

Research on Customers' Willingness to Engage in Green Consumption: Based on the Theory of Planned Behavior

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Abstract: Customer willingness to consume is influenced by multiple factors. Currently, market consumption tends to be personalized, customized, and green. Green consumer products, combined with marketing strategies presented by businesses, promote customer choice and purchase. It is an urgent need in the current market to explore the operational logic and inherent value of the mechanism influencing customers' willingness to consume green products, which will help businesses formulate scientific and effective marketing strategies. Based on research findings from both domestic and international sources, combined with on-site business inspections, this article delves into the attribution of the impact of green consumption on customers and presents specific conclusions: coordinate regional economies, develop green consumption tailored to local conditions, incentivize enterprises to establish mechanisms for green product development, stimulate the vitality of green consumption, conduct effective green consumption publicity and education, and cultivate green consumption habits.

Keywords: Green Consumption; Consumer Market; Theory of Planned Behavior; Hospitality Industry; Customer Behavior

1. Introduction

In the current fierce market competition, customers' product purchases have shifted from considering single functions to multiple perspectives, with a particular emphasis on green consumption. An increasing number of consumers are paying attention to environmental protection and sustainable development considerations during the purchasing process. Based on the Theory of Planned Behavior, this study explores the influence of attitude, subjective norms, perceived behavioral control, and personal norms on customers' green

consumption behavior, and further analyzes the impact of variables. It holds significant academic and practical implications. In terms of academia, this study fills the gap in the mechanism of green consumption willingness, expands the role of personal norms as a variable in tourist behavioral decision-making, and provides a richer perspective for the theory of green consumption behavior. In terms of practice, the results of this study can provide a scientific basis for enterprises to optimize their green consumption guidance strategies, and also offer references for promoting green consumption patterns, thereby contributing to the sustainable development of regional economies.

2. Literature Review

2.1 Green Consumption Behavior

Green consumption behavior refers to the consumption choices and behavioral patterns made by individuals guided by the principles of resource conservation and environmental protection during the consumption process. In recent years, influenced by the promotion of environmental protection policies, customers' awareness of environmental protection has gradually increased, and green consumption has gained an important position in market consumption. Green consumption behavior encompasses multiple aspects such as consumer psychology, behavioral decision-making, and policy guidance. Starting from the behavioral patterns and driving factors of consumer behavior, green consumption behavior is influenced by multiple factors, including the policy environment, social responsibility, and environmental awareness. In the context of Chinese tourism, green consumption behavior is more susceptible to the influence of tourism functions and social values. Some research indicates that through brand public welfare activities, consumers can not only acquire the

practical functions of products when purchasing, but also gain a dual satisfaction of emotional and social value by contributing to environmental protection, thereby comprehensively enhancing their overall perceived value of the products^[1]. And other scholars found through surveys that among different types of green consumption products, health and environmental protection products, new energy vehicles, and shared mobility are the three major categories that receive the highest attention from residents, while energy-saving aquatic products and green building materials receive relatively less attention^[2].

2.2 Theory of Planned Behavior

The Theory of Reasoned Action (TRA) is the precursor to the Theory of Planned Behavior. In practical research, TRA has not proven to be effective. This is because it attributes consumers' purchasing behavior solely to their purchasing intention. However, in reality, consumers' purchasing behavior does not always stem from their purchasing intention. Therefore, the Perceived Behavioral Control (PBC) variable was introduced based on TRA to make the model more comprehensive, leading to the development of the Theory of Planned Behavior - TPB. TPB, by incorporating the PBC variable, compensates for TRA's inadequate explanation of non-fully autonomous control behaviors. TPB is not a static model but rather one that is continuously refined through practical application. The Theory of Planned Behavior posits that behavioral intentions are determined by three core factors: attitude (ATT), subjective norm (SN), and perceived behavioral control (PBC)^[3].

2.3 The Influence of Personal Norms on Customer Consumption Behavior

Researchers have integrated Theory of Planned Behavior and Norm Activation Theory to establish a theoretical framework for consumers' choice of green hotels. In this model, behavioral attitudes, subjective norms, and perceived behavioral control all positively influence consumers' willingness to choose green hotels, with subjective norms having the most significant effect^[4]. Based on the Theory of Planned Behavior, a researcher developed a model to analyze the decision-making process of tourists choosing grassland homestays and collected relevant data through questionnaires.

