VALUE-ORIENTED MOTIVATIONS AND GREEN CONSUMPTION INTENTION AMONG GEN Z: THE MODERATING ROLE OF GREEN EXTRINSIC MOTIVATION

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Abstract: ***Against the backdrop of global climate change, this research was conducted to identify and quantify the factors influencing the green consumption intention of Generation Z in Ho Chi Minh City. Utilizing a convenience sampling technique, data gathered from 403 valid responses were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via the SmartPLS platform. Empirical results indicate that Environmental Concern serves as a pivotal driver with a moderate effect size. Furthermore, Green thinking, Altruistic Motivation, and Egoistic Motivation all exhibit positive impacts, albeit at lower magnitudes of influence. Notably, the study provides empirical evidence regarding the moderating role of Green Extrinsic Motivation. Rather than crowding out intrinsic drivers, extrinsic factors, such as economic benefits and social recognition, function as "catalysts" that significantly amplify the influence of Green thinking on behavioral intention. These findings offer practical managerial implications for enterprises in formulating integrated marketing strategies that synergize cognitive education with extrinsic "nudges" to foster sustainable lifestyles among the Vietnamese youth.***

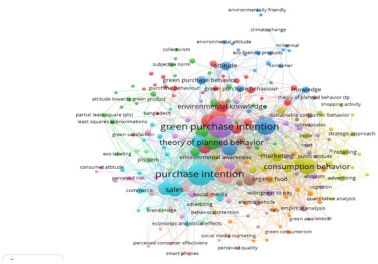
• Keywords: *green consumption intention, gen Z, green thinking, green extrinsic motivation.*

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1. Introduction

Amidst the escalating global environmental degradation and climate change, Green consumption has emerged as an imperative to mitigate negative anthropogenic impacts on the ecosystem (Hou et al., 2026). Prior research has asserted that unsustainable lifestyles and consumption patterns constitute the root causes of resource depletion (Ali et al., 2020). Bibliometric analysis conducted via VOSviewer (Figure 1) reveals a multitude of factors influencing Green purchase intention, including environmental knowledge, awareness, social media marketing, subjective norms, and attitudes toward green products (Le Thanh Ha et al., 2024; Kumar & Pandey, 2023; Zameer & Yasmeen, 2022).

Figure 1: Bibliometric analysis of studies related to waste sorting behavior



Source: Copmpiled by the authors

While extant theories have provided significant frameworks for explaining consumption intentions, further exploration into value-oriented motivations (egoistic and altruistic) and the interplay between internal cognition (Green thinking) and extrinsic motivation remains under-explored. In particular, Generation Z - identified as a pivotal consumer force with a keen sense of social responsibility - has become a priority target demographic in dynamic markets such as Ho Chi Minh City.

Given this context, the present study aims to identify and quantify the impact of several key factors: Environmental concern, Egoistic motivation, Altruistic motivation, and Green thinking on the Green consumption intention of Gen Z. The core novelty of this research lies in examining the moderating role of Green extrinsic motivation, seeking to elucidate the mechanisms through which external influences interact with internal mindsets to shape behavioral intentions. The findings are expected to offer both theoretical and practical contributions for businesses and policymakers in fostering sustainable lifestyles within the Vietnamese context.

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2. Theoretical framework and research model

2.1. Theoretical Framework

Green consumtion intention

Green consumption behavior is understood as the preferential selection of products that either provide environmental benefits or minimize adverse ecological impacts throughout their entire lifecycle, from production to disposal or recycling. From this perspective, Green Fast-Moving Consumer Goods (Green FMCG) are defined as items derived from natural or recycled materials. Furthermore, these products must be manufactured through energy-efficient, low-carbon production processes and utilize eco-friendly packaging (Sharma & Bhardwaj, 2021).

Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA), developed by Ajzen and Fishbein (1980), serves as a fundamental framework for deciphering the correlations between attitudes, subjective norms, and human behavior. When applied to the context of green consumption, TRA effectively identifies the factors driving eco-friendly lifestyles. For instance, Zhuang et al. (2021) demonstrated the positive role of green attitudes and beliefs in shaping sustainable purchase intentions, thereby reaffirming the efficacy of the TRA model in predicting ecological consumption decisions.

Self-Determination Theory (SDT)

In addition to TRA, the Self-Determination Theory (SDT) proposed by Ryan and Deci (2000) is utilized to elucidate the mechanisms driving behavioral intentions through distinct motivational types. SDT distinguishes between intrinsic motivation, which arises from inherent interest, and extrinsic motivation, which stems from external goals such as rewards or social recognition. Within the sphere of sustainable consumption, SDT provides a vital theoretical lens for explaining how external influences interact with an internal Green thinking. Specifically, SDT facilitates a profound interpretation of the moderating role of extrinsic motivation in promoting, adjusting, or transforming awareness into actual behavioral intention.

