

Factors Influencing Green Consumption Intention of Customers In NGHE an Province, Vietnam

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ABSTRACT: This study aims to examine the impact of various factors on customers' green consumption intention in Nghe An Province, Vietnam. A quantitative research approach was employed, utilizing multiple regression analysis techniques. The study was conducted with a sample size of 346 respondents, consisting of customers who have consumed green products in Nghe An, Vietnam. The findings reveal that three factors, environmental awareness, information accessibility, and trust have significant positive effects on green consumption intention. Among these, the magnitude of influence, based on standardized regression coefficients (Beta), is ranked as follows: (1) trust in firms' green claims; (2) information accessibility; and (3) environmental awareness. These results highlight the significant contributions of the study and provide a foundation for future research. Based on the findings, several recommendations are proposed to enhance customers' green consumption intention in Nghe An Province, Vietnam in the coming period.

Keywords: Environmental awareness; Green product perception; Price; Information accessibility; Personal responsibility; Trust; Green consumption intention.

I. INTRODUCTION

Digital transformation and global integration are creating significant foundations for the development of nations in the current era (Nguyen et al., 2025). Alongside economic development, increasing environmental warnings regarding pollution, climate change, and the depletion of natural resources have become critical issues across the country. Vietnam, as a developing nation, faces the challenge of ensuring that economic growth is closely aligned with environmental protection and sustainable resource management. Environmental degradation not only disrupts ecosystems but also directly threatens human health.

In the process of socio-economic development, Nghe An Province is confronting numerous environmental challenges, particularly in urban areas and industrial production zones. With its large geographical area and dense population, the pressure on natural resources and ecosystems has been steadily increasing. This has contributed to the growing severity of environmental pollution, largely due to the inability to effectively collect and centrally process waste. Through governmental policies and initiatives, public awareness of environmental impacts on health and living conditions has gradually improved. At the same time, individuals have become more conscious of the role their consumption behaviors play in affecting the environment.

Although green consumption trends have been widely promoted through policy interventions, they remain largely at the level of awareness, such as the use of eco-friendly products and biodegradable plastic bags. However, these efforts are often fragmented, lack systematic coordination, and have not yet become mainstream. Most consumers still prioritize low-cost and convenient products over environmentally friendly alternatives.

Therefore, this study seeks to explore, from a broader perspective, the factors influencing consumer behavior. The aim is to develop effective communication strategies that promote green consumption practices, thereby contributing to a healthier living environment and providing a foundation for sustainable economic development.

Therefore, this study investigates the factors influencing customers' green consumption behavior in Nghe An Province, with the aim of fostering pro-environmental attitudes and behaviors. In particular, the research focuses on exploring perspectives on green consumption and identifying key determinants affecting consumers' intention to purchase green products, thereby enhancing awareness and encouraging behavioral change toward sustainable consumption. A quantitative research approach was employed, utilizing multiple regression analysis techniques. The findings provide both theoretical and practical contributions by demonstrating that three factors, environmental awareness, information accessibility, and trust, have significant positive effects on green consumption intention. Among these, the relative influence, based on standardized regression coefficients (Beta), is ranked as follows: (1) trust in firms' green claims; (2) information accessibility; and (3) environmental awareness. Based on these findings, the study proposes several recommendations to promote customers' green consumption intention in Nghe An Province, Vietnam, in the coming period.

II. LITERATURE REVIEW AND HYPOTHESES

2.1. Literature review

The study by Xie et al. (2022) employed multilevel linear analysis and household microdata to examine the impact of environmental awareness on consumers' green consumption behavior, as well as the underlying mechanisms. The findings indicate that, at the individual level, environmental awareness, as an antecedent variable, can positively influence three key constructs: attitudes toward green consumption, subjective norms regarding green consumption, and perceived behavioral control over green consumption. These factors, in turn, lead to the intention to engage in green consumption behavior and actual green consumption behavior. Moreover, environmental awareness may also directly promote green consumption behavior, either by enhancing behavioral intention or by exerting a direct effect on such behavior.

Peattie (2010) argued that research on green consumer behavior has developed rapidly over recent decades. However, its impact has been constrained by the continued prioritization among businesses, policymakers, and researchers of addressing sustainable production models and incremental changes in consumption patterns, rather than fundamentally challenging prevailing consumer behaviors. This approach tends to reinforce industrialized consumption lifestyles and dominant production systems (DPS). Consequently, there has been a growing number of consumers adopting environmentally friendly practices, such as using energy-efficient light bulbs, consuming organic food, driving hybrid vehicles, paying for green energy tariffs, engaging in eco-tourism, and recycling waste. In reality, household management and transportation behaviors account for a substantial proportion of environmental impacts, thereby justifying the need for focused research in this area.

