

The impact of Vietnamese consumers' sense of environmental responsibility on green purchasing behavior

Quocphong Hoa, Wenpei Chen

School of Economics and Management, Chongqing University of Posts and Telecommunications, Chongqing 404000, China

Abstract: Amid escalating environmental challenges in Vietnam, understanding the drivers of green consumption has become increasingly important. This study examines the influence of Environmental Responsibility (ER) on Green Purchase Behavior (GPB) through an integrated framework that incorporates both mediating and moderating mechanisms. Specifically, Green Perceived Value (GPV) and Perceived Behavioral Control (PBC) are modeled as mediators, while Cognitive Effort Saving (CES) and External Incentive Policies (EIP) are introduced as moderators. Using survey data from 438 Vietnamese consumers, the proposed model is tested via Structural Equation Modeling (SEM) and multi-group analysis. The findings demonstrate that ER significantly affects GPB both directly and indirectly through GPV and PBC. Moreover, the strength of these relationships increases under conditions of higher CES and stronger EIP. By integrating the Value–Belief–Norm (VBN) theory with the Theory of Planned Behavior (TPB), this study advances the understanding of sustainable consumption behavior in emerging markets. The results also provide practical implications for policymakers and firms to design interventions that lower cognitive barriers and strengthen institutional support for green consumption.

Keywords: Environmental Responsibility; Green Purchase Behavior; Green Perceived Value; Perceived Behavioral Control; Cognitive Effort Saving; External Incentive Policies.

1. Introduction

In recent years, environmental degradation has become an increasingly critical issue, particularly in emerging economies such as Vietnam. Rapid industrialization and urbanization have contributed to rising pollution levels, resource depletion, and unsustainable consumption patterns. Prior research suggests that approximately 40% of environmental problems are linked to consumer behavior, highlighting the importance of promoting green consumption [1].

Despite growing environmental awareness, a significant gap persists between consumers' attitudes and their actual purchasing behavior. Many individuals express concern for environmental protection but fail to translate these concerns into consistent green purchasing decisions. This discrepancy is often attributed to factors such as perceived costs, limited availability, and insufficient institutional support.

To address this issue, this study investigates the influence of Environmental Responsibility (ER) on Green Purchase Behavior (GPB). By integrating the Value–Belief–Norm (VBN) theory and the Theory of Planned Behavior (TPB), this research proposes a comprehensive framework that incorporates both mediating mechanisms and moderating conditions. Specifically, Green Perceived Value (GPV) and Perceived Behavioral Control (PBC) are examined as mediators, while Cognitive Effort Saving (CES) and External Incentive Policies (EIP) are introduced as moderators.

This study aims to provide both theoretical and practical insights into the drivers of sustainable consumption in emerging markets.

2. Literature Review and Hypotheses Development

2.1. Green Purchase Behavior

Green purchase behavior refers to consumption decisions that minimize environmental harm throughout the product lifecycle. Prior studies have identified various determinants of such behavior, including psychological, social, and economic factors [2, 3, 4].

2.2. Theory of Planned Behavior (TPB)

TPB posits that behavior is influenced by attitude, subjective norms, and perceived behavioral control [5, 6]. In the context of green consumption, perceived behavioral control plays a crucial role due to barriers such as high prices and limited availability.

2.3. Value–Belief–Norm Theory (VBN)

VBN explains pro-environmental behavior through a chain from values to beliefs and personal norms [1]. Environmental responsibility emerges as a key moral driver influencing behavior.

2.4. Key Variables

- Environmental Responsibility (ER): moral obligation toward environmental protection
- Green Perceived Value (GPV): perceived benefits of green products
- Perceived Behavioral Control (PBC): perceived ease or difficulty of performing behavior
- Cognitive Effort Saving (CES): perceived effort required to engage in green behavior
- External Incentive Policies (EIP): institutional support mechanisms

2.5. Hypotheses Development

2.5.1. Direct Effects

- H1: Environmental Responsibility has a significant positive effect on Green Purchase Behavior.
- H2: Environmental Responsibility has a significant positive effect on Green Perceived Value.
- H3: Environmental Responsibility has a significant positive effect on Perceived Behavioral Control.
- H4: Green Perceived Value has a significant positive effect on Green Purchase Behavior.
- H5: Perceived Behavioral Control has a significant positive effect on Green Purchase Behavior.