2.2. Hypotheses Development and Research Model

Environmental Concern

Environmental concern is a core factor driving the intention to act for the environment, as ecological apprehension motivates consumers to choose green products (Nguyen Thu Thuy et al., 2024). This positive impact has been empirically validated across numerous studies (Zameer & Yasmeen, 2022; Le Thanh Ha et al., 2024). Based on this premise, the following hypothesis is proposed:

H1: Environmental concern has a positive impact on green consumption intention.

Egoistic motivation

Egoistic motivation is considered a powerful factor driving individuals to perform behaviors that yield direct benefits for themselves or their families (Oh, 2012). In the context of online communication, social media elements often emphasize the individual advantages of adopting a green lifestyle, such as health, usage efficiency, and cost-effectiveness (Chwialkowska, 2019). Regarding green consumption, when consumers perceive that utilizing green goods helps them achieve personal values, social status, or self-enhancement, they tend to form stronger purchase intentions (Kumar & Pandey, 2023). Consequently, the following hypothesis is proposed:

H2: Egoistic motivation has a positive impact on green consumption intention.

Altruistic motivation

Altruism reflects selfless actions aimed at supporting the community and protecting the ecosystem without seeking personal gain; it serves as a crucial motive driving users to communicate information, share experiences, and support one another on social media platforms (Oh, 2012). When individuals are influenced by behavioral standards maintained and encouraged within the community, they develop a desire to contribute to the common social good through the selection of green products (Kumar & Pandey, 2023). Based on these foundations and arguments, the following hypothesis is proposed:

H3: Altruistic motivation has a positive impact on green consumption intention.

Green Thinking

Green thinking is understood as a profound awareness of the relationship between humans and the ecosystem, accompanied by a reflection on the negative impacts of daily activities on the environment (Ali et al., 2020). When consumers establish a belief in the ecological value and sustainability of a product, they are willing to pay a premium to prioritize eco-friendly solutions (Kumar & Ghodeswar, 2015; Ali et al., 2020). From the aforementioned arguments, we propose the following hypothesis:

H4: Green thinking has a positive impact on green consumption intention.

Green extrinsic motivation

Individuals with a strong Green thinking often tend to seek external validation to reinforce their decisions. When extrinsic motivators - such as economic savings or social recognition - are present (Ali et al., 2020), the impact of internal mindset on behavioral intention becomes more pronounced. Therefore, the following hypothesis is proposed:

H5: Green extrinsic motivation positively moderates the impact of Green Thinking on Green Consumption Intention.

3. Research methodology

In this study, a convenience sampling technique was employed, with the sample size determined in accordance with the criteria established by Tabachnick and Fidell (2013). Out of 415 survey questionnaires collected from individuals interested in green consumption in Ho Chi Minh City, 403 valid responses remained after a rigorous screening and data cleaning process, which were then used for formal analysis. Data processing was conducted via the SmartPLS platform through a series of stringent testing procedures: reliability assessment (Cronbach's Alpha), as well as convergent and discriminant validity. Subsequently, the structural model was evaluated based on indicators such as multicollinearity (Variance Inflation Factor - VIF), the coefficient of determination (Adjusted R^2), and effect size (f^2) to ascertain the influence of the factors and the overall robustness of the model.

4. Results and discussion

4.1 Analysis of Cronbach's Alpha Coefficients

Table 4.1: Summary of Composite Reliability and Cronbach's Alpha Coefficients

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
AM	0,806	0,807	0,874	0,634
EC	0,805	0,810	0,872	0,630
ECI	0,809	0,826	0,875	0,639
EM	0,785	0,787	0,875	0,699
EX	0,876	0,890	0,914	0,728
GT	0,761	0,772	0,862	0,675

Source: Calculated results from SmartPLS software

The reliability of the scales was assessed using Cronbach's Alpha coefficients, with results indicating that all variables met the acceptable reliability threshold (Cronbach's Alpha ≥ 0,7). Furthermore, the Average Variance Extracted (AVE) values were all ≥ 0,50, demonstrating satisfactory convergent validity for the measurement scales (Chin, 1998).