The study by Zhao et al. (2025) indicates that attitude and perceived behavioral control positively influence green consumption intention, which in turn exerts a strong effect on actual green consumption behavior. Additionally, location-based information and social trust have direct and statistically significant impacts on green consumption behavior. In contrast, green advertising and eco-labeling do not demonstrate a significant effect on consumers' green consumption behavior. Hong et al. (2024) found that biospheric values (BV), altruistic values (AV), the New Ecological Paradigm (EP), awareness of consequences (AC), ascription of responsibility (AR), and personal norms (PN) have significant positive effects on the intention to engage in green practices (IGP), which subsequently leads to a significant positive impact on the adoption of green practices (AGP). Meanwhile, Peattie (2010) provides an emerging perspective that green consumption is a process strongly influenced by consumers' values, norms, and habits; however, it is inherently complex, multifaceted, and highly context-dependent.

A review of prior studies indicates that green consumption behavior has attracted considerable attention from researchers. Existing studies have examined the determinants of green consumption behavior from multiple perspectives and have employed various theoretical frameworks, such as the Theory of Planned Behavior (TPB), the Value-Belief-Norm (VBN) model, and other related models. These studies have generated important insights into green consumption across different regions and countries.

However, most of the existing research has primarily focused on central areas, major cities, or large urban regions, where green product distribution systems are well developed and consumers have higher levels of access. In localities such as Nghe An, although some studies have explored the factors influencing green consumption behavior, they have largely been limited to specific wards within the province (formerly Vinh City). Furthermore, these studies have not been extended to a provincial scale, nor have they comprehensively examined the transition from green consumption intention to actual behavior.

2.2. Hypothesis

Existing studies indicate that customers' green consumption behavior is influenced by a wide range of factors. Barbu et al. (2022) synthesized 111 determinants and categorized them into eight main groups: social norms; environmental orientation (including individuals' environmental awareness and attitudes); firms' green image; green product characteristics; perceived risks and inconveniences associated with purchasing green products; perceived benefits; institutional trust; and demographic characteristics and consumer trust. Similarly, Teece (2016) identified five key determinants: green product attributes, social influence, green marketing activities, perceived price of green products, and environmental awareness. Based on prior literature, several major factors can be highlighted as follows:

Individual awareness and attitudes: Consumers who possess higher levels of environmental knowledge, concern, and responsibility are more likely to actively seek environmentally friendly products. A clear understanding of the long-term benefits of green products encourages them to prioritize such products in their purchasing decisions.

Social norms and community influence: The behaviors and expectations of family members, peers, and the broader society significantly shape consumers' green purchasing tendencies. When environmental protection is widely regarded as a social norm, individuals tend to experience both pressure and motivation to adopt environmentally responsible consumption behaviors.

Green product characteristics and price: The attributes of green products, such as quality, functionality, environmentally friendly production technologies, recyclable packaging, and eco-labeling, have a direct impact on consumers' purchase decisions. At the same time, price and perceived value play a crucial role; a reasonable price, or even a higher price that is justified by environmental and health benefits, can encourage consumers to be willing to purchase green products.

Corporate image and green communication: Firms with a positive environmental image, demonstrated through green commitments, eco-certifications, and transparent information disclosure are more likely to build consumer trust. In addition, green marketing and promotional activities contribute to influencing purchasing decisions. Trust in firms' green claims serves as a significant driver in encouraging consumers to adopt environmentally friendly purchasing behavior.

Based on the review of related studies, the following hypotheses are proposed:

H1: Environmental awareness positively influences customers' green consumption intention in Nghe An Province, Vietnam.

H2: Green product perception positively influences customers' green consumption intention in Nghe An Province, Vietnam.

H3: The price of green products positively influences customers' green consumption intention in Nghe An Province, Vietnam.

H4: Accessibility to information on green products positively influences customers' green consumption intention in Nghe An Province, Vietnam.

H5: Personal environmental responsibility positively influences customers' green consumption intention in Nghe An Province, Vietnam.

H6: Trust in firms' green claims positively influences customers' green consumption intention in Nghe An Province, Vietnam.

