustainability intentions and behaviors through ethical perspectives, combining these two concepts is necessary. Therefore, this study offers a new approach by confirming the partial mediating roles of egobiocentric values between DE, TE, and GPPIs. This suggests that while moral duty and outcome-based ethical orientations are crucial for consumers' GPPIs, their self-to-nature connection also significantly influences their pursuit of green products. This complements the findings of Perera et al. (2022). Overall, the study addresses a gap in the theoretical understanding of DE and TE relations, indicating that GPPIs may be mediated by egobiocentric values.

Finally, by building on the works of Kumar et al. (2023) and Sun et al. (2022), which suggest the relevance of evaluating consumers' actual purchase behaviors rather than only their purchase intentions, the current study enriches the literature by indicating the partial mediating role of green purchase behavior between GPPIs and GPRI. This narrows the existing gap between intention and actual purchase behaviors. The findings offer a new perspective on the phenomena. Additionally, the study demonstrates an insignificant moderating role of green price sensitivity in the relationship between green purchase intentions and green purchase behavior. This aligns with the findings of Ghali-Zinoubi (2020), which also found green price sensitivity insignificantly moderating the relations between green product purchase intention and green purchase behavior. Although much of the sample population falls within the high-income group, the results suggest that many consumers are sensitive to high green product prices and might be reluctant to purchase them if prices increase significantly. This indicates the presence of price-sensitive differences in the Gambian context.

5.2. Practical Implications

Based on managerial perspectives, the current study demonstrates the relevance of marketing managers in communicating the ethical features of their products to create a point of differentiation in the market. Similarly, the positive mediating role of egobiocentric values makes it evident to position their products in the market by emphasizing the tangible consumption values of the products, both for self and the environment. Further, companies should implement green marketing strategies that ignite consumers' interest in purchasing their products in the future. Such activities could include implementing loyalty programs that foster user satisfaction and product green performance. Similarly, implementing sustainability education and sensitization programs can further boost consumer awareness about products, thus promoting their future consideration of green products. Moreso, it becomes relevant for marketing managers to pay attention to the negative and insignificant moderating role of green price sensitivity. In doing so, the adoption of a wide array of distribution channels could help counter the adverse spillover effects of green price sensitivity (Kumar & Mohan, 2021). Also, the government should provide subsidies or tax breaks to firms producing green products in the country to help them remain competitive in the market.

5.3. Limitations and Directions to Future Studies

Although the study enriches our understanding of least developed countries' consumers' sustainability intentions and behaviors, some setbacks still exist that could be addressed by future studies. First, from a theoretical perspective,

the TPB and H-V ethical theories are not novel. Hence, studies could utilize the Value-Belief-Norm (VBN) theory alongside the sustainability theory of planned behavior (STP) for a more nuanced understanding of consumers' green sustainability awareness and orientations. Besides, instead of examining the moderating role of green price sensitivity, valuable insights could be drawn by examining the moderating roles of perceived green value, since value proportion is significant to consumers in this region's purchasing decision-making. Additionally, using an online mode of data collection might cause some biases in capturing consumers' real purchasing intentions and behaviors.

Thus, it becomes relevant for future researchers to intercept consumers in their buying situations to collect survey-based data from them. Besides, the study does not use any specific product to evaluate the green consumption intentions of consumers; hence, the generalization of the findings is limited. Additionally, another limitation of the study is the lack of representativeness of the sample size, given the use of convenience sampling. Therefore, by using a stratified sampling method, the findings could be further validated in the context of African consumers, considering solar panels or electric cars as products to be evaluated.

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