4.2. Assessment of Convergent Validity

Table 4.2: Results of Convergent Validity Assessment

	AM	EC	ECI	EM	EX	GT
AM1	0,805					
AM2	0,830					
AM3	0,811					
AM4	0,736					
EC1		0,817				
EC2		0,804				
EC3		0,780				
EC4		0,771				
ECI1			0,804			
ECI2			0,708			
ECI3			0,789			
ECI4			0,886			
EM1				0,857		
EM2				0,820		
EM3				0,832		
EX1					0,868	
EX2					0,857	
EX3					0,873	
EX4					0,813	
GT1						0,835
GT2						0,797
GT3						0,833

Source: Calculated results from SmartPLS software

Convergent validity denotes the degree of consistency among observed variables in collectively measuring a specific research construct (Bagozzi et al., 1991). In assessing this validity, researchers typically evaluate the outer loadings of each indicator alongside the Average Variance Extracted (AVE). According to established psychometric criteria, observed variables must possess outer loadings of ≥ 0,7 to be considered statistically adequate. Based on the SmartPLS analysis, all measurement items exhibited loadings exceeding the 0,7 threshold, confirming that the requirements for convergent validity were fully satisfied.

4.3. Assessment of Discriminant Validity

Table 4.3: Testing Discriminant Validity (Heterotrait-Monotrait Ratio - HTMT Matrix)

	AM	EC	ECI	EM	EX	GT
AM						
EC	0,445					
ECI	0,645	0,718				
EM	0,442	0,458	0,627			
EX	0,429	0,329	0,365	0,317		
GT	0,410	0,462	0,630	0,448	0,239	

Source: Calculated results from SmartPLS software

According to Henseler et al. (2015), the Heterotrait-Monotrait (HTMT) ratio is proposed as a reliable criterion for assessing discriminant validity between constructs, with an acceptable threshold of below 0,90. The results presented in Table 4.3 demonstrate that all HTMT values are below 0,90, confirming that the scales in the research model satisfy the requirements for discriminant validity.

Table 4.4: Assessment of Discriminant Validity using the Fornell-Larcker Criterion

	AM	EC	ECI	EM	EX	GT
AM	**0,796**					
EC	0,365	**0,794**				
ECI	0,526	0,589	**0,799**			
EM	0,352	0,369	0,503	**0,836**		
EX	0,363	0,289	0,314	0,261	**0,853**	
GT	0,330	0,372	0,503	0,353	0,201	**0,822**

Source: Calculated results from SmartPLS software

Furthermore, based on the criterion proposed by Fornell and Larcker (1981), discriminant validity is established when the square root of the AVE for each latent construct exceeds the correlation coefficients between that construct and any other constructs in the model. The results in the table indicate that the diagonal values (representing the square root of the AVE) are higher than the corresponding correlations in the same column, thereby demonstrating that the scales satisfy the discriminant validity criterion.

Table 4.5: Results of Structural Model Assessment

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	p values
AM -> ECI	0,229	0,229	0,058	3,952	0,000
EC -> ECI	0,313	0,312	0,047	6,618	0,000
EM -> ECI	0,185	0,183	0,048	3,856	0,000
GT -> ECI	0,235	0,234	0,045	5,222	0,000
EX x GT -> ECI	0,128	0,131	0,037	3,429	0,001

Source: Calculated results from SmartPLS software

Path coefficients range from -1 to 1. Table 4.5 illustrates that all coefficients fall within the standard range, are positive, and approach 1, indicating strong positive relationships between the variables in the model. To evaluate statistical significance, the study employed the bootstrapping technique. Coefficients are deemed statistically significant when the t-statistic > 1,96 (corresponding to a p-value < 0,05). The results confirm that all hypothesized relationships within the model are statistically significant.

4.5. Model Re-evaluation using PLS-SEM

Multicollinearity Assessment

Table 4.6: Multicollinearity Test Results (Variance Inflation Factor - VIF)

	AM	EC	ECI	EM	EX	GT	EX x GT
AM			1,377				
EC			1,365				
ECI							
EM			1,336				
EX			1,304				
GT			1,292				
EX x GT			1,128				

Source: Calculated results from SmartPLS software

The model was re-evaluated using the PLS-SEM method to ensure the reliability and explanatory power of the variables. The multicollinearity test results indicate that all Variance Inflation Factor (VIF) values fall within the safe range (1,000 - 1,426), which is significantly lower than the common exclusion threshold of 5. This confirms the absence of multicollinearity issues among the independent variables.

4.6. Assessment of Adjusted R^2 Coefficients

Table 4.7: Adjusted R^2 Coefficients

DV	R-square	R-square adjusted
ECI	0,567	0,561

Source: Calculated results from SmartPLS software

The R^2 coefficient measures the model's predictive power, reflecting the collective influence of exogenous variables on the endogenous variable (Hair et al., 2019). R^2 values range from 0 to 1, with higher values indicating stronger predictive capacity. In behavioral or exploratory research, an R^2 value of 0,20 or higher is considered acceptable (Hair et al., 2019). Consequently, the findings substantiate the relationships between motivations, green thinking, and purchase intention within the proposed theoretical framework.