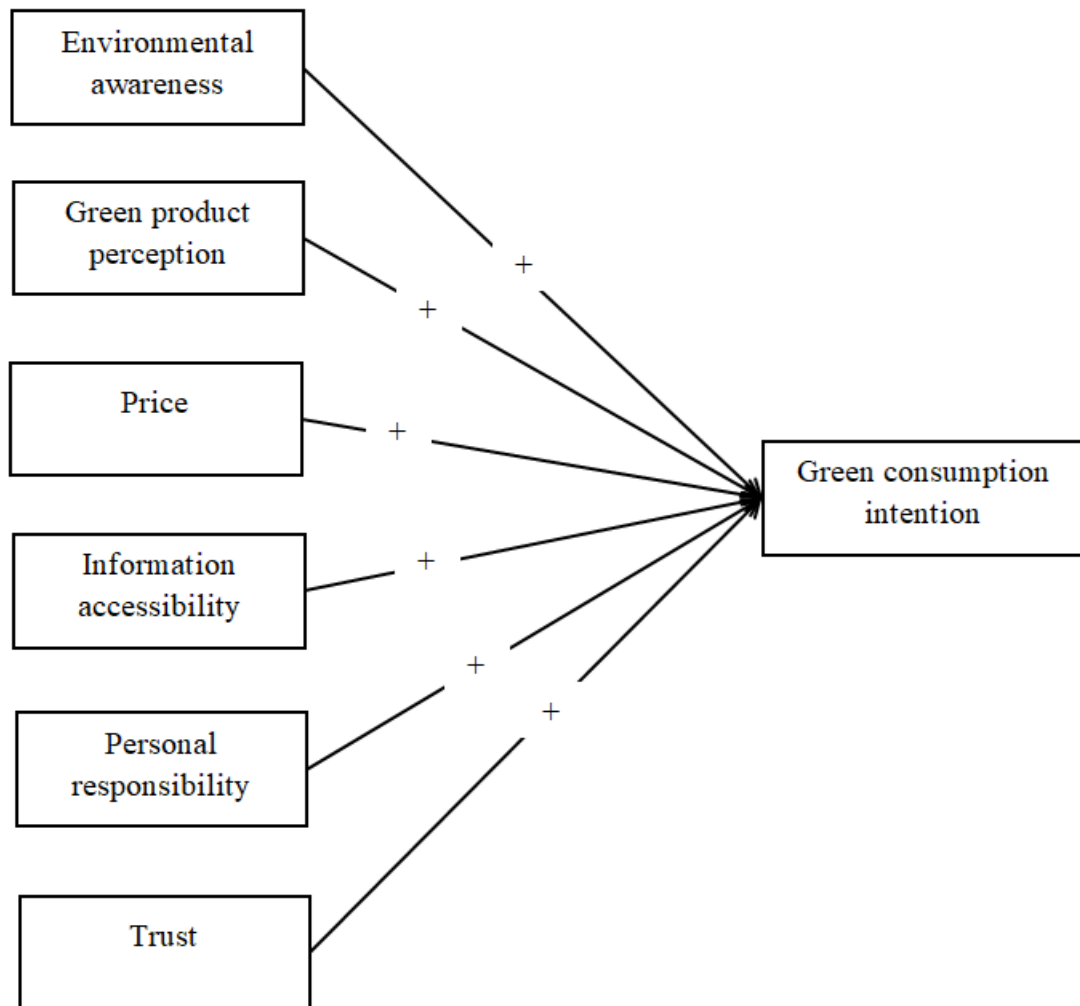


Figure 1. The proposed research model

III. RESEARCH METHODOLOGY

This study employs a quantitative research approach. Based on the research objectives and a review of prior studies, the authors identify and analyze six factors influencing green consumption intention, including: environmental awareness, green product perception, price, information accessibility, personal responsibility, and trust. The survey questionnaire consists of 44 measurement items, of which 38 items correspond to the independent variables (six constructs in the proposed model), and 6 items measure the dependent variable (green consumption intention).

The target respondents are customers who have consumed green products in Nghe An Province, Vietnam. The sample was selected using a non-probability sampling method, specifically convenience sampling, with a relatively stratified distribution across different regions within Nghe An Province to enhance representativeness. Data collection was conducted through two approaches. For the online survey, 300 questionnaires were distributed, of which 189 valid responses were obtained. For the direct survey method, 200 questionnaires were distributed, with 157 valid responses collected. In total, 346 valid responses were used for analysis. According to Hair et al. (2010), the minimum sample size should be at least five times the number of observed variables. With 44 observed variables, the sample size of 346 satisfies the requirement for statistical analysis. The data collection period spanned from April 2025 to September 2025.

After data collection and cleaning, the dataset was processed using SPSS 25. The reliability of the scales was assessed using Cronbach's Alpha, with a threshold of ≥ 0.7 , and item-total correlation coefficients ≥ 0.3 . Subsequently, the validity of the scales was examined using Exploratory Factor Analysis (EFA) to assess both convergent and discriminant validity. The criteria included factor loadings greater than 0.5, and the Promax rotation method was applied for factor extraction. The reliability of the scales was re-evaluated after removing inappropriate items. Finally, correlation analysis and multiple regression analysis were conducted to examine the impact of the proposed factors on customers' green consumption intention in Nghe An Province, Vietnam.

IV. RESEARCH RESULTS AND DISCUSSION

4.1. Testing the reliability of the scale

The results of the Cronbach's Alpha reliability test indicate that the measurement scales used in the analysis are reliable. Specifically, the Cronbach's Alpha coefficients for all constructs exceed the threshold of 0.7, while the item-total correlation coefficients for all items are greater than 0.3. Additionally, the Cronbach's Alpha values if item deleted are all lower than the overall Cronbach's Alpha coefficients, confirming that no items need to be removed and that the scales demonstrate good internal consistency.

Table 1. Evaluate the reliability of the scale through Cronbach's Alpha coefficient

| No. | Variable | Symbol | Cronbach's Alpha |
|-----|-----------------------------|--------|------------------|
| 1 | Environmental awareness | NTMT | 0.912 |
| 2 | Green product perception | NTSPX | 0.886 |
| 3 | Price | GIACA | 0.827 |
| 4 | Information accessibility | KNTC | 0.878 |
| 5 | Personal responsibility | TNCN | 0.880 |
| 6 | Trust | MDTT | 0.905 |
| 7 | Green consumption intention | YDTD | 0.865 |

4.2. Exploratory factor analysis (EFA)

After assessing the reliability of the measurement scales, the study conducted Exploratory Factor Analysis (EFA) for both the independent and dependent variables.

For the group of independent variables, the analysis was performed in two iterations. In both rounds, factor loadings exceeded 0.5, indicating a satisfactory correlation between the observed variables (indicators) and the underlying constructs in the proposed model. However, due to the lack of convergent validity, where certain items did not load appropriately onto the same factor, the first analysis led to the removal of the following items: GIACA1, GIACA4, KNTC1, KNTC4, and NTSPX5.

The results of the second analysis show that the remaining data meet the criteria for factor analysis, as all factor loadings are greater than 0.5 and both conditions of convergent validity (items loading onto the same factor) and discriminant validity (items clearly distinguishing between different factors) are satisfied.

For the dependent variable (green consumption intention), EFA was conducted only once. The results indicate that all remaining items meet the required criteria, with factor loadings exceeding 0.5 and satisfying both convergent and discriminant validity.

Table 2. Exploratory factor analysis results

| EFA analysis | | KMO coefficient | P-value | Variance extracted | Factor loading | Conclusion |
|-----------------------|-------------|-----------------|---------|--------------------|------------------------|---|
| Independent variables | Iteration 1 | 0.948 | 0.000 | 70.642 | All coefficients > 0.5 | The following items were removed: GIACA1, GIACA4, KNTC1, KNTC4, and NTSPX5. |
| | Iteration 2 | 0.941 | 0.000 | 69.911 | All coefficients > 0.5 | Meet requirements |
| Dependent variable | | 0.881 | 0.000 | 59.751 | All coefficients > 0.5 | Meet requirements |

4.3. Pearson correlation analysis

The correlation analysis results indicate that all independent variables have significant effects on the dependent variable (students' satisfaction). In addition, the variables exhibit relatively strong correlations with one another, as all Sig. (2-tailed) values are below 0.05.

Therefore, to ensure the accuracy of the model, it is necessary to further examine the role of each independent variable in the multiple regression model by assessing their individual effects on the dependent variable. The regression analysis results reveal no evidence of multicollinearity, as all Variance Inflation Factor (VIF) values are below 2. This confirms the reliability and robustness of the model estimation as well as the collected data.