The research results indicate that: (1) tourists' attitudes towards staying in grassland homestays, social pressure, and their perception of self-control ability all significantly and positively affect their willingness to stay; (2) tourists' willingness to stay also significantly and positively affects their actual staying behavior^[5]. Some experts point out that with the shift in consumer preferences for travel accommodation options, the suburban tourism accommodation industry is entering a new period of development. Focusing on parent-child families, the study utilizes the Theory of Planned Behavior to analyze various factors that influence consumer willingness to purchase. The research finds that attitude, subjective norms, and perceived behavioral control have a significant positive impact on consumer willingness to purchase^[6]. Based on the Theory of Planned Behavior and incorporating the unique cultural element of face concept in China, some scholars have constructed a new analytical framework to analyze the influencing factors of Chinese consumers' food waste behavior. The research content includes how attitudes, subjective norms, perceived behavioral control, and face concept affect consumers' willingness and actual behavior to reduce food waste, as well as the internal mechanisms of these influences. The research results show that consumers' attitudes, subjective norms, and perceived behavioral control have a significant positive effect on their willingness to reduce food waste^[7].

Personal norms (MN) reflect an individual's understanding of social responsibility and play a crucial complementary role in promoting green consumer behavior among tourists. Generally speaking, constrained by factors such as morality, personal norms will influence customers' consumption behavior to some extent. Therefore, incorporating personal norms into the TPB framework can more comprehensively elucidate the role played by altruistic motivation in tourists' green consumption behavior.

3. Data Analysis

3.1 Questionnaire Design

From a marketing perspective, customers often purchase a product based on a single or multiple combinations of its features, price, and promotional strategies. Some scholar pointed out in the implementation of green marketing

strategies for retail enterprises that the target market for green products is middle-to-high-income consumers with a strong environmental awareness and a focus on health and wellness. These consumers recognize the sustainable development concept behind green products and are willing to pay a premium for them. Retail enterprises should strive to introduce green products to the market at lower prices to meet market demand. At the same time, to reduce the discomfort brought by high prices to customers, retail enterprises should utilize various public relations channels to consciously cultivate the concept of customers paying for products to better protect the environment^[8]. Employees' perception of corporate environmental responsibility can enhance their green self-efficacy, leading to more green behaviors^[9]. Corporate social responsibility perception has a positive impact on purchase intention^[10]. For consumers, conducting research on the role of corporate social responsibility perception in consumer purchase intention can help consumers better understand the relevant content in the field of corporate social responsibility, understand corporate marketing strategies, identify potential consumption traps and scams, consume rationally, establish correct consumption concepts, enhance responsible consumption, and make reasonable consumption decisions^[11].

3.2 Construction of Influencing Factors

To further investigate the impact of customers' green consumption willingness, this study adopted a questionnaire survey method for analysis. The survey questionnaire in this study targets customers and combines 1-5 satisfaction single-choice questions and personal information single-choice questions to investigate the influencing factors of customers' green consumption willingness. The first part designs Likert scale items based on four aspects: "perceived behavioral control", "subjective norms", "attitude", and "personal norms", summarizing the survey questionnaire on influencing factors of customers' green consumption willingness. The question settings are relatively flexible, using sentences that describe relevant factors to explain the measured items, and each item is scored. SPSS 26.0 software was selected as the statistical analysis tool for the data collected from the survey questionnaires. The data

obtained through the distribution, collection, and analysis of the questionnaires were analyzed and summarized. The systematic process involved sorting out the influencing factors.