4.7. Assessment of Effect Size (f^2)

Bảng 4.6: Results of Effect Size (f^2) Assessment

	f-square	Effect size
AM -> ECI	0,088	Small effect size
EC -> ECI	0,165	Medium effect size
EM -> ECI	0,059	Small effect size
GT -> ECI	0,099	Small effect size
EX x GT -> ECI	0,039	Small effect size

Source: Calculated results from SmartPLS software

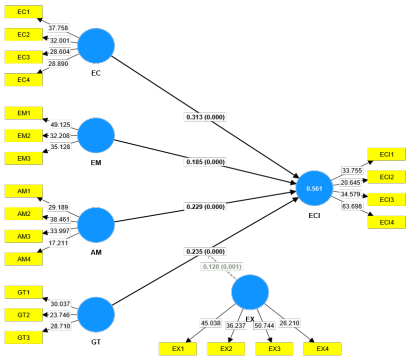
The f^2 effect size is utilized to evaluate the substantive impact of an exogenous construct on an endogenous construct, with standard thresholds defined as 0,35 (large), 0,15 (medium), and 0,02 (small) (Cohen, 1988).

Empirical results reveal that Environmental Concern (EC) plays a dominant role in driving the Green consumption intention of Gen Z, with an f^2 value of 0,165, signifying a moderate effect size. In contrast, although the factors of Green thinking (GT), Altruistic motivation (AM), and Egoistic motivation (EM) are statistically significant, they exhibit only weak effect sizes. A pivotal highlight of the structural model is the interaction term (EX x GT), which yields a path coefficient (beta) of 0,128 ($p < 0,05$). With an f^2 of 0,039, Hypothesis H5 is supported, confirming the positive moderating role of Green extrinsic motivation.

This finding offers a novel perspective: for young consumers, the synergy between internal mindset

and external nudges - such as economic rewards or social reputation - creates a resonance mechanism that effectively reinforces eco-responsible purchasing decisions.

Research Model



Note: EC - Environmental Concern; EM - Egoistic Motivation; AM - Altruistic Motivation; GT - Green Thinking; EX - Green Extrinsic Motivation; ECI - Green Consumption Intention.

Source: Authors elaboration

5. Conclusion and managerial implications

5.1. Conclusion

This study contributes to identifying and measuring the factors influencing the Green consumption intention of Generation Z in Ho Chi Minh City. Based on the results of the PLS-SEM analysis, the assessment of f^2 effect sizes indicates that since Environmental Concern (EC) exerts the strongest impact (f^2 = 0,165), enterprises should prioritize "Value-based Marketing" strategies. Meanwhile, factors including Green Thinking (GT), Altruistic Motivation (AM), and Egoistic Motivation (EM) all exhibit a weak degree of influence on this intention (with f^2 values of 0,099, 0,088, and 0,059, respectively). More importantly, the research offers a novel theoretical contribution by providing empirical evidence for the moderating role of Green Extrinsic Motivation (EX).

The results demonstrate that Green Extrinsic Motivation acts as a catalyst, amplifying the impact of Green Thinking on behavioral intention (EX x GT ->ECI). Based on these findings, it is evident that to foster Green consumption intentions among Gen Z, addressing Environmental Concern remains the central focus. Simultaneously, it is essential to evoke Green thinking and individual motivations (Egoistic, Altruistic, and Extrinsic) in a synchronized manner.

5.2. Managerial Implications

Based on the research findings, several strategic solutions are proposed for enterprises as follows:

First, focus on the core value of Environmental Concern. Businesses need to enhance transparency in production processes and clearly delineate the actual contributions of their products toward resolving urgent ecological issues to build solid trust within Gen Z.

Second, maximize the moderating role of Green Extrinsic Motivation. For a generation sensitive to social media and community engagement, brands should integrate cognitive education with the implementation of extrinsic "nudges," such as economic incentives, green loyalty point systems, or the conferment of "Green Citizen" titles on online platforms. These tangible benefits will serve as "psychological leverage," accelerating the transition from a Green thinking to actual purchasing actions.

In summary, to capture the green consumption segment, brands need to establish a synchronized strategy: nurturing moral values (altruistic), satisfying personal interests (egoistic), and creating a dynamic extrinsic incentive environment to reinforce sustainable thinking among consumers.

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