Table 3. Results of pearson correlation analysis

| | | <i>YDTD</i> | <i>NTMT</i> | <i>NTSP</i> | <i>GIACA</i> | <i>KNTC</i> | <i>TNCN</i> | <i>MDTT</i> |
|---------------|---------------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|
| YDTD | Pearson Correlation | 1 | 0.473** | 0.468** | 0.259** | 0.468** | 0.528** | 0.646** |
| | Sig. (2-tailed) | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| NTMT | Pearson Correlation | 0.473** | 1 | 0.549** | 0.420** | 0.229** | 0.604** | 0.538** |
| | Sig. (2-tailed) | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| NTSP X | Pearson Correlation | 0.468** | 0.549** | 1 | 0.564** | 0.450** | 0.593** | 0.615** |
| | Sig. (2-tailed) | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| GIACA | Pearson Correlation | 0.259** | 0.420** | 0.564** | 1 | 0.153** | 0.490** | 0.439** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | | .004 | 0.000 | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| KNTC | Pearson Correlation | 0.468** | 0.229** | 0.450** | 0.153** | 1 | 0.369** | 0.439** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | .004 | | 0.000 | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| TNCN | Pearson Correlation | 0.528** | 0.604** | 0.593** | 0.490** | 0.369** | 1 | 0.661** |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.000 |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |
| MDTT | Pearson Correlation | 0.646** | 0.538** | 0.615** | 0.439** | 0.439** | 0.661** | 1 |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | |
| | N | 346 | 346 | 346 | 346 | 346 | 346 | 346 |

***. Correlation is significant at the 0.01 level (2-tailed).*

4.4. Regression model analysis

The results of the first regression analysis indicate that, due to significance levels (Sig.) greater than 0.05 (0.962, 0.086, and 0.070), green product perception, price, and personal responsibility do not have statistically significant effects on green consumption intention. Therefore, hypotheses H2, H3, and H5 are rejected.

To improve the model fit, these non-significant variables, green product perception, price, and personal responsibility were removed, and the regression model was re-estimated. The results of the second regression analysis show that all remaining hypotheses (H1, H4, and H6) are supported, as their significance levels are below 0.05 and their regression coefficients are positive.

Thus, it can be confirmed that environmental awareness, information accessibility, and trust all have significant positive effects on customers' green consumption intention in Nghe An Province, Vietnam. Among these factors, trust has the strongest impact, with the highest standardized regression coefficient (Beta = 0.450). This is followed by information accessibility (Beta = 0.230) and environmental awareness (Beta = 0.178).

The estimated regression equation is as follows:

$$YDTD = 1.139 + 0.166*NTMT + 0.160*KNTC + 0.423*MDTT$$

Table 4. Results of Regression Analysis on Factors Affecting Customers' Green Consumption Intention in Nghe An Province, Vietnam

| No. | Independent variables | Unstandardized coefficients | Standardized coefficients Beta | Sig. | Variance Inflation Factor (VIF) |
|-----|-----------------------|-----------------------------|--------------------------------|-------|---------------------------------|
| | (Constans) | 1.139 | | 0.000 | |
| 1 | NTMT | 0.166 | 0.178 | 0.000 | 1.407 |
| 2 | KNTC | 0.160 | 0.230 | 0.000 | 1.239 |
| 3 | MDTT | 0.423 | 0.450 | 0.000 | 1.651 |

The adjusted R² is 0.478, indicating that the independent variables included in the model explain 47.8% of the variance in the dependent variable (Green consumption intention).

V. CONCLUSIONS AND RECOMMENDATIONS

Based on the literature review and related studies, this paper proposes a research model and examines the factors influencing customers' green consumption intention in Nghe An Province, Vietnam. The findings reveal that three factors, environmental awareness, information accessibility, and trust have significant positive effects on green consumption intention. Among these, the order of influence, based on standardized regression coefficients (Beta), is as follows: trust, information accessibility, and environmental awareness.

Based on the research findings, several recommendations are proposed to enhance customers' green consumption intention in Nghe An Province, Vietnam in the coming period:

First, regarding trust in firms' green claims, businesses should enhance transparency and credibility in their environmental commitments by clearly disclosing information about green production processes, environmentally friendly raw materials, and reputable certifications. Local authorities should also establish mechanisms for verifying and certifying green claims in order to protect consumers and strengthen trust in the green product market.

Second, regarding information accessibility, it is necessary to enhance the dissemination and transparency of information related to green products through multiple channels, such as mass media, social media, e-commerce platforms, and retail systems. Businesses should provide comprehensive information on product origin, ingredients, production processes, and environmental impacts. In addition, local authorities can collaborate with social organizations, universities, and business associations to organize communication programs, workshops, and campaigns aimed at raising awareness of green consumption.

Third, with respect to environmental awareness, greater efforts should be made to promote education and raise public awareness about environmental protection and sustainable consumption. It is essential to encourage green consumption practices in daily life, such as using recycled products, reducing plastic waste, and prioritizing products with eco-certifications. Local governments should also implement supportive policies and incentives to promote green consumption, including tax incentives, subsidies, and programs that encourage sustainable consumer behavior.

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