3.3 Distribution and Collection of Questionnaires

Before publishing the official questionnaire, this study conducted a preliminary survey to define the scope, aiming to ensure the scientific nature and reasonableness of the data collected by the official questionnaire. Based on the results of the preliminary survey and the opinions and suggestions of some interviewees and experts, minor adjustments were made to the data scale of this survey, resulting in the formation of the official survey questionnaire. The data used in this study comes from the official research. The survey began on April 26, 2025, and ended on May 26, 2025. A total of 180 questionnaires were distributed and collected from participants. In order to fully ensure the authenticity of the statistical survey results and the validity of the data, this research conducted a detailed review of the official distribution and collection of questionnaires. The number of questionnaires collected was organized, and the case processing summary table obtained through SPSS 26.0 analysis by the author is shown in Table 1 below:

Table 1. Summary of Case Handling

Case Processing Summary			
		N	%
Cases	Valid	180	100.0
	Excludeda	0	.0
	Total	180	100.0

(This study was organized based on SPSS 26.0)

The author organized 180 questionnaire data using SPSS 26.0 analysis software to analyze the basic information of the survey participants, including gender, education background, and level of education, as shown in Table 2:

Table 2. Summary of Interviewee Information

type	project	number
gender	male	80
	female	100
age	Aged 20-29	25
	Aged 30-39	50
	Aged 40-49	37
	Over 50 years old	68
Educational level	High school and below	45
	junior college	50
	undergraduate	64

	Master's degree or above	21
Annual income level	10,000 or less	10
	RMB 20,000 to 50,000	30
	RMB 60,000 to 100,000	50
	RMB 110,000 to 200,000	56
	Over 200,000 yuan	34
career	On campus students	20
	Government personnel	30
	Enterprise management personnel	60
	Self-employed individual/contractor	30
	Freelancer	40

From Table 2, it can be known that among the valid samples, there are 80 males and 100 females. In the age statistics table, there are 25 people aged 20-29, 50 people aged 30-39, 37 people aged 40-49, and 68 people aged 50 and above. Among the interviewees, 21 have master's degrees or above, 64 have bachelor's degrees, 50 have college degrees, and 45 have high school degrees or below. In the annual income statistics table, 10 people earn 10,000 yuan or less, 30% earn 20,000-50,000 yuan, 50 people earn 60,000-100,000 yuan, 56 people earn 110,000-200,000 yuan, and 34 people earn more than 200,000 yuan. In the occupation statistics table, there are 20 students, 30 government employees, 60 enterprise managers, 30 self-employed individuals/contractors, and 40 freelancers.

3.4 Reliability Analysis of the Questionnaire

Cronbach's Alpha is the most common reliability measurement method in scientific research. The Cronbach's Alpha coefficient is used to test whether the items measuring the same theoretical dimension are consistent. The magnitude of the Alpha coefficient represents different levels of reliability. When the Alpha value is less than 0.3, the reliability is low and not credible; an Alpha value between 0.3 and 0.4 indicates marginal credibility; an Alpha value between 0.4 and 0.5 indicates relatively high credibility; and an Alpha value between 0.5 and 0.7 indicates credibility. Scholars generally believe that a Cronbach's Alpha value ranging from approximately 0.7 to 0.98 can be considered as a value with high reliability. This study, calculated using SPSS 26.0 statistical software, has determined that the Cronbach's Alpha value has reached 0.858, achieving a high reliability value widely recognized in academic circles both domestically and internationally.

The results of the questionnaire reliability analysis are presented in Table 3 below:

Table 3. Reliability Analysis Table

Reliability Statistics	
Cronbach's Alpha	N of Items
.858	14

3.5 Analysis of Questionnaire Validity

KMO and Bartlett's test of sphericity are methods used to assess whether indicators are suitable for factor analysis. The higher the KMO value, the greater the number of common influencing factors between variables, making it more likely suitable for common factor analysis. When the KMO test reaches a certain level, it can effectively address issues related to the practicality and efficient evaluation of measurement content. Specifically, a KMO value closer to 1 indicates that the statistic is better at assessing the effectiveness of variable analysis. In this study, the KMO value is 0.82, indicating that the analysis of principal components has achieved good results. Since the measurement scales of this survey questionnaire are not completely independent of each other, the significance of Bartlett's test of sphericity is also relatively evident. The results of the KMO and Bartlett's test of sphericity are presented in Table 4:

Table 4. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.820
Bartlett's Test of Sphericity	Approx. Chi-Square	1151.673
	df	91
	Sig.	.000

3.6 Principal Factor Analysis

This study opted for principal component analysis for extraction. Fourteen variables were designed for factor analysis in this study. The questionnaire analysis results were derived from the comprehensive calculation results after SPSS questionnaire analysis of the questions. The analysis indicated that the sum of the comprehensive explanatory accuracy of the four common factors in the questionnaire extraction results was 70.169%, which is higher than 60%. This sufficiently confirms that the common factors possess a certain representativeness. The variance of the common factors and the total variance explained are presented in Tables 5 and 6 below:

Table 5. Common Factor Variance Table

Communalities		
	Initial	Extraction
Environmental supervision by relevant departments	1.000	.755
The public's emphasis on environmental protection issues	1.000	.797
The degree of government planning for future environmental protection issues	1.000	.673
The degree of contact between marketing activities and environmental protection enterprises	1.000	.613
The degree of cooperation with environmental protection organizations in product development	1.000	.628
Pay attention to the safety of hotel products for human health	1.000	.743
Pay attention to the degree of environmental pollution caused by product development	1.000	.748
Choose transportation tools powered by environmentally friendly energy sources	1.000	.628
Favor green-labeled hotel cloud operation products	1.000	.588
Actively promote the concept of green environmental protection	1.000	.713
The frequency of material usage in the promotional process has increased	1.000	.584
The price of green products	1.000	.650
Products with a longer usage cycle are beneficial	1.000	.862
Actively improve the reuse rate of hotel consumables	1.000	.842

Table 6. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.047	36.052	36.052	5.047	36.052	36.052
2	2.088	14.914	50.966	2.088	14.914	50.966
3	1.551	11.079	62.045	1.551	11.079	62.045
4	1.137	8.124	70.169	1.137	8.124	70.169
5	.723	5.164	75.334			
6	.616	4.403	79.737			
7	.563	4.020	83.756			
8	.455	3.248	87.005			
9	.408	2.913	89.918			
10	.389	2.776	92.694			
11	.344	2.455	95.149			
12	.254	1.815	96.964			
13	.236	1.686	98.650			
14	.189	1.350	100.000			

This article employs principal component analysis for factor analysis. After rotation, the variables will have their corresponding factor loadings calculated, with values ranging from 0 to 1. An acceptable range is above 0.5, and the closer it is to 1, the higher the reliability. After rotation, the 14 variables in this questionnaire are classified into 4 factors, and the loadings of the corresponding variables are all above the acceptable loading value of 0.5, indicating that the questionnaire has a high degree of reliability. As shown in Table 7:

Table 7. Rotation Component Matrix Table

	Component			
	1	2	3	4
Environmental supervision by relevant departments	.833			
The public's emphasis on environmental protection issues	.869			
The degree of government planning for future	.814			

environmental protection issues				
The degree of contact between marketing activities and environmental protection enterprises	.660			
The degree of cooperation with environmental protection organizations in product development	.678			
Pay attention to the safety of hotel products for human health		.842		
Pay attention to the degree of environmental pollution caused by product development		.843		
Choose transportation tools powered by environmentally friendly energy sources		.746		
Favor green-labeled hotel cloud operation products		.653		
Actively promote the concept of green environmental protection			.826	

The frequency of material usage in the promotional process has increased			.715	
The price of green products			.646	
Products with a longer usage cycle are beneficial			.884	
Actively improve the reuse rate of hotel consumables			.870	

Based on the rotation component matrix in Table 7, the 14 problem factors were named by combining professional knowledge. The naming of each common factor is shown in Table 8 below:

Table 8. Naming Table of Common Factors

common factor	Variable factors
Subjective norms	Environmental supervision by relevant departments
	The public's emphasis on environmental protection issues
	The degree of government planning for future environmental protection issues
	The degree of contact between marketing activities and environmental protection enterprises
	The degree of cooperation with environmental protection organizations in product development
Perceptual-behavioral control	Pay attention to the safety of hotel products for human health
	Pay attention to the degree of environmental pollution caused by product development
	Choose transportation tools powered by environmentally friendly energy sources
	Favor green-labeled hotel cloud operation products
Personal Standards	Actively promote the concept of green environmental protection
	The frequency of material usage in the promotional process has increased
	The price of green products
Attitude	Products with a longer usage cycle are beneficial
	Actively improve the reuse rate of hotel consumables

This study makes judgments based on data and knowledge, and through analyzing 14 variable factors, extracts four common factors and names them.