2.5.2. Mediating Effects

- H6: Green Perceived Value mediates the relationship between Environmental Responsibility and Green Purchase Behavior.

- H7: Perceived Behavioral Control mediates the relationship between Environmental Responsibility and Green Purchase Behavior.

2.5.3. Moderating Effects

- H8a: Cognitive Effort Saving moderates the relationship between Environmental Responsibility and Green Perceived Value.
- H8b: Cognitive Effort Saving moderates the relationship between Environmental Responsibility and Perceived Behavioral Control.
- H9a: External Incentive Policies moderate the relationship between Green Perceived Value and Green Purchase Behavior.
- H9b: External Incentive Policies moderate the relationship between Perceived Behavioral Control and Green Purchase Behavior.

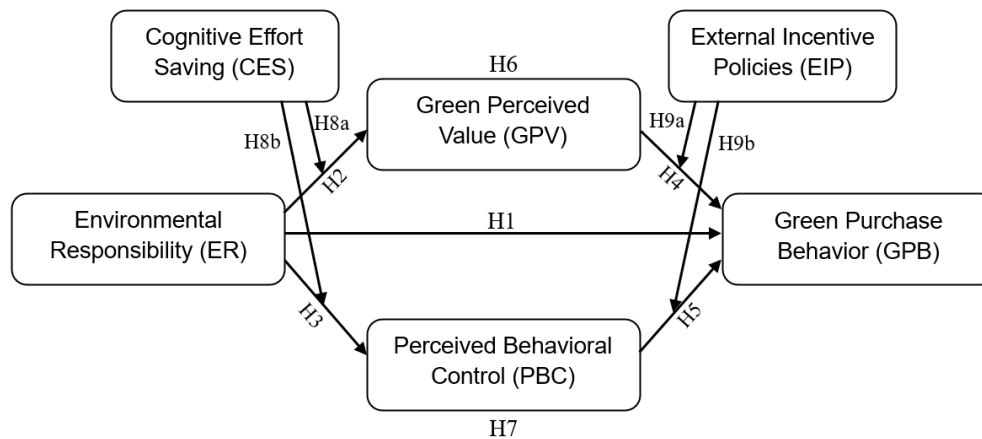


Figure 1. Research Model

Figure 1 presents the conceptual framework of this study, illustrating the proposed relationships among variables.

3. Methodology

This study adopts a quantitative research design using survey data collected from Vietnamese consumers. Measurement scales for all constructs, including Environmental Responsibility (ER), Green Perceived Value (GPV), Perceived Behavioral Control (PBC), Green Purchase Behavior (GPB), Cognitive Effort Saving (CAE), and External Incentive Policies (EIP), were adapted from established studies.

A structured questionnaire with a five-point Likert scale was employed. Prior to formal data collection, a pilot test was conducted with 50 respondents to ensure reliability and clarity. After refinement, the final survey included 25 items.

Data were collected through online platforms using convenience and snowball sampling methods. A total of 489 responses were obtained, of which 438 valid responses were retained after data cleaning. The sample size satisfies the requirements for structural equation modeling [7].

4. Results

4.1. Descriptive Statistics

The results indicate generally high levels of agreement with green consumption-related statements, with mean values ranging from 4.16 to 4.62. Standard deviations fall within acceptable ranges, indicating moderate variability.

Normality assumptions are satisfied, with skewness and

kurtosis values within acceptable thresholds.

4.2. Reliability and Validity

All constructs demonstrate satisfactory reliability, with Cronbach's α values exceeding 0.7. The overall scale reliability is 0.823.

Validity is supported by KMO (0.770) and Bartlett's test ($p < 0.001$). Convergent validity is confirmed through acceptable factor loadings, AVE, and CR values. Discriminant validity is established using the Fornell-Larcker criterion [8].

Table 1. Reliability and Convergent Validity

Construct	Items	Loadings	Cronbach's α	CR	AVE
ER	ER1–ER4	0.746–0.833	0.861	0.862	0.610
GPV	GPV1–GPV4	0.671–0.796	0.760	0.806	0.510
PBC	PBC1–PBC3	0.754–0.770	0.808	0.808	0.584
GPB	GPB1–GPB3	0.687–0.782	0.776	0.777	0.538
CES	CES1–CES4	0.731–0.781	0.843	0.844	0.575
EIP	EIP1–EIP3	0.733–0.825	0.809	0.811	0.589

4.3. Hypothesis Testing

4.3.1. Direct Effects

The structural model results indicate that Environmental Responsibility significantly influences both mediating variables and the dependent variable.

- H1: ER → GPB ($\beta = 0.108, p = 0.033$) → Supported
- H2: ER → GPV ($\beta = 0.481, p < 0.001$) → Supported
- H3: ER → PBC ($\beta = 0.460, p < 0.001$) → Supported
- H3: GPV → GPB ($\beta = 0.289, p < 0.001$) → Supported
- H4: PBC → GPB ($\beta = 0.252, p < 0.001$) → Supported

4.3.2. Mediating Effects

To examine the mediating roles of Green Perceived Value (GPV) and Perceived Behavioral Control (PBC), a bootstrap analysis with 5,000 resamples was conducted.

The results indicate that both GPV and PBC significantly mediate the relationship between Environmental Responsibility and Green Purchase Behavior.

- H6: ER → GPV → GPB ($\beta = 0.140, CI [0.089, 0.200]$) → Supported
- H7: ER → PBC → GPB ($\beta = 0.117, CI [0.076, 0.163]$) → Supported

The indirect effects account for approximately 70.3% of the total effect, indicating strong partial mediation.

4.3.3. Moderating Effects

The moderating effects of Cognitive Effort Saving (CES) and External Incentive Policies (EIP) were tested using interaction terms.

The results reveal that both moderators significantly strengthen the proposed relationships.

- H8: CES moderates ER → GPV ($\beta = 0.167, p < 0.001$) → Supported
- H9: CES moderates ER → PBC ($\beta = 0.091, p = 0.032$) → Supported
- H10: EIP moderates GPV → GPB ($\beta = 0.116, p = 0.010$) → Supported
- H11: EIP moderates PBC → GPB ($\beta = 0.217, p < 0.001$) → Supported

Table 2. Structural Model Results

Hypothesis	Path	β	CI	p-value	Result
H1	ER → GPB	0.108	–	0.033	Supported
H2	ER → GPV	0.481	–	< 0.001	Supported
H3	ER → PBC	0.460	–	< 0.001	Supported
H4	GPV → GPB	0.289	–	< 0.001	Supported
H5	PBC → GPB	0.252	–	< 0.001	Supported
H6	ER → GPV → GPB	0.140	[0.089, 0.200]	–	Supported
H7	ER → PBC → GPB	0.117	[0.076, 0.163]	–	Supported
H8a	CES moderates the ER–GPV relationship	0.167	–	< 0.001	Supported
H8b	CES moderates the ER–PBC relationship	0.091	–	0.032	Supported
H9a	EIP moderates the GPV–GPB relationship	0.116	–	0.010	Supported
H9b	EIP moderates the PBC–GPB relationship	0.217	–	< 0.001	Supported

5. Discussion

The findings demonstrate that Environmental Responsibility plays a crucial role in promoting green purchase behavior, but its influence is largely transmitted through cognitive and behavioral mechanisms.

The mediating roles of Green Perceived Value and Perceived Behavioral Control confirm that both perceived benefits and perceived feasibility are essential for translating responsibility into action.

Moreover, the moderating effects highlight the importance of contextual factors. Reducing cognitive effort and enhancing institutional support significantly strengthen the impact of psychological drivers.

These results contribute to bridging the attitude–behavior gap and provide a more comprehensive understanding of sustainable consumption behavior.

6. Conclusion

This study provides empirical evidence that Environmental Responsibility influences Green Purchase Behavior through both direct and indirect pathways. By integrating TPB and VBN, the research offers a comprehensive framework that captures both motivational and behavioral dimensions.

The findings highlight the importance of reducing cognitive barriers and strengthening policy support to

promote green consumption, particularly in emerging markets such as Vietnam.

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