Although the judgment of common factors is

somewhat subjective, the five factors obtained through the analysis of principal components in the study are all likely to have an impact on the implementation of research on customers' willingness to engage in green consumption. The questionnaire survey still has a certain reference value for analyzing the research and providing suggestions for improving green marketing behavior.

5. Strategies to Enhance Customers' Willingness to Engage in Green Consumption

5.1 Coordinate Regional Economies and Develop Green Consumption Tailored to Local Conditions

Promote green consumption tailored to local conditions and strengthen regional coordination. Therefore, when implementing policies at the macro level, it is necessary to fully consider the economic development level, industrial structure, and consumption characteristics of each region. Increase investment in green consumption infrastructure in underdeveloped and remote areas, improve the green product sales network, green logistics system, and green payment system, and solve the problems of "not being able to buy" and "not being able to afford". In addition, encourage local governments to introduce regional green consumption promotion policies, especially for remote areas, to carry out green lifestyle publicity activities and green product rural projects, and enhance residents' awareness of green consumption. Under this premise, we should coordinate the green economy between the south and the north, jointly drive the construction of green consumption supply chains in economically developed and underdeveloped regions, promote the development of the green consumption market, and narrow regional disparities.

5.2 Incentivize the Mechanism for Green Product Development in Enterprises and Stimulate the Vitality of Green Consumption.

Currently, most existing incentive mechanisms primarily take short-term subsidies as their main form, which yield limited results and exhibit shortcomings. Therefore, it is imperative to establish a multi-tiered and long-term incentive mechanism. This can be achieved by enhancing the green finance system, incentivizing financial institutions, developing financial products such as green consumer loans and green credit cards,

and lowering the barriers to green consumption. Additionally, tax policies should be innovated, and measures such as tax reductions or exemptions for green product consumption should be explored to enhance customers' long-term engagement in consumption. Furthermore, the certification and labeling system for green products should be improved, and a unified and authoritative information platform for green products should be established to prevent information asymmetry between enterprises and consumers, alleviate consumers' distrust towards green products, and ultimately enhance consumers' purchasing confidence.

5.3 Promote Green Consumption Awareness and Education, and Cultivate Green Consumption Habits.

The concept of green consumption needs to be deeply ingrained in people's minds through continuous promotion and education in order to achieve the transformation from "cognition" to "action". Therefore, the Chinese government can incorporate green consumption education into the education system, popularize green living knowledge in primary and secondary schools as well as higher education, and carry out green product experience activities through school-enterprise cooperation. Furthermore, with the development of new media platforms, innovative promotion methods, combined with short videos, live broadcasts, and e-commerce platforms to promote the advantages of green products and green living cases, can also help improve communication effectiveness and public participation, thereby creating a green living atmosphere, forming a green consumption culture, and making green consumption a normalized and spontaneous behavior. With the deepening of the concept of sustainable development in China and the educational efforts to emphasize that everyone has a responsibility to protect the environment, customers will have a certain resistance to paper materials. Therefore, when promoting daily, hotels should integrate media, emphasize both recycling and aesthetic appeal, reduce unreasonable and inefficient promotion methods, start from action, reduce the use of paper products, and set an example for environmental protection. While reducing unnecessary materials, hotels can broaden their promotion channels and increase their popularity. Short

videos, represented by platforms such as Douyin and Kuaishou, cater to the consumption psychology of contemporary young people, while providing traffic and popularity for hotels, they also compensate for the low efficiency of traditional paper material dissemination. Therefore, the key to building a green brand for hotels and enhancing their competitiveness lies in how to connect customers' sustainable development concepts through promotional media. Competitiveness strengthens with stronger connections. By achieving online promotion through third-party platforms, hotels can further break away from the comfort of traditional promotional materials and realize online marketing promotion, which not only saves costs but also promotes the attraction of hotels, excavates the highlights of sustainable development, builds green hotels, and promotes the transformation of green marketing into actual economic benefits beneficial to hotels.

6. Conclusion

Currently, domestic customers' willingness for green consumption is continuously increasing. However, it still requires joint efforts from multiple parties to transform this willingness into green consumption behavior. The government should strengthen regional coordination, improve policy incentives, and enhance the publicity and education system. Markets and enterprises should align with the green trend, continuously optimize products and services, and jointly promote green consumption to a higher level, thereby facilitating the high-quality development of the consumer